DRAFT EIR

FOR THE

TRACY COSTCO DEPOT ANNEX PROJECT
(SCH # 2020080531)

SEPTEMBER 2022

Prepared for:

City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

Prepared by:

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De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

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INTRODUCTION

The City of Tracy has determined that the Tracy Costco Depot Annex Project is a "Project" within the definition of the California Environmental Quality Act (CEQA). CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "Project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

The EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of Project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the Notice of Preparation (NOP) were considered in preparing the analysis in this EIR.

PROJECT DESCRIPTION

The Project site includes two distinct planning boundaries defined below. The following terms are used throughout this Draft EIR to describe the planning boundaries within the Project site:

- **Project Site** (or **Annexation Area**) – totals 104.46 acres and includes the whole of the Project, including the proposed 103.0-acre Development Area, and 1.46 acres of land along the Delta Mendota Canal (which would not be developed as part of the proposed Project).
- **Development Area** – includes a 103.0-acre parcel (Assessor's Parcel Number [APN] 209-230-02) that is intended for the development of up to 1,745,052 square feet (sf) of industrial uses.

The Project would include the construction and subsequent operation of two Costco warehouse buildings that would serve as an annex to the existing Costco Depot located approximately 1.5-miles to the west of the Project and as a Direct Delivery Center. The two buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) will total approximately 1,745,052 sf on the 104.46-acre Project site. The smaller Building 1 is anticipated to serve as an annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor (RTV) facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), which is an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery. The Project would also include the required circulation, parking, and utility improvements. The principal objective of the proposed Project is the approval and subsequent construction and operation of the two warehouse buildings

The Project site is designated as Agriculture by San Joaquin County's General Plan Land Use Map and is zoned as AG-40 Agriculture by the County. The site currently has a City General Plan land use

designation of Industrial (I). The San Joaquin County Local Agency Formation Commission (LAFCO) will require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning will include the Light Industrial (M-1) zoning designation for the Project site. Additionally, the proposed Project would result in the annexation of the Annexation Area into the City of Tracy.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Project that are known to the City of Tracy, were raised during the NOP process, or raised during preparation of the Draft EIR. This Draft EIR discusses potentially significant impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, noise, public services, transportation and circulation, utilities, and wildfire.

The City of Tracy received three written comment letters on the NOP for the proposed Project from the agencies listed below. Copies of those NOP comment letters are provided in Appendix A of this Draft EIR. The City also held a public scoping meeting on September 9, 2020. No written or verbal comments were provided at that scoping meeting.

- California Department of Conservation;
- Central Valley Regional Water Quality Control Board;
- San Joaquin Valley Air Pollution Control District.

ALTERNATIVES TO THE PROPOSED PROJECT

The CEQA Guidelines require an EIR to describe a reasonable range of alternatives to the Project or to the location of the Project which would reduce or avoid significant impacts, and which could feasibly accomplish the basic objectives of the proposed Project. Three alternatives to the proposed Project were developed based on input from City staff, various outside agencies during the NOP review period, and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition and not be annexed into the City.
- **Reduced Project Alternative:** Under this alternative, the proposed Project would be developed with the same types of industrial uses as described in the Project Description, but the amount of developed land and industrial square footage would each decrease by 25 percent.
- **Agriculture Protection Alternative:** Under this alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative.

Alternatives are described in detail in Chapter 5.0. Table ES-1 provides a comparison of the alternatives using a qualitative matrix that compares each alternative relative to the other Project alternatives. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the remaining alternatives must be identified. The Reduced Project Alternative would have equal impacts in two areas, slightly less impacts in seven areas, and less impacts in six areas. The Agriculture Protection Alternative would have greater impacts in one area, equal impacts in eight areas, slightly less impacts in one area, and less impacts in four areas. Therefore, the Reduced Project Alternative would be the next environmentally superior alternative. It is noted that the Reduced Project Alternative would not fully meet all of the Project objectives.

TABLE ES-1: COMPARISON SUMMARY OF ALTERNATIVES TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*REDUCED PROJECT ALTERNATIVE*	*AGRICULTURE PROTECTION ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Slightly Less (2nd Best)	Greater (3rd Best)
Agricultural Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Air Quality	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Cultural and Tribal Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Geology and Soils	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Land Use	Less (Best)	Equal (2nd Best)	Equal (2nd Best)
Noise	Less (Best)	Less (2nd Best)	Slightly Less (3rd Best)
Public Services	Less (Best)	Equal (2nd Best)	Equal (2nd Best)
Transportation and Circulation	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

SUMMARY OF IMPACTS AND MITIGATION MEASURES

In accordance with the CEQA Guidelines, this EIR focuses on the significant effects on the environment. The CEQA Guidelines define a significant effect as a substantial adverse change in the physical conditions which exist in the area affected by the proposed Project. A less than significant effect is one in which there is no long or short-term significant adverse change in environmental conditions. Some impacts are reduced to a less than significant level with the implementation of mitigation measures and/or compliance with regulations.

The environmental impacts of the proposed Project, the impact level of significance prior to mitigation, the proposed mitigation measures and/or adopted policies and standard measures that are already in place to mitigate an impact, and the impact level of significance after mitigation are summarized in Table ES-2.

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
AESTHETICS AND VISUAL RESOURCES			
Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources.	PS	*None feasible.*	SU
Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway.	LS		--
Impact 3.1-3: In an urbanized area, Project implementation would not conflict with the applicable zoning and other regulations governing scenic quality.	LS		--
Impact 3.1-3: Project implementation may result in light and glare impacts.	LS		--
AGRICULTURAL RESOURCES			
Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses.	PS		SU

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts.	LS		--
Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands.	PS	***Mitigation Measure 3.2-1:*** *Prior to approval of a grading permit for each phase of the Project, the Project applicant shall demonstrate that the Project site plans include adequate measures to buffer adjacent agricultural uses from urban uses on the Project site and to reduce adverse impacts to neighboring agricultural uses. Additionally, the Project applicant shall provide notifications to all operators of uses on the Project site that are adjacent or in the vicinity of existing agricultural land of the City's Right-to-Farm Ordinance.*	LS
AIR QUALITY			
Impact 3.3-1: Project operation would conflict or obstruct implementation of the District's air quality plan.	PS	***Mitigation Measure 3.3-1:*** *During Project operation, operators of heavy-duty trucks that travel to and from the Project site are required to use trucks that have 2010 model year or newer engines that meet the CARB's 2010 engine emission standards of 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions, or newer, cleaner trucks and equipment.*	SU
Impact 3.3-2: The proposed Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is in nonattainment under an applicable federal or State ambient air quality standard.	PS	*Implement* ***Mitigation Measure 3.3-1****.*	SU
Impact 3.3-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations.	LS		--
Impact 3.3-4: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people.	LS		--

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
BIOLOGICAL RESOURCES			
Impact 3.4-1: The proposed Project has the potential to have a direct or indirect effect on special-status invertebrate species.	PS	***Mitigation Measure 3.4-1****: Prior to commencement of any grading activities, the Project proponent shall obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*	LS
Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status reptile and amphibian species.	PS	*Implement* ***Mitigation Measure 3.4-1.***	LS
Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species.	PS	*Implement* ***Mitigation Measure 3.4-1.***	LS
Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species.	PS	*Implement* ***Mitigation Measure 3.4-1.***	LS
Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species.	LS		--
Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters.	NI		--

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community.	LS		--
Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites.	LS		--
Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan.	PS	*Implement **Mitigation Measure 3.4-1.***	LS
Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	LS		--
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5.	PS	***Mitigation Measure 3.5-1:*** *If any historical resources, cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, are found during grading and construction activities during any phase of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s).* *Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.*	LS

CC – cumulatively considerable *LCC – less than cumulatively considerable* *LS – less than significant*

PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		In addition, if the resource(s) identified is cultural or tribal in nature, the Confederated Villages of Lisjan shall be contacted to review and identify the resource, prior to work continuing at the discovery site. *If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, would also be required and, if Native American resources are identified, shall be retained at the Project applicant's expense.*	
Impact 3.5-2: Project implementation has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines §15064.5, or a significant tribal cultural resource, as defined in Public Resources Code §21074.	PS	*Implement* ***Mitigation Measure 3.5-1.*** ***Mitigation Measure 3.5-2:*** *If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:* • *The coroner shall contact the Native American Heritage Commission and the Confederated Villages of Lisjan in order to ascertain the Most Likely Descendant (MLD) from the deceased individual. If a MLD is identified, the MLD, with the permission of the owner of the land, or his or her authorized representative, in accordance with the law, may inspect the site discovery site and recommend to the landowner, or his or her representative, means for the treatment or disposition, with appropriate dignity' of the human remains and any associated grave goods. The landowner has no legal obligation to allow the MLD accesses to the property for the purpose of making a recommendation. The MLD must complete their inspection and make their recommendation within 48 hours of their notification by the NAHC. The recommendation may include the scientific removal and analysis of human remains and items associated with Native American burials. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing*	LS

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PS – potentially significant *B – beneficial impact* *SU – significant and unavoidable*

ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
		of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains. • *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:* o *The Native American Heritage Commission and Confederated Villages of Lisjan is unable to identify a descendent.* o *The descendant identified fails to make a recommendation.* o *The City of Tracy or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*	
Impact 3.5-3: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries.	PS	*Implement* ***Mitigation Measure 3.5-2.***	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The proposed Project may cause potential adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, or landslides.	LS		--
Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil.	PS	*Implement* ***Mitigation Measure 3.9-1.***	LS

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse.	PS	***Mitigation Measure 3.6-1****: Prior to earthmoving activities for each phase of the Project, a certified geotechnical engineer shall perform a final geotechnical evaluation of the soils at a design-level as required by the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The geotechnical evaluation shall be funded by the Project applicant.* *The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or lateral spreading. The grading and improvement plans, as well as the storm drainage and building plans for each phase of the Project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.*	LS
Impact 3.6-4: Potential for expansive soils to create substantial risks to life or property.	PS	*Implement* ***Mitigation Measure 3.6-1.***	LS
Impact 3.6-5 The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	PS	***Mitigation Measure 3.6-2:*** *If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. A paleontologist is a scientist with an advanced degree (Master's or Doctorate) who studies the history of life on Earth through the fossil record.* *Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology. The paleontologist recommendations shall be implemented.*	LS

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GREENHOUSE GASES AND CLIMATE CHANGE			
Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment to conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.	LS		--
Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources	LS		--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.	PS	*Implement **Mitigation Measure 3.9-1**.* ***Mitigation Measure 3.8-1**: In the event that hazardous materials are encountered during construction, a Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.* ***Mitigation Measure 3.8-2**: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Department (CUPA) for review and approval. If during the construction process the applicant or its subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*	LS

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		***Mitigation Measure 3.8-3**: During construction and Project operation, if subsurface contamination as a result of leaks from the crude oil pipeline is detected, the Project proponent/operator shall notify the San Joaquin County Department of Environmental Health Division (CUPA) to facilitate the site cleanup. Crimson Pipeline, L.P., or the current pipeline operator, shall be responsible for the site cleanup.*	
HYDROLOGY AND WATER QUALITY			
Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	PS	***Mitigation Measure 3.9-1:** Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Tracy and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.* ***Mitigation Measure 3.9-2:** Prior to the issuance of grading permits, the applicant must submit a site-specific Project Stormwater Quality Control Plan to the City of Tracy for review and approval. The site-specific Project Stormwater Quality Control Plan must specify operational BMPs the Project will use and design specifications for selected operational BMPs to ensure the Project's consistency with State and local water quality regulations.*	LS
Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.	LS		--

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Impact 3.9-3: The proposed Project would not alter the existing drainage pattern of the site or area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff.	LS		--
Impact 3.9-4: The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LS		--
LAND USE			
Impact 3.10-1: The proposed Project would not conflict with an applicable land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.	LS		--
NOISE			
Impact 3.11-1: The proposed Project has the potential to generate 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.	PS	***Mitigation Measure 3.11-1:*** *To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:* • *All construction equipment powered by internal combustion engines shall be muffled and maintained.* • *Quiet construction equipment, particularly air compressors, shall be selected whenever possible.* • *All stationary noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction*	SU

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		equipment so that emitted noise is directed away from sensitive receptors nearest the Project site. • *Unnecessary idling of internal combustion engines shall be prohibited.* • *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.* • *Construction shall be limited to 7:00 a.m. to 7:00 p.m. per General Plan Policy P4.* *These requirements shall be noted on the Project improvement plans.* ***Mitigation Measure 3.11-2:** To reduce potential operational noise impacts during Project operation, a minimum 6-foot tall sound wall and/or landscaped berm shall be constructed along the western Project boundary. Noise barrier walls shall be constructed of concrete masonry units, earthen berms, or any combination of these materials. Should the adjacent west residential use be vacated, demolished, and rezoned to industrial before the proposed Project is completed, a sound wall shall not be required. These requirements shall be included in the improvements plans prior to their approval by the City's Public Works Department*	
Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels.	LS		--
PUBLIC SERVICES			
Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts.	LS		--
Impact 3.12-2: The proposed Project has the potential to require the construction of fire	LS		--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
department facilities which may cause substantial adverse physical environmental impacts.			
Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts.	LS		--
Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities.	LS		--
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	PS	***Mitigation Measure 3.13-1:*** *The Project applicant shall implement feasible Transportation Demand Management (TDM) strategies, which would decrease the VMT generated by the Project by 15 percent. Specific potential TDM strategies include, but are not limited to, the following:* • *Emergency Ride Home (ERH) Program* • *Designated Parking Spaces for Car Share Vehicles* *The TDM Plan shall be submitted to the City for review prior to approval of improvement plans, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if determined necessary by the City. The TDM Plan shall include the TDM strategies that will be implemented during the lifetime of the proposed Project and shall outline the anticipated effectiveness of the strategies. The anticipated effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City. The frequency and duration of the anticipated effectiveness would depend on the ultimate strategy determined in coordination with the City. Additionally, the Project applicant shall pay any VMT banking fee in effect at the time of building permit issuance to secure VMT credits of a total of 15 percent for the*	SU

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		subject building, taking into account the stated percent efficacy for the TDM measures above.	
Impact 3.13-2: Project implementation would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.	LS		--
Impact 3.13-3: Project implementation would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	PS	***Mitigation Measure 3.13-2:*** *Prior to the start of construction, the Project applicant shall prepare and submit a Construction Traffic Control Plan. The Plan shall include the following items. The approved Plan shall be implemented during construction of the Project.* • *Project staging plan to maximize on-site storage of materials and equipment.* • *Permitted construction hours.* • *Location of construction staging.* • *Provisions for street sweeping to remove construction-related debris on public streets.* • *A set of comprehensive traffic control measures including scheduling of major truck trips and deliveries to avoid peak-hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction haul routes.* • *Survey of the pavement condition on roadways to be used as part of the haul route(s) or any alternate route(s) that are proposed to be utilized by hauling operation for the Project prior to the commencement of any work on-site. The survey shall include a video tape of the roadways. The Project applicant shall complete any remedial work prior to initiation of use and provide a bond assuring completion of the remediation work triggered by the individual development proposal, the amount which shall be deemed sufficient by the Public Works Department. If the work is completed before the use of the proposed buildings, a bond shall not be required.*	LS

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Impact 3.13-4: Project implementation would not result in inadequate emergency access.	LS		--
UTILITIES			
Impact 3.14-1: The proposed Project has the potential to exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	LS		--
Impact 3.14-2: The proposed Project has the potential to result in a determination by the wastewater treatment and/or collection provider which serves or may serve the Project that is does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	LS		--
Impact 3.14-3: The proposed Project has the potential to require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS		--
Impact 3.14-4: The proposed Project has the potential to require construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS		--
Impact 3.14-5: The proposed Project has the potential to have insufficient water supplies	LS		--

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available to serve the Project from existing entitlements and resources.			
Impact 3.14-6: The proposed Project has the potential to require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	LS		--
Impact 3.14-7: The proposed Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste, and would not 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.	LS		--
CUMULATIVE IMPACTS			
Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway	LS and LCC		--
Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region	PS		CC and SU
Impact 4.3: Cumulative Impact on Light and Glare	LS and LCC		--
Impact 4.4: Cumulative Impact on Agricultural Resources	PS		CC and SU

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Impact 4.5: Cumulative Impact on the Region's Air Quality	PS		CC and SU
Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LS and LCC		--
Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural Resources	LS and LCC		--
Impact 4.8: Cumulative Impact on Geologic and Soils Resources	LS and LCC		--
Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions	LS and LCC		--
Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials	LS and LCC		--
Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project site	LS and LCC		--
Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality	LS and LCC		--
Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LS and LCC		--
Impact 4.14: Cumulative Impact on Communities and Local Land Uses	LS and LCC		--

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ENVIRONMENTAL IMPACT	*LEVEL OF SIGNIFICANCE WITHOUT MITIGATION*	*MITIGATION MEASURE*	*RESULTING LEVEL OF SIGNIFICANCE*
Impact 4.15: Cumulative Exposure of Existing Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development	PS		CC and SU
Impact 4.16: Cumulative Impact on Public Services	LS and LCC		--
Impact 4.17: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	PS		CC and SU
Impact 4.18: Under Cumulative conditions, the proposed Project would not adversely affect pedestrian, bicycle, or transit facilities	LS and LCC		--
Impact 4.19: Cumulative Impact on Wastewater Utilities	LS and LCC		--
Impact 4.20: Cumulative Impact on Water Utilities	LS and LCC		--
Impact 4.21: Cumulative Impact on Stormwater Facilities	LS and LCC		--
Impact 4.22: Cumulative Impact on Solid Waste Facilities	LS and LCC		--

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1.1 PURPOSE AND INTENDED USES OF THE EIR

The City of Tracy, as the lead agency, determined that the proposed Tracy Costco Depot Annex Project is a "Project" within the definition of CEQA. CEQA requires the preparation of an environmental impact report (EIR) prior to approving any project, which may have a significant impact on the environment. For the purposes of CEQA, the term "Project" refers to the whole of an action, which has the potential for resulting in a direct physical change or a reasonably foreseeable indirect physical change in the environment (CEQA Guidelines Section 15378[a]).

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its significant adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize environmental impacts of proposed development.

The City of Tracy, as the lead agency, has prepared this Draft EIR to provide the decisionmakers, the public and the responsible and trustee agencies with an objective analysis of the potential environmental impacts resulting from implementation of the proposed Project. The environmental review process enables interested parties to evaluate the proposed Project in terms of its environmental consequences, to examine and recommend methods to eliminate or reduce potentially significant adverse impacts, and to consider a reasonable range of alternatives to the proposed Project. This EIR will be used by the City of Tracy to determine whether to approve, modify, or deny the proposed Project and associated approvals in light of the Project's environmental effects. The EIR will be used as the primary environmental document to evaluate full development, all associated infrastructure improvements, and permitting actions associated with the proposed Project. All of the actions and components of the proposed Project are described in detail in Chapter 2.0, Project Description.

1.2 TYPE OF EIR

The State CEQA Guidelines identify several types of EIRs, each applicable to different project circumstances. This EIR has been prepared as a Project-level EIR, described in State CEQA Guidelines § 15161 as: "The most common type of EIR (which) examines the environmental impacts of a specific development project. This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project including planning, construction, and operation. The project-level analysis considers the broad environmental effects of the proposed Project.

1.3 KNOWN RESPONSIBLE AND TRUSTEE AGENCIES

The term "Responsible Agency" includes all public agencies other than the Lead Agency that have discretionary approval power over the proposed Project or an aspect of the proposed Project (CEQA Guidelines Section 15381). For the purpose of CEQA, a "Trustee" agency has jurisdiction by law over

natural resources affected by a project which are held in trust for the people of the State of California (CEQA Guidelines Section 15386).

The following agencies are considered "Responsible Agencies" or "Trustee Agencies" for the proposed Project, and may be required to issue permits or approve certain aspects of the proposed Project:

- Central Valley Regional Water Quality Control Board (CVRWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES); and a Storm Water Pollution Prevention Plan (SWPPP) would be required prior to construction activities pursuant to the Clean Water Act;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Construction activities would be subject to the SJVAPCD codes and requirements;
- San Joaquin LAFCo - Annexation of the Project site would be required; and

1.4 ENVIRONMENTAL REVIEW PROCESS

The review and certification process for the EIR has involved, or will involve, the following general procedural steps:

NOTICE OF PREPARATION AND INITIAL STUDY

The City of Tracy circulated an Initial Study (IS) and Notice of Preparation (NOP) of an EIR for the proposed Project on August 28, 2020 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, Organizations and Interested Persons. A public scoping meeting was held during the Planning Commission meeting on September 9, 2020 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The IS, NOP, and comments received on the NOP by interested parties are presented in Appendix A.

DRAFT EIR

This document constitutes the Draft EIR. The Draft EIR contains a description of the proposed Project, description of the environmental setting, identification of project impacts, and mitigation measures for impacts found to be significant, as well as an analysis of project alternatives, identification of significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. This Draft EIR identifies issues determined to have no impact or a less than significant impact, and provides detailed analysis of potentially significant and significant impacts. Comments received in response to the NOP were considered in preparing the analysis in this EIR. Upon completion of the Draft EIR, the City of Tracy will file the Notice of Completion (NOC) with the State Clearinghouse of the Governor's Office of Planning and Research to begin the public review period. Additionally, the City of Tracy will file the Notice of Availability with the County Clerk and have it published in a newspaper of regional circulation to begin the local public review period.

PUBLIC NOTICE/PUBLIC REVIEW

The City of Tracy will provide a public notice of availability for the Draft EIR, and invite comment from the general public, agencies, organizations, and other interested parties. Consistent with CEQA, the review period for this Draft EIR is forty-five (45) days. Public comment on the Draft EIR will be accepted in written form. All comments or questions regarding the Draft EIR should be addressed to:

Attn: Genevieve Federighi, Associate Planner
City of Tracy, Planning Division
333 Civic Center Plaza
Tracy, CA 95376
(209) 831-6435
Genevieve.federighi@cityoftracy.org

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to written comments received during the public review period and to oral comments received at any public hearing that may be held during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

The City of Tracy will review and consider the Final EIR. If the City of Tracy finds that the Final EIR is "adequate and complete", the City of Tracy will certify the Final EIR in accordance with CEQA. The rule of adequacy generally holds that an EIR can be certified if:

1) The EIR shows a good faith effort at full disclosure of environmental information; and

2) The EIR provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

Following review and consideration of the Final EIR, the City of Tracy may take action to approve, modify, or reject the proposed Project. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097 for mitigation measures that have been incorporated into or imposed upon the proposed Project to reduce or avoid significant effects on the environment. This Mitigation Monitoring and Reporting Program will be designed to ensure that these measures are carried out during project implementation, in a manner that is consistent with the EIR.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the project and its environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the

environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the proposed Project, environmental and planning documentation prepared for recent projects located within the City of Tracy, applicable local and regional planning documents, and responses to the Notice of Preparation (NOP).

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

The Executive Summary summarizes the characteristics of the proposed project, known areas of controversy and issues to be resolved, and provides a concise summary matrix of the proposed Project's environmental impacts and possible mitigation measures. The Executive Summary also identifies the alternatives that reduce or avoid at least one significant environmental effect of the proposed Project.

CHAPTER 1.0 – INTRODUCTION

Chapter 1.0 briefly describes the purpose of the environmental evaluation, identifies the lead, trustee, and responsible agencies, summarizes the process associated with preparation and certification of an EIR, and identifies the scope and organization of the Draft EIR.

CHAPTER 2.0 – PROJECT DESCRIPTION

Chapter 2.0 provides a detailed description of the proposed Project, including the location, intended objectives, background information, the physical and technical characteristics, including the decisions subject to CEQA, related improvements, and a list of related agency action requirements.

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

Chapter 3.0 contains an analysis of environmental topic areas as identified below. Each subchapter addresses a topical area and is organized as follows:

Environmental Setting. A description of the existing environment as it pertains to the topical area.

Regulatory Setting. A description of the regulatory environment that may be applicable to the proposed Project.

Impacts and Mitigation Measures. Identification of the thresholds of significance by which impacts are determined, a description of project-related impacts associated with the environmental topic, identification of appropriate mitigation measures, and a conclusion as to the significance of each impact.

The following environmental topics are addressed in this section:

- Aesthetics and Visual Resources
- Agricultural Resources
- Air Quality

- Biological Resources
- Cultural and Tribal Resources
- Geology and Soils
- Greenhouse Gases, Climate Change, and Energy
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Noise
- Public Services
- Transportation and Circulation
- Utilities and Service Systems

It is noted that the Initial Study for the Project (see Appendix A) concluded that impacts related to Mineral Resources, Population and Housing, Recreation, and Wildfire were determined to be less than significant.

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

Chapter 4.0 evaluates and describes the following CEQA required topics: impacts considered less-than-significant, significant and irreversible impacts, growth-inducing effects, cumulative, and significant and unavoidable environmental effects.

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

State CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed Project, which could feasibly attain the basic objectives of the proposed Project and avoid and/or lessen any significant environmental effects of the proposed Project. Chapter 5.0 provides a comparative analysis between the environmental impacts of the proposed Project and the selected alternatives.

CHAPTER 6 – REPORT PREPARERS

This section lists all authors and agencies that assisted in the preparation of the EIR, by name, title, and company or agency affiliation.

APPENDICES

This section includes all notices and other procedural documents pertinent to the EIR, as well as technical material prepared to support the analysis.

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Tracy received three written comment letters on the NOP for the proposed Project from the agencies listed below. Copies of those NOP comment letters are provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping

meeting on September 9, 2020. No written or verbal comments were provided at that scoping meeting.

- California Department of Conservation;
- Central Valley Regional Water Quality Control Board;
- San Joaquin Valley Air Pollution Control District.

1.7 POTENTIAL AREAS OF CONCERN

Aspects of the proposed project that could be of public concern include the following:

- The type and amount of agricultural land converted to urban uses;
- Impacts on any current and future agricultural operations in the vicinity;
- Potential impacts to surface and groundwater;
- Project-related construction and/or operational emissions potentially exceeding SJVAPCD thresholds;
- Operational emissions from off-road equipment (i.e., forklifts) and/or on-road equipment (i.e., mobile yard trucks with the ability to move materials) during Project operation;
- Truck routing and heavy-duty truck air emissions potentially impacting residential communities and sensitive receptors; and
- Toxic Air Contaminants impact on surrounding sensitive receptors.

2.1 PROJECT LOCATION

The Project site is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (Figures 2.0-1 and 2.0-2). The Project site is within the Tracy Sphere of Influence (SOI) 10-Year Planning Horizon and is immediately adjacent to the Tracy city limits to the north of the site.

The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant agricultural land. The Project site is located within Sections 35 of Township 2 South, Range 4 East Mount Diablo Base Meridian (MDBM). Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity.

2.2 PROJECT SITE DEFINED

The Project site includes two distinct planning boundaries defined below. The following terms are used throughout this Draft EIR to describe the planning boundaries within the Project site:

- **Project Site** (or **Annexation Area**) – totals 104.46 acres and includes the whole of the Project, including the proposed 103.0-acre Development Area, and 1.46 acres of land along the Delta Mendota Canal (which would not be developed as part of the proposed Project).
- **Development Area** – includes a 103.0-acre parcel (Assessor's Parcel Number [APN] 209-230-02) that is intended for the development of up to 1,745,052 square feet (sf) of industrial uses.

2.3 PROJECT SETTING

EXISTING SITE CONDITIONS

The APN for the Project site is 209-230-02. As noted above, the Project site totals approximately 104.46 acres of undeveloped land previously used for agricultural purposes. The site is regularly disked and moved for weed abatement. Since the issuance of the Notice of Preparation, the County approved the temporary parking of Costco truck trailers on a portion of the Project site. In order to ensure a conservative analysis, this EIR uses the vacant/undeveloped, on-the-ground conditions that existed at the time the environmental review process commenced with the release of the Notice of Preparation. Figure 2.0-3 shows the aerial view of the Project site.

SITE TOPOGRAPHY

The Project site is relatively flat with natural gentle slope from southwest to northeast. The Project site topography ranges in elevation from approximately 148 to 187 feet above sea level[1].

[1] San Joaquin County GIS; ArcGIS Online USGS Topographic Map Service. Map date: November 1, 2019.

EXISTING SURROUNDING USES

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

2.4 PROJECT GOALS AND OBJECTIVES

Consistent with the California Environmental Quality Act (CEQA) Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed. The principal objective of the proposed Project is the approval and subsequent construction and operation of the Costco depot and Direct Delivery Center warehouse facility.

The Tracy Costco Depot Annex Project identifies the following objectives:

- Construct and operate a new state-of-the-art Costco depot annex and Direct Delivery Center warehouse facility with two separate buildings containing ground-level shipping and receiving truck loading docks along the eastern and western sides that is of sufficient size to efficiently ship, receive, store and distribute regional merchandise and food products.
- Annex the property into the City Limits and develop the site with light industrial uses that the City's General Plan already designates the site for.
- Locate an industrial Project in an area with nearby access to a regional roadway network.
- Create approximately 150 to 250 full time jobs along with approximately 400 construction jobs during Project buildout within the City of Tracy, thus improving the local jobs/housing balance.
- Ensure that the industrial area along West Schulte Road continues to be developed in a visually pleasing manner.
- Increase contributions to the City's tax base.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and Federal code requirements.
- Locate needed Costco facilities on a site which can be purchased (rather than leased) in order to protect Costco's substantial investment of time, money and goodwill in the proposed location.
- Locate the facilities in close proximity to Costco's existing distribution operations (i.e., Costco Depot located at 25501 Gateway Blvd, Tracy, CA) and centrally located to service Costco's retail warehouse locations within northern California.
- Provide site ingress access for trucks from West Schulte at one gated access point to manage security of the site. Provide site egress for trucks to West Schulte at two access points to allow for efficient on-site circulation.
- Improve services to Costco members, including by making appliances and big/bulky products more readily available.
- Complete the Project on schedule and within budget.

2.5 PROJECT CHARACTERISTICS AND DESCRIPTION

PROJECT CHARACTERISTICS

The Project would include the construction and subsequent operation of two warehouse buildings that would serve as an annex to the existing Costco Depot located approximately 1.5-miles to the west of the Project and as a Direct Delivery Center. The two buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) total approximately 1,745,052 sf on the Project site. The smaller Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. DDC warehouses distribute ordered goods to the MDOs for delivery (by appointment) to the members. The Project also would include the required circulation, parking, and utility improvements. The site plan is shown in Figure 2.0-4.

Tracy Costco Depot Annex Traffic and Employment

Costco anticipates that approximately 100 trucks and 300 trailers typically would be parked on site, with the typical truck size being approximately 70 feet long for double-axle trailers. Trucks would enter the site from West Schulte Road at the eastern driveway. The proposed eastern driveway would provide two inbound lanes, each of approximately 1,600 feet, providing on-site storage capacity for up to42 trucks awaiting processing at the security gate.

It is anticipated that during operation of the Project facilities there will be approximately 150 to 250 full-time employees that would work from between 4 a.m. to 11 p.m. daily. The Project is anticipated to generate approximately 400 jobs during the construction phase.

Warehouse Architecture

The proposed warehouse design would be contemporary in style and would use a variety of massing and materials appropriate for the scale of the buildings. Architectural metal with varied textures and horizontal and vertical orientations would be used, while varying parapet cap heights would break up the long elevations both horizontally and vertically. The parapets will also assist in concealing rooftop-mounted mechanical equipment. The proposed architecture places and focuses the design's detailed elements, varied building materials and color changes towards the front of the buildings along West Schulte Road.

Energy Efficient Project Components

In an effort to reduce energy consumption and promote sustainability, the proposed Project would incorporate many energy saving measures during both construction and operation of the facility. Below are some of the significant practices that Costco would incorporate into its new buildings and overall operations that help reduce emissions and conserve energy and other natural resources:

SITE

- A substantial amount of the proposed plant material for new facilities will be native and drought tolerant and will use less water than other common species.
- Irrigation systems for new facilities include the use of deep root watering bubblers for parking lot trees to minimize water usage and ensure that water goes directly to the intended planting areas.
- Storm water management plans are designed to maintain quality control and storm water discharge rates based on the City's requirements.
- Parking lot lights are designed at 38' in height to provide even light distribution and utilize less energy compared to a greater number of fixtures at lower heights. LED lamps are used to provide a higher level of perceived brightness with less energy than other lamps such as high-pressure sodium.

BUILDING

- New and renewable building materials are typically extracted and manufactured within the region. Materials such as concrete and concrete masonry units will be purchased local to the Project, minimizing the transport distances and resultant effects to road networks and regional air quality.
- Main building structures are comprised of pre-engineered systems that use 80% recycled steel. These pre-manufactured building components include structural framing and architectural metal wall and roof panels. These materials are shop finished, maximizing spans, and minimizing structure and waste during the construction process, reducing the overall construction duration.
- Roofs maintain a reflectance rating of .68, emittance of .25 and Solar Reflectance Index of 63, lessening heat gain. Reflective cool roof materials are used to lower heat absorption, subsequently lowering energy requirements during the hot summer months. This roofing material meets the requirements for the EPA's Energy Star energy efficiency program. Building management systems monitor performance and energy usage of HVAC systems.
- HVAC comfort systems are controlled by a computerized building management system to maximize efficiency. Costco's HVAC units are high efficiency direct ducted units. Costco completely phased out the use of HCFCs in its HVAC units, long before the Montreal Protocol timeline.
- Mechanical systems are site specifically commissioned and designed and field tested to ensure that the HVAC systems are performing to the high efficiency standards.
- The roof structure is designed to support future solar arrays.
- Pre-manufactured insulated architectural metal walls meet or exceed current energy code requirements. Building heat absorption is further reduced by a decrease in the thermal mass of the metal wall when compared to a typical masonry block wall. Insulated architectural metal wall panels contain approximately 76 percent of recycled material.
- Mechanical heat from refrigeration systems is captured and reused to preheat hot water tanks.
- High-efficiency restroom fixtures are used, which conserves water by achieving a 40% decrease over U.S. standards.
- Energy efficient transformers (i.e., Square D Type EE transformers) are used.

- Variable speed motors are used on make-up air units and booster pumps.
- Gas water heaters are direct vent and 94% efficient or greater.
- Construction waste is recycled whenever possible.
- Lighting systems are designed with employee controllability in mind. Lighting is controlled by timers, but over-ride switches are provided for employee use.

OPERATIONS

- Deliveries are made in full trucks whenever feasible.
- Costco trucks are equipped with engine idle shut off timers.
- This Project's additional warehouse space will provide the existing nearby Tracy Depot distribution facilities with increased capacity and storage of products to minimize miles traveled for delivery.
- Costco has been an active user of recycled content in packaging for many years and continues to increase its use of recycled content.

Landscape and Stormwater Plan

The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter. The landscape design and plant palette would complement the existing street and building/development landscape character established by Prologis and the International Park of Commerce. The general pattern of landscape islands to be located throughout the employee parking lot would provide the required shading of the vehicle parking area. Four bioretention basins/planters are shown on the site plan located on the northeast and northwest portions of the site to provide for detention and water quality treatment of the storm water runoff generated by the Project. The treatment basin/planters would be landscaped with a variety of grasses and oak trees per the preliminary landscape plan.

In addition to the proposed landscaping on the 103-acre Development Area, the 1.46-acre area outside the Development Area but within the Project site may be improved for landscape and stormwater purposes. The 1.36-acre area, located adjacent to the Delta-Mendota Canal, would be improved with large rocks and would continue to be used as an overflow area for the Canal. Additionally, some landscaping may be incorporated for stormwater and drainage purposes; hardscape or utilities are not proposed for this area.

Project Construction

To ensure the most conservative analysis, this EIR assumes that Project construction will be completed in one phase with a portion of the Project site developed and made operational prior to the remaining portion. Construction is anticipated to be completed within two years after building permits are received and will include construction of the warehouse buildings, as well as all related on-site improvements including the associated parking areas and stormwater features along West Schulte Road.

A construction staging area will be provided on-site, and the entire Project site would be graded as part of the proposed Project construction. The estimated cut and fill amounts for the Project are 259,000

cubic yards (cy) cut and 253,000 cy fill (for a total export [cut] of 6,000 cy of material). The excess dirt would be off-hauled in one-way trips or used on-site for landscape berms.

Table 2.0-1 shows the types of anticipated off-road construction equipment that will be utilized for the proposed Project. The construction-related worker and vendor trips are shown in Table 2.0-2. These trips would be spread out over the entire construction period for the Project.

TABLE 2.0-1: CONSTRUCTION EQUIPMENT LIST

EQUIPMENT TYPE	*UNIT AMOUNT*	*HOURS/DAY*	*HORSEPOWER*	*LOAD FACTOR*
SITE PREPARATION PHASE				
Rubber Tired Dozers	3	8	247	0.40
Tractors/Loaders/Backhoes	4	8	97	0.37
GRADING PHASE				
Excavators	2	8	158	0.38
Graders	1	8	187	0.41
Rubber Tired Dozers	1	8	247	0.40
Scrapers	2	8	367	0.48
Tractors/Loaders/Backhoes	2	8	97	0.37
BUILDING CONSTRUCTION PHASE				
Cranes	1	7	231	0.29
Forklifts	3	8	89	0.20
Generator Sets	1	8	84	0.74
Tractors/Loaders/Backhoes	3	7	97	0.37
Welders	1	8	46	0.45
PAVING PHASE				
Pavers	2	8	130	0.42
Paving Equipment	2	8	132	0.36
Rollers	2	8	80	0.38
ARCHITECTURAL COATING PHASE				
Air Compressors	1	6	78	0.48

SOURCE: CALEEMOD, 2022.

TABLE 2.0-2: CONSTRUCTION WORKER AND VENDOR TRIPS

PHASE NAME	*# OF WORKER TRIPS/DAY*	*# OF VENDOR TRIPS/DAY*	*# OF HAULING TRIPS*	*TOTAL CONSTRUCTION (WORKER AND VENDOR) TRIPS*
Site Preparation	18	0	0	18
Grading	20	0	750	20
Building Construction	1,884	735	0	2,619
Paving	15	0	0	15
Architectural Coating	377	0	0	377

SOURCE: CALEEMOD, 2022.

CIRCULATION, TRANSPORTATION, AND PARKING

The design of the site locates the office and ancillary/accessory administrative uses at the far northern portion of each of the two buildings, along West Schulte Road, with the warehousing and truck dock doors located at the center and southern portion of the buildings. Entries to the office and

administrative uses are located at the northern end of each building and adjacent to the employee parking areas.

The employee parking lot located on the north side of the site and adjacent to West Schulte Road includes a 30-foot landscape buffer area. Landscape buffers would be provided on all sides of the Project site to provide screening of the buildings and dock doors with various shade trees and drought tolerant shrubs and other vegetation.

Vehicle ingress/egress to/from the Project site will occur from three points along West Schulte Road. The main entry and exit point for employee vehicles would be located at the center of the site, at the existing signalized Bud Lyons Way intersection. The Bud Lyons Way driveway would also serve as a secondary exit with security gates for warehouse trucks, and no truck entry would be permitted. The main Bud Lyon Way driveway access would provide a deceleration lane for eastbound traffic and would have full turning movements to enter and exit the site. The deceleration lane at the Bud Lyons Way intersection will allow for the safe entry of employee vehicles to the site and access the parking adjacent to and in front of each building. A second employee entry would be located east of the Bud Lyons Way intersection and would be right-in and right-out only.

The third access driveway located at the Project site's northeast boundary includes a new signalized intersection and a deceleration lane for trucks traveling eastbound on West Schulte Road. This driveway would be the entrance for all truck traffic. A shared accessway to the adjacent parcel to the east is also provided with a left-hand turn pocket to provide access to the parcel. The deceleration lane at the eastern intersection will allow for the safe entry of warehouse trucks to access the loading docks and trailer parking surrounding the buildings. The new intersection provides the only truck access to the site, and also provides a second exit for the warehouse trucks. This truck entrance/exit provides two inbound lanes, each of approximately 2,300-feet, for trucks entering and one lane for trucks exiting the facility and includes a security building and security gates. Approximately 61 trucks could queue within the inbound lanes without spilling back to the new signalized intersection or the shared intersection for the parcel to the east.

A total of 611 employee vehicle parking stalls will be provided on the north side of the buildings, including 12 handicapped stalls, 45 electric vehicle-designated stalls and 554 standard parking stalls. The electric vehicle-designated stalls will include all the electrical infrastructure necessary to support the future installation of charging stations as required by the building code. The 611 parking stalls provided exceeds the City of Tracy's parking requirement of 556 stalls based on the building square footage. The Project would provide standard parking stalls of 9-foot by 18-foot, consistent with the City of Tracy's standards. The site would also include 604 truck and trailer parking stalls around the east, south, and west sides of the buildings. An ADA-compliant pedestrian pathway would extend from each building to the northern property boundary, where it would connect to West Schulte Road.

The employee vehicle parking lot and truck and trailer parking areas would be illuminated with standard downward pointing lights, each containing two LED fixtures affixed to a 38-foot foot light pole. The lighting fixtures would be of a "shoe-box" style. Parking lot light standards would be designed to provide even light distribution for vehicle and pedestrian safety as well as site and building security without causing light to spill onto adjacent properties. Lighting fixtures also would be located approximately

every 40 feet around the exterior of the warehouse buildings to provide additional lighting for safety and security.

UTILITIES

The proposed Project would connect to existing City infrastructure to provide water, sewer, and storm drainage utilities. Existing storm drain, sewer, water, and gas lines/pipes are currently located along West Schulte Road.

The Project would be served by the following existing service providers:

1. City of Tracy for water;
2. City of Tracy for wastewater collection and treatment;
3. City of Tracy for stormwater collection;
4. Pacific Gas and Electric Company for gas and electricity.

Utility extensions would be installed to provide services to the Project. Utility lines within the Project site and adjacent roadways would be extended throughout the Project site. Wastewater, water, and storm drainage lines would be connected via existing lines along West Schulte Road. Eight-inch sanitary sewer lines are currently located along West Schulte Road. Additionally, 2-inch water lines are currently located along West Schulte Road. Further, storm drainage lines ranging in size from 12 to 24 inches and a six-inch gas line are currently located along West Schulte Road.

Stormwater treatment/detention basins and stormwater bioretention treatment planters would be located throughout the Project site, mainly in the proposed landscaped areas and along West Schulte Road. The Project site includes seven drainage areas: Area 1 (12.07 acres located along the western boundary of the site) Area 2 (36.50 acres located in the center of the site), Area 3 (2.46 acres located along the northwestern boundary of the site), Area 4 (2.00 acres located along the northern boundary of the site) Area 5 (34.26 acres located in the eastern portion of the site), Area 6 (1.64 acres located along the northern boundary of the site), and Area 7 (5.68 acres located along the eastern boundary of the site). Stormwater runoff from each of the seven drainage areas would be routed to a series of on-site stormwater bioretention treatment planters and treatment/detention basins. It is anticipated that the detention basin identified as LW-11 located on the adjacent City land east of the Project site as planned in the Storm Drain Master Plan would also be utilized in the future.

Best management practices (BMPs) will be applied to the proposed development to limit the concentrations of constituents in any site runoff to acceptable levels. Stormwater flows from the Project site would be directed to the proposed stormwater treatment basins, treatment planters, and bioretention areas by a new stormwater conveyance system on the Project site. Stormwater runoff would not be allowed to discharge directly to the existing storm drains in West Schulte Road without first discharging to the bioretention areas. The landscaping plan includes stormwater treatment plantings in the treatment/detention basins. Additionally, erosion and sediment control measures would be implemented during construction.

GENERAL PLAN LAND USE AND ZONING

The City and County General Plan land use designations for the Project site and surrounding area are shown on Figure 2.0-5. The zoning is shown on Figure 2.0-6.

General Plan

The Project site is designated as Agriculture by the County's General Plan Land Use Map and is zoned as AG-40 Agriculture by the County. The site is within the City's Sphere of Influence 10-Year Planning Horizon and currently has a City General Plan land use designation of Industrial (I).

Figure 2.0-5 illustrates Tracy General Plan land use within the Project site.

Pre-zoning

The Project site is currently within the jurisdiction of San Joaquin County. As noted above, current county zoning for the Project site is AG-40.

The San Joaquin County Local Agency Formation Commission (LAFCO) will require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning will include the Light Industrial (M-1) zoning designation for the Project site. The pre-zoning would go into effect upon annexation into the City of Tracy. Additionally, the Project is requesting a Conditional Use Permit to allow for food processing and canning in the proposed M-1 zoning district. The proposed pre-zoning for the Project site is shown on Figure 2.0-6.

ANNEXATION

The Project site is currently within San Joaquin County, and within the City of Tracy's SOI 10-Year Planning Horizon. The proposed Project would result in the annexation of the Annexation Area into the City of Tracy. The EIR analyzes the potential annexation of the parcels into the City of Tracy. Annexation of the Project site is consistent with the growth plans for the City of Tracy. The annexation area would include the entire 104.46-acre Project site.

2.6 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

This EIR may be used for the following direct and indirect approvals and permits associated with adoption and implementation of the proposed Project.

CITY OF TRACY

The City of Tracy is the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. If the City Council certifies the EIR in accordance with CEQA requirements, the City may use the EIR to support the following actions:

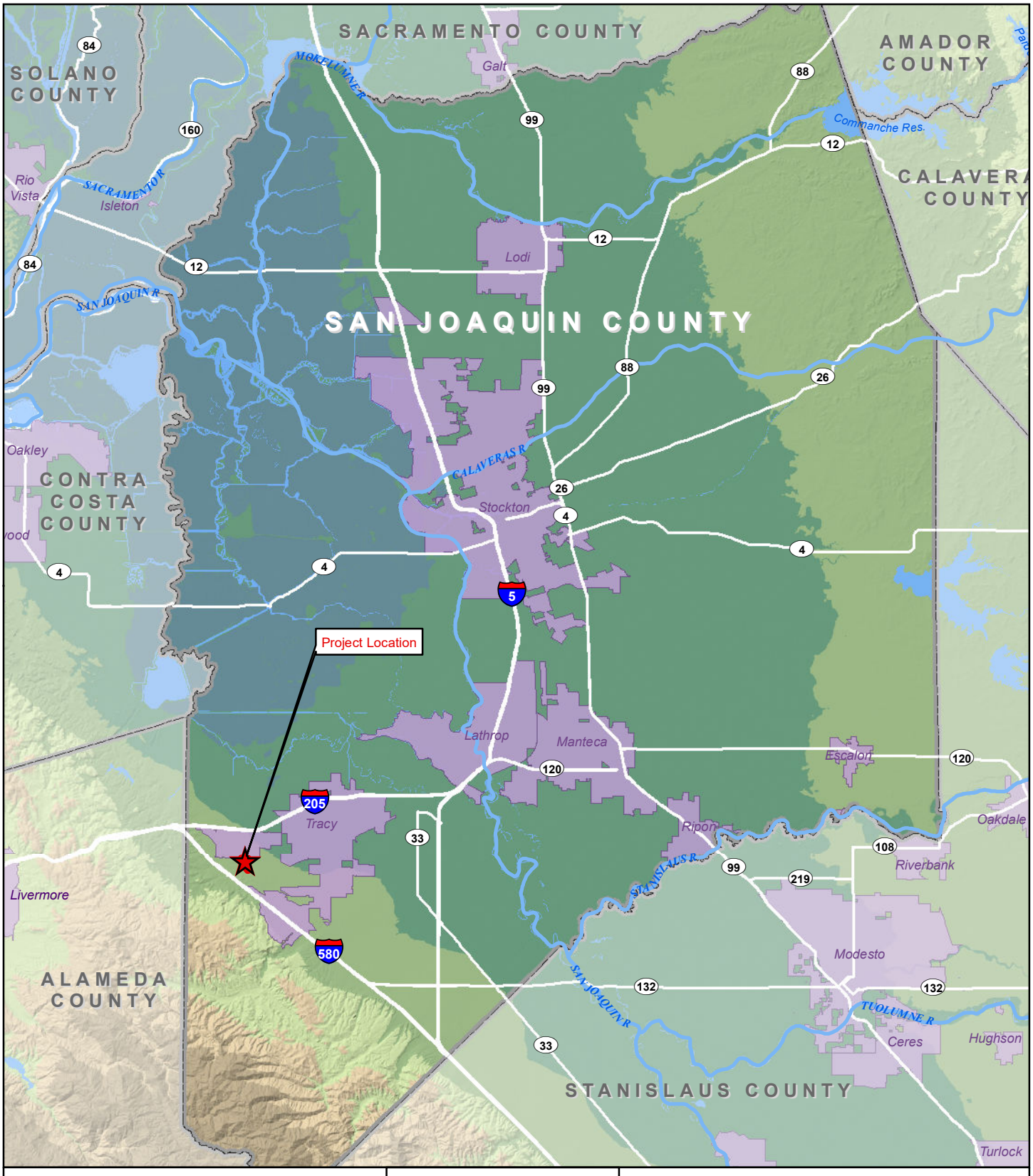
- Pre-zone of the property to the City's M-1 zoning district;
- Annexation of the Project site into the City (which requires approval by the San Joaquin County LAFCO);
- Development review permit for building design, landscaping, and other site features;

- A Conditional Use Permit to allow for food processing and canning in the M-1 Zoning District;
- Building, grading, and other permits as necessary for Project construction;
- Adopting a Mitigation Monitoring and Reporting Program (MMRP).

OTHER GOVERNMENTAL AGENCY APPROVALS

The following agencies may rely on the certified EIR to issue permits or approve certain aspects of the proposed Project:

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES); and a Storm Water Pollution Prevention Plan (SWPPP) would be required prior to construction activities pursuant to the Clean Water Act;
- San Joaquin LAFCO – Annexation of the Project site would be required.
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Construction activities would be subject to the SJVAPCD codes and requirements.



Legend

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; San Joaquin, Stanislaus, Sacramento, Solano, Contra Costa, and Alameda Counties. Map date: October 22, 2019.

N

0 2½ 5

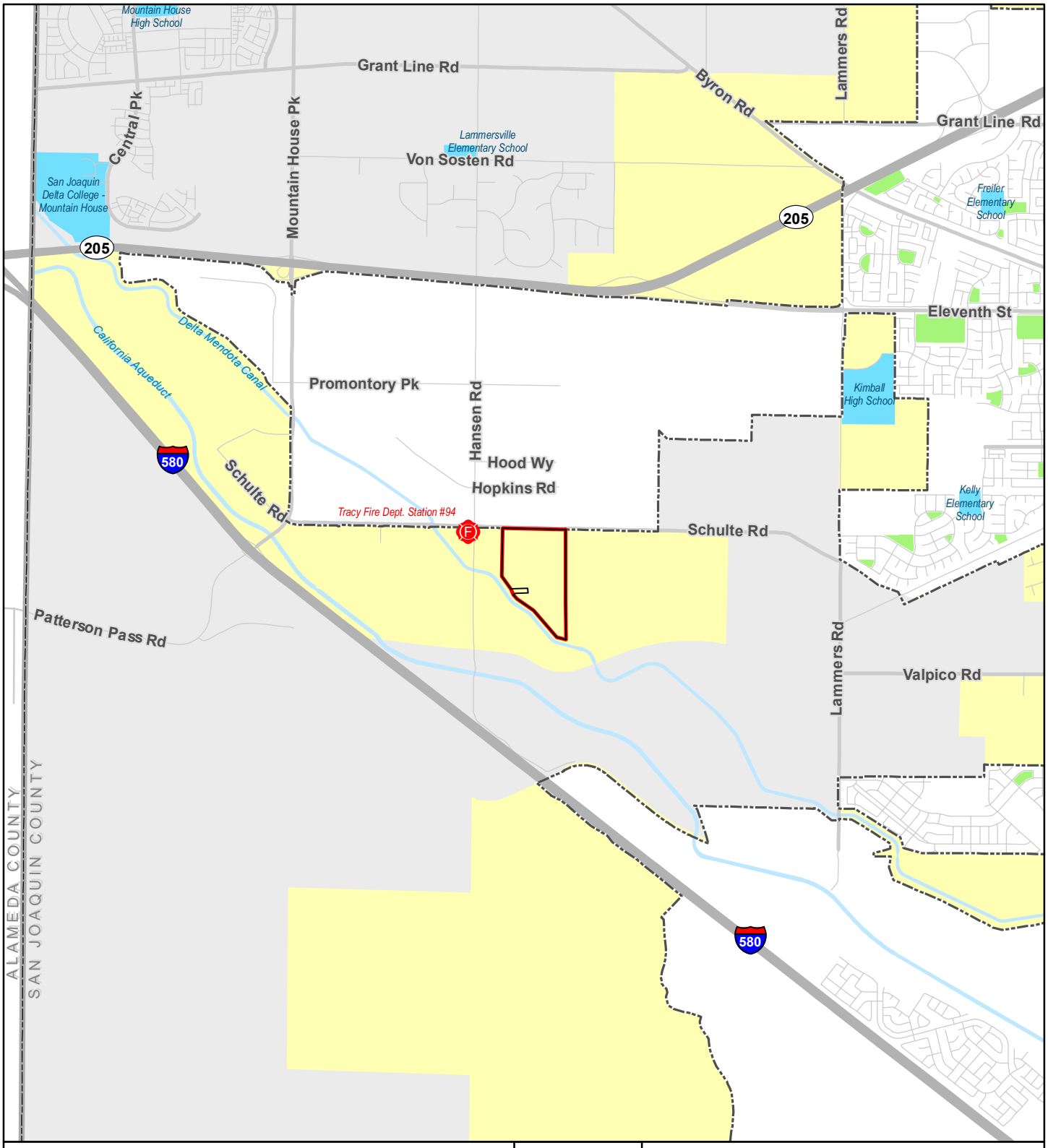
Miles

TRACY COSTCO DEPOT PROJECT

Figure 2.0-1. Regional Location Map

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A Land Use Planning, Design, and Environmental Firm

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Legend

- Project Site/ Annexation Area
- Development Area
- Tracy City Limits
- Tracy Sphere of Influence
- San Joaquin County
- School
- Park
- Fire Station

N

0 ¼ ½ Miles

Sources: San Joaquin County GIS. Map date: October 25, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 2.0-2. Project Vicinity

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Legend

- Project Site/ Annexation Area
- Development Area
- Tracy City Limits

N

0 500 1,000

Feet

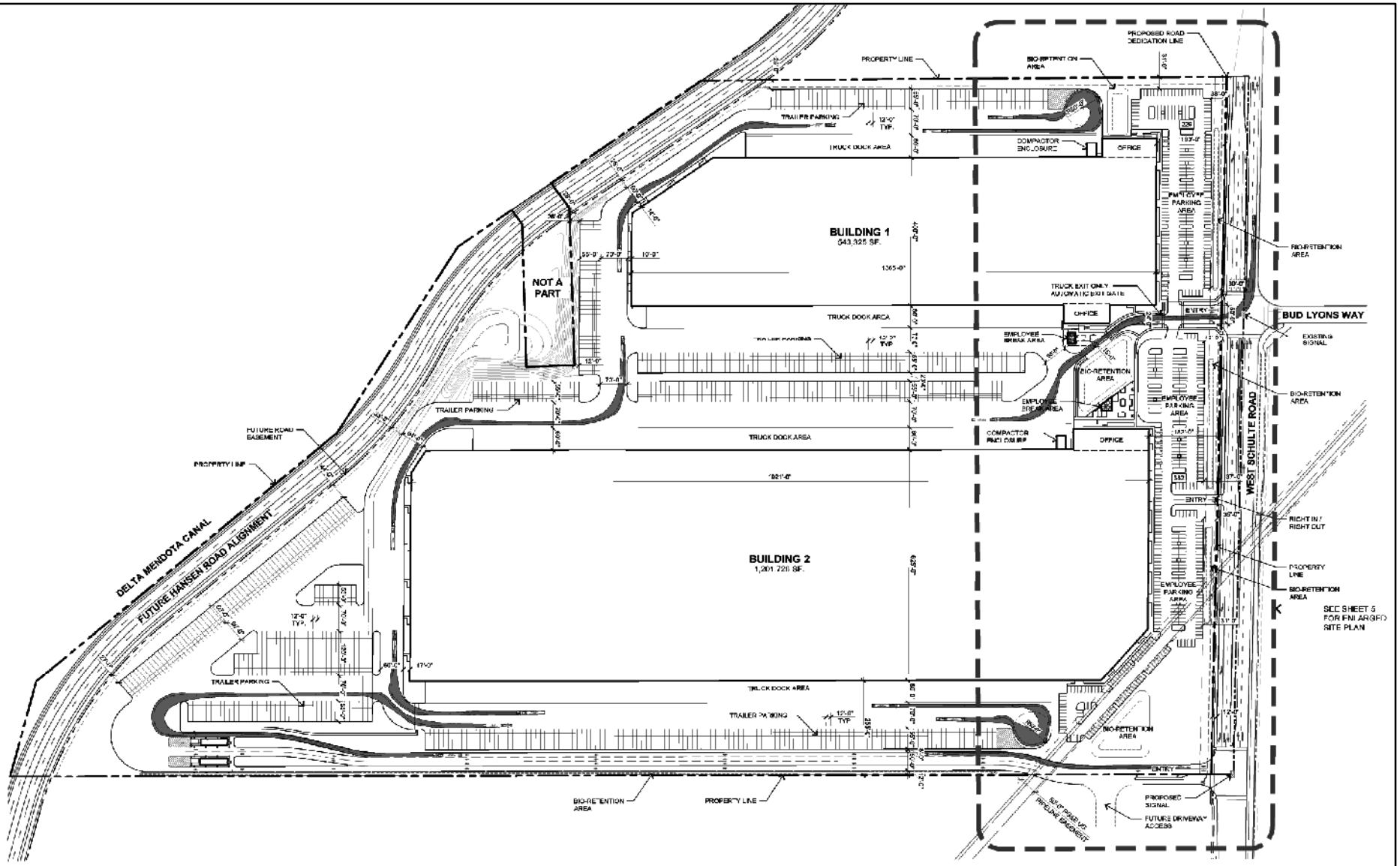
Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service.
Map date: October 25, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 2.0-3. Aerial View of Project Site

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N

0 150 300

Feet

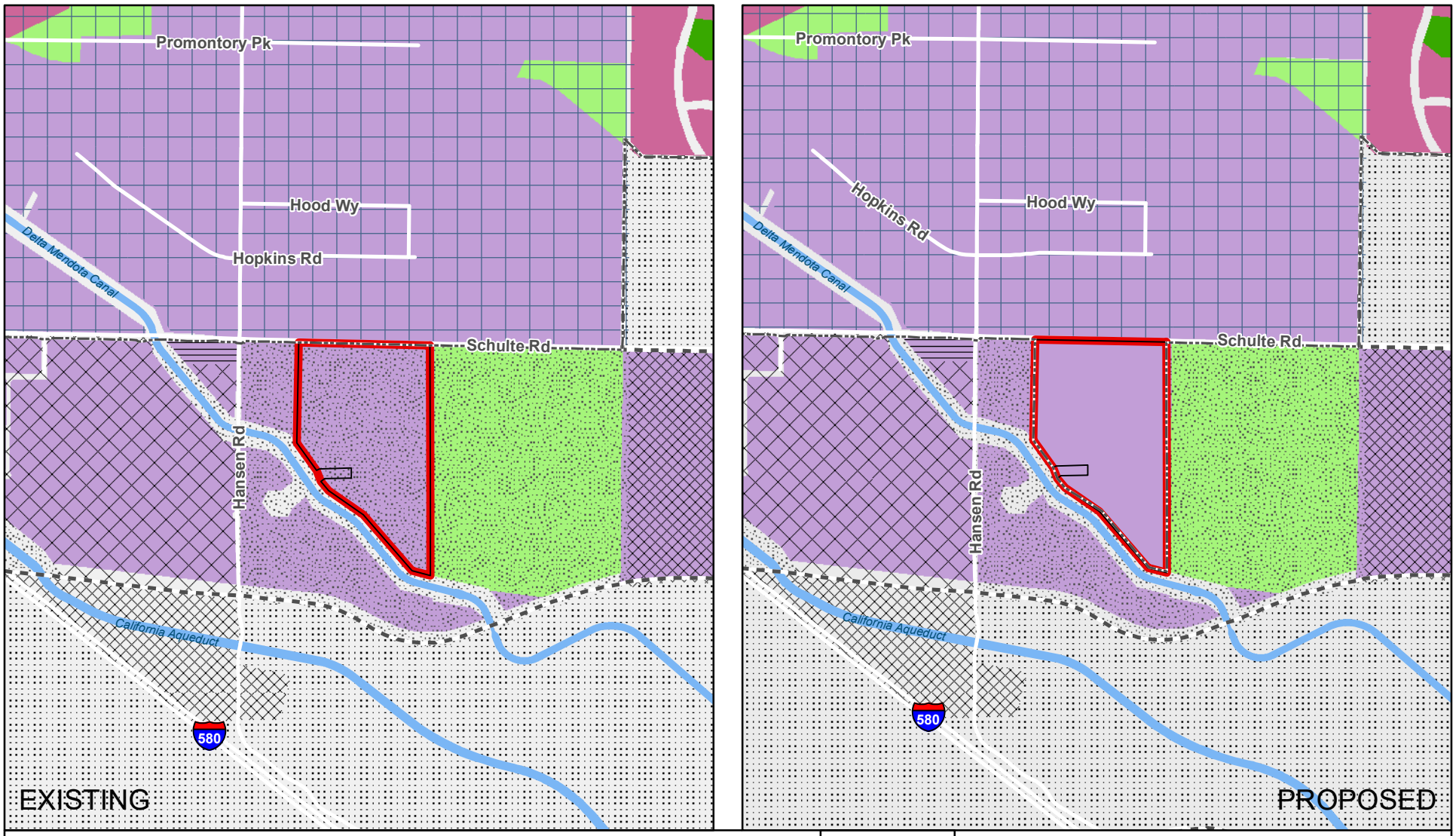
TRACY COSTCO DEPOT PROJECT

Figure 2.0-4.Site Plan

Source: David Babcock + Associates, June 16, 2021. Map date: August 26, 2021.

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Legend

- Project Site/ Annexation Area
- Development Area
- Tracy City Limits

San Joaquin County Land Use

- Agriculture/General
- Agriculture/Urban Reserve
- Industrial/General
- Industrial/Limited
- Public

City of Tracy Land Use

- Industrial
- Office
- Open Space
- Park
- Urban Reserve 6

N

0 500 1,000

Feet

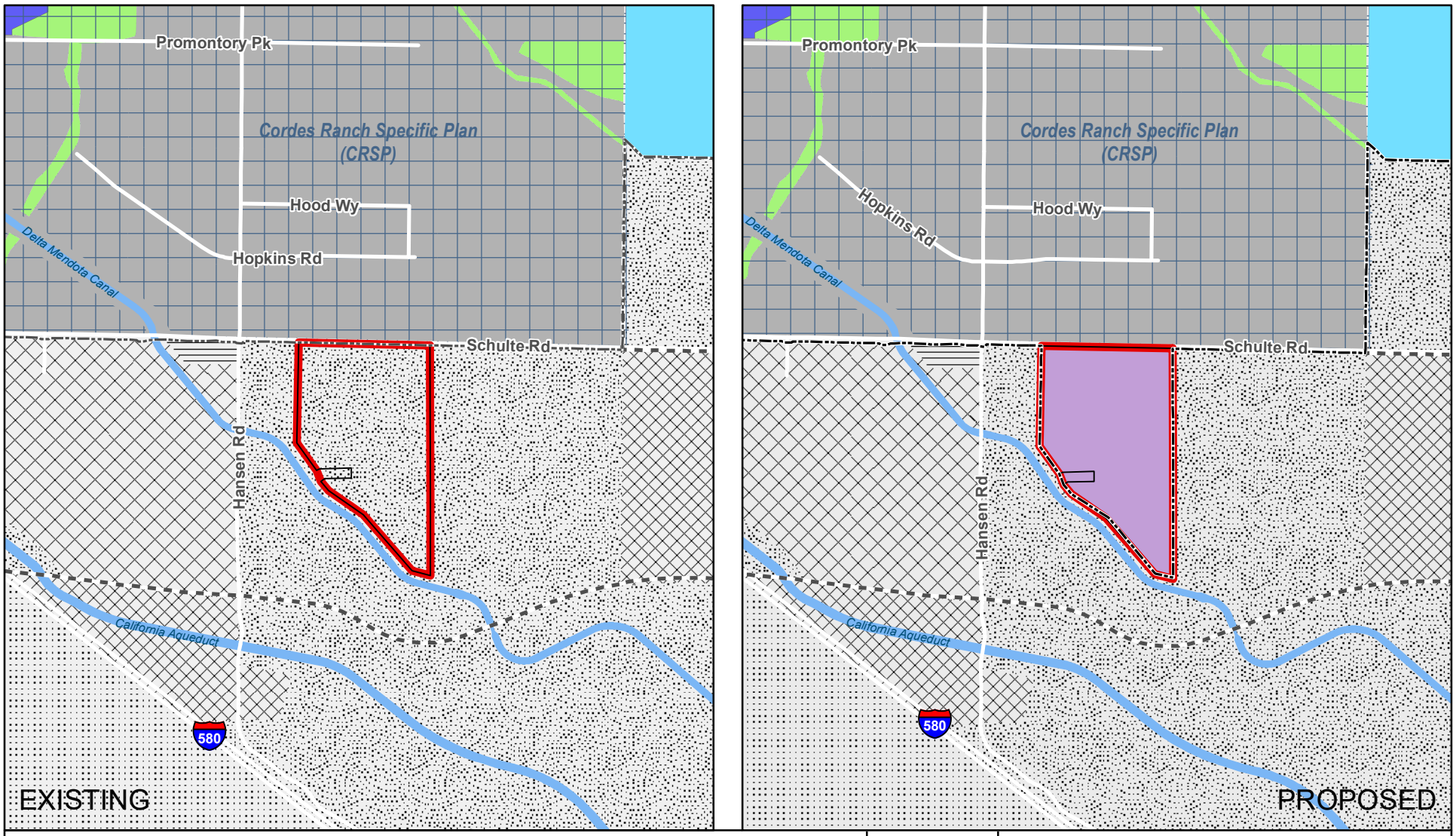
Sources: San Joaquin County GIS; City of Tracy GIS. Map date: November 26, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 2.0-5. Existing and Proposed Land Use Designations

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Legend

Project Site/Annexation Area | Development Area | Tracy City Limits | Sphere Of Influence

City of Tracy Zoning
- CRSP - Cordes Ranch Specific Plan
- PUD - Planned Urban Development
- M-1 - Light Manufacturing

Cordes Ranch Specific Plan
- Business Park Industrial
- General Office
- Park

San Joaquin County Zoning
- AG-160
- AG-40
- I-G
- I-L
- P-F

N

0 500 1,000
Feet

Sources: San Joaquin County GIS; City of Tracy GIS. Map date: October 25, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 2.0-6. Existing and Proposed Zoning Designations

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section provides an overview of the visual character, scenic resources, views, scenic highways, and sources of light and glare that are encountered on the Project site and the vicinity. This section concludes with an evaluation of impacts. Information in this section is derived primarily from the California Department of Transportation (Caltrans) Scenic Highways Program website (2019), San Joaquin County General Plan (2016), City of Tracy General Plan (2011), City of Tracy Municipal Code (June 4, 2019), and City of Tracy Standard Plans (2019).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Full comments received are included in Appendix A.

3.1.1 ENVIRONMENTAL SETTING

VISUAL AND SCENIC RESOURCES

Visual resources are generally classified into two categories: scenic views and scenic resources. Scenic views are elements of the broader viewshed such as mountain ranges, valleys, and ridgelines. They are usually mid-ground or background elements of a viewshed that can be seen from a range of viewpoints, often along a roadway or other corridor. Scenic resources are specific features of a viewing area (or viewshed) such as trees, rock outcroppings, and historic buildings. They are specific features that act as the focal point of a viewshed and are usually foreground elements.

Aesthetically significant features occur in a diverse array of environments within the region, ranging in character from urban centers to rural agricultural lands to natural water bodies. Features of the built environment that may also have visual significance include individual or groups of structures that are distinctive due to their aesthetic, historical, social, or cultural significance or characteristics. Examples of the visually significant built environment may include bridges or overpasses, architecturally appealing buildings or groups of buildings, landscaped freeways, and a location where a historic event occurred.

Most of Tracy's scenic vistas and corridors are associated with the open space and agricultural resources of the surrounding Sphere of Influence (SOI) and Planning Area, and are a valued local asset for the community. The surrounding farming and grazing lands, and grassy hillsides of the Diablo coastal range, serve to situate the City in its local environment and landscape, and provide a reminder of its agricultural heritage.

Scenic resources in the vicinity of the Project site include:

- Views of the Diablo Range. Rising from the Southwest portion of the Tracy Planning Area, this range extends from near sea level to 1,652 feet and provides a visual barrier between the Central Valley and the San Francisco Bay Area. Generally, the eastern slopes visible from Tracy have not been developed and contain sporadic tree groupings.

- Expansive Agricultural Lands. Agricultural lands that are used for row crops and grazing are found in the Project vicinity.

SCENIC HIGHWAYS AND CORRIDORS

Scenic highways and corridors make major contributions to the quality of life enjoyed by the residents of a region. The development of community pride, the enhancement of property values, and the protection of aesthetically-pleasing open spaces reflecting a preference for the local lifestyle are all ways in which scenic corridors are valuable to residents.

Scenic highways and corridors can also strengthen the tourist industry. For many visitors, highway corridors will provide their only experience of the region. Enhancement and protection of these corridors ensures that the tourist experience continues to be a positive one and, consequently, provides support for the tourist-related activities of the region's economy.

Scenic Highways

A scenic highway is generally defined by Caltrans as a public highway that traverses an area of outstanding scenic quality, containing striking views, flora, geology, or other unique natural attributes. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 (I-5) to Interstate 205 (I-205). This route traverses the edge of the Coast Range to the west and Central Valley to the east. Portions of the western portion of the City of Tracy and portions of the Project site are visible from this roadway segment, which is located 0.65 miles southwest of the site.

Scenic Corridors/Routes

A scenic corridor is the view from the road that may include a distant panorama and/or the immediate roadside area. A scenic corridor encompasses the outstanding natural features and landscapes that are considered scenic. It is the visual quality of the man-made or natural environments within a scenic corridor that are responsible for its scenic value. Commonly, the physical limits of a scenic corridor are broken down into foreground views (zero to one quarter mile) and distant views (over one quarter mile). In addition to distinct foreground and distant views, the visual quality of a scenic corridor is defined by special features, which include:

- Focal points - prominent natural or man-made features which immediately catch the eye.
- Transition areas - locations where the visual environment changes dramatically.
- Gateways - locations which mark the entrance to a community or geographic area.

As identified in the Open Space Element of the San Joaquin County General Plan, designated scenic routes in the county include I-5 from the Sacramento County line south to Stockton. The City of Tracy is located southwest of Stockton, and neither the City nor the Project site is visible from this segment of I-5. The City of Tracy General Plan does not identify any scenic routes within or adjacent to the City.

SCENIC WATER RESOURCES AND WILD AND SCENIC RIVERS

Water resources are important visual resources that draw tourists to the area for recreational opportunities.

Wild and Scenic Rivers

Federal agencies have jurisdiction, under the Wild and Scenic Rivers Act, to designate rivers or river sections to "be preserved in free-flowing condition and…protected for the benefit and enjoyment of present and future generations."

The most visually significant water body in the region is the San Joaquin River, which is located approximately 11 miles northeast of the Project site. The San Joaquin River is not designated as a Wild and Scenic River under the Federal Wild and Scenic Rivers Act.

PROJECT SITE

The Project site is located in the western portion of the City of Tracy's Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is located northeast of I-580, approximately 4.75 miles southwest of Tracy City Hall, and directly south of the Cordes Ranch Specific Plan[1]. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site encompasses approximately 101.71 acres of undeveloped land previously used for agricultural purposes. The Project site is relatively flat and ranges in elevation from approximately 148 to 187 feet above sea level. As a result of site disturbance associated with the previous agricultural operations, limited natural scenic areas can be found within the Project site. There is little native vegetation or natural habitat located on the site, and the flat topography of the site renders the site essentially void of prominent natural visual features. There are no trees or light sources on-site.

There is no unique or distinguishing visual or aesthetic characteristic of the Project site, aside from the open space nature of the undeveloped land, which offers a vast expanse of grassland. The undeveloped grassland can provide visual relief to a passerby/viewer from common manmade structures and visual obstructions found in an urban environment. The Project site's aesthetic value can be attributed to its openness and undeveloped nature, which contrasts the industrial nature to the west, east, and north.

[1] The Cordes Ranch Specific Plan establishes land use, zoning, development standards and regulations for approximately 1,780 acres located in the northwest region of the City of Tracy. The vision for the Cordes Ranch Specific Plan is to create a commerce and business park, consisting of 55.1 acres of General Commercial uses, 152.2 acres of General Office uses, 1,476.9-acres of Business Park Industrial uses, and 96.3-acres of Park uses.

Throughout the year the land, previously used for agriculture, evolves from an environment that appears lush with vegetation (green grassland) to an environment that appears barren (dead grassland). Agricultural land in California's Great Central Valley is generally accepted as an important visual resource. The visual character is only occasionally interrupted by shrubbery and mature trees (primarily located near the agricultural residential property west of the site), or by telephone poles (located along West Schulte Road and Hansen Road).

Surrounding Land Uses

The Project site is surrounded by a variety of undeveloped and developed land uses. The Project site is bordered on the north by West Schulte Road. The parcels to the north of the Project site (across West Schulte Road) are designated Industrial in the Tracy General Plan and are part of the Cordes Ranch Specific Plan, which plans for a variety of commerce and business park uses on approximately 1,780-acres of land. An existing industrial warehouse is located to the north/northwest of the Project site across West Schulte Road. The parcel to the west of the Project site is currently undeveloped agricultural land with a ranch-style house, detached garages, barns, and sheds in the southern portion of the parcel. A fenced utility substation is located along West Schulte Road, north of the ranch-style home and associated buildings. The South County Fire Authority Station 94/California Department of Fire Station 26 is located at the southwest corner of the intersection of West Schulte Road and Hansen Road (approximately 800 feet west of the Project site). The Delta Mendota Canal borders the Project site on the south and the parcels to the south across the canal are designated A/UR Urban Reserve Agriculture and A/G General Agriculture by the San Joaquin County General Plan. There is undeveloped agricultural land (designated A/UR Urban Reserve Agriculture by the San Joaquin County General Plan) bordering the site to the east, as well as a glassware manufacturer and the Tracy Biomass Plant (approximately 0.5-mile) to the east beyond the agricultural land. Existing lighting in the vicinity of the Project site is limited and primarily associated with the adjacent developments within the area.

3.1.2 REGULATORY SETTING

STATE

California Scenic Highway Program

The intent of the California Scenic Highway Program is "to protect and enhance California's natural scenic beauty and to protect the social and economic values provided by the State's scenic resources." Caltrans administers the program, which was established in 1963 and is governed by the California Streets and Highways Code §260 et seq. The goal of the program is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of the adjacent land. Caltrans has compiled a list of state highways that are designated as scenic and county highways that are officially designated or eligible for designation as scenic. Scenic highway designation can provide several types of benefits to the region. Scenic areas are protected from encroachment of inappropriate land uses, free of billboards, and are generally required to maintain existing contours and preserve important vegetative features. Only low-density

development is allowed on steep slopes and along ridgelines on scenic highways, and noise setbacks are required for residential development.

To obtain an official "Scenic Highway" designation, the State and Caltrans require a responsible local agency or Local Governing Body (LGB) to prepare a scenic corridor protection program. In the Tracy area, San Joaquin County is the LGB. Corridor protection programs are required to contain the following five elements, which have been included in the San Joaquin County's policies:

- Regulations of land use and density of development;
- Detailed land and site planning;
- Control of outdoor advertising;
- Careful attention to and control of earthmoving and landscaping; and
- The design and appearance of structures and equipment. [2]

According to the Caltrans Scenic Highway Programs website, Caltrans monitors state-designated scenic routes in order to ensure each local jurisdiction's consistency with State guidelines. Specifically, Caltrans District Scenic Highway Coordinator (DSHC) will review a scenic highway for compliance every five years, but can recommend the revocation of scenic designation at any time. To enforce the program, the DSHC will contact the responsible local agency or LGB, in this case, San Joaquin County. The LGB must either respond by submitting its current Corridor Protection Program or a letter of intent to request a revocation of the scenic designation. The DSHC reviews the submittal and takes corrective action to resolve any issues of non-compliance, certifies compliance, or recommends revocation of scenic designation.

LOCAL

The San Joaquin County General Plan and the City of Tracy General Plan identifies visual and scenic resources within the city and county and recommends measures to protect these resources.

San Joaquin County General Plan

San Joaquin County is responsible for enforcing the protection of State-designated scenic routes within its borders. The County General Plan identifies I-580 and Interstate 5 as scenic routes near Tracy. Though the Project site is not traversed by or located adjacent to a scenic route, portions of the Project site are intermittently viewable from I-580 over 0.65 miles away.

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to an evaluation of the visual quality of the Project site. General Plan policies applicable to the Project are identified below:

[2] Scenic Highways Program website, Frequently Asked Questions, https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways/lap-liv-i-scenic-highways-faq2, accessed on November 25, 2019.

POLICY: OPEN SPACE AND CONSERVATION

- OSC-2.2-P1. Development projects shall have buffer zones, such as roads, setbacks and other physical boundaries, between agricultural uses and urban development. These buffer zones shall be of sufficient size to protect the agriculture operations from the impacts of incompatible development and shall be established based on the proposed land use, site conditions and anticipated agricultural practices. Buffers shall be located on the land where the use is being changed, and shall not become the maintenance responsibility of the City.

POLICIES: COMMUNITY CHARACTER

- CC-1.1-P3. All new development and redevelopment shall adhere to the basic principles of high-quality urban design, architecture and landscape architecture including, but not limited to, human-scaled design, pedestrian-orientation, interconnectivity of street layout, siting buildings to hold corners, entryways, focal points and landmarks.
- CC-1.1-P4. To the extent possible, site layout and building design should take into account Tracy's warm, dry climate, such as through the inclusion of trees and landscaping or other architectural elements to provide shade.
- CC-1.1-P5. Lighting on private and public property should be designed to provide safe and adequate lighting, while minimizing light spillage to adjacent properties.
- CC-1.2-P1. New development projects shall be approved only if they meet the design principles set forth in the Community Character Element and in detailed design guidelines approved by the City Council.
- CC-1.5-P1. New development shall locate and construct utilities underground.
- CC-11.1.-P1. Employment Areas should contain one or more Focal Points such as a retail use, park or plaza.
- CC-11.1.-P2. Focal Points in Employment Areas may be located on private or public property and are encouraged to be publicly accessible.
- CC-11.2-P.1. Development in Employment Areas should adhere to high-quality design standards.
- CC-11.2-P.4. Building setbacks for office buildings or office portions of industrial buildings should be minimized to ensure that buildings define the edges of the street.
- CC-11.2-P.6. Loading facilities in Employment Areas should be screened from view from public streets to the extent possible.
- CC-11.3-P.1. The impact of parking in Employment Areas on the pedestrian environment should be minimized with attractive landscaping.
- CC-11.3-P.2. Parking lots should be set back from the street with a landscaped buffer wherever possible.
- CC-11.3-P.3. Parking for alternative modes of transportation, such as preferential parking for carpool/vanpool, motorcycles or alternative fuel vehicles and bicycles, should be incorporated into parking plans for development projects in Employment Areas.

City of Tracy Municipal Code

Tracy Municipal Code Section 10.08.3560, Landscaping Requirements for Parking Areas, contains standards and provisions related to landscaping design requirements that would apply to the proposed Project. The primary intent of Section 10.08.3560 is to require a variety of landscaping throughout the parking areas and to screen the parking areas from the public rights-of-ways.

Tracy Municipal Code Chapter 11.28, Article 8, Water Efficient Landscape Ordinance, establishes structure for planning, designing, installing, maintaining and managing water efficient landscapes in new construction and rehabilitated projects by encouraging the use of a watershed approach. The ordinance promotes the benefits of consistent landscape ordinances with local and regional agencies, as well as promotes the values and benefits of landscaping that integrate and go beyond the conservation and efficient use of water.

The City's Municipal Code Chapter 7.08, Trees and Shrubbery, contains standards for tree planting and removal, as well as provisions that address tree maintenance of public and private property. The standards address issues of trees on private property and those on public easements through private property.

City of Tracy Standard Plans

The City of Tracy Standard Plan #140 establishes standards for street lights, requiring high pressure sodium lamps. Standard Plan #154 establishes standards for lighting parking areas, requiring that illuminated parking facilities provide a minimum 1-foot candle.[3] The City's Standard Plan for streetscapes and parks (#D10.0) establishes that all lights shall be designed and oriented to shield neighboring residences to the extent possible.[4]

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on aesthetics if it will:

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- 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

[3] City of Tracy, Standard Plans (Streets and Utilities), https://www.ci.tracy.ca.us/documents/Standard_Plans_Streets_Utilities.pdf, accessed on November 25, 2019.
[4] City of Tracy, Standard Plans (Parks and Streetscapes), https://www.ci.tracy.ca.us/documents/Standard_Plans_Parks_Streetscape.pdf , accessed on November 25, 2019.

project conflict with the applicable zoning and other regulations governing scenic quality; and/or

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

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas. (Significant and Unavoidable)

As described in Chapter 2.0, Project Description, the proposed Project includes the annexation of the 104.36-acre Project site into the City of Tracy city limits and subsequent development of the 103.0-acre Development Area. Development of the proposed Project would convert the 103.0-acre Development Area from its existing use as vacant land into an industrial warehouse use. The Project would include the construction and subsequent operation of two warehouse buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) totaling approximately 1,745,052 sf on the 104.46-acre Project site. Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor facility for large items returned to a Costco warehouse. Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. The entire Project Site would be annexed into the City.

The Project site is not designated as a scenic vista by the City of Tracy General Plan or the San Joaquin County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista. However, as noted previously, most of Tracy's scenic vistas and corridors are associated with the open space and agricultural resources of the surrounding Sphere of Influence (SOI) and Planning Area, and are a valued local asset for the community. The surrounding farming and grazing lands, and grassy hillsides of the Diablo coastal range, serve to situate the City in its local environment and landscape, and provide a reminder of its agricultural heritage.

Scenic resources in the vicinity of the Project site include:

- Views of the Diablo Range. Rising from the Southwest portion of the Tracy Planning Area, this range extends from near sea level to 1,652 feet and provides a visual barrier between the Central Valley and the San Francisco Bay Area. Generally, the eastern slopes visible from Tracy have not been developed and contain sporadic tree groupings.
- Expansive Agricultural Lands. Agricultural lands that are used for row crops and grazing are found in the Project vicinity.

The above-referenced public views are primarily available to motorists traveling along the major transportation corridors at highway speed. In addition, these public views of foothills and mountains are characteristic of San Joaquin County, and exist throughout the region. The Project

site is highly visible from Old Schulte Road and portions of the project site may be visible from I-580 (between I-205 and I-5).

Implementation of the proposed Project would change the existing visual character of the site from vacant agricultural land to industrial uses. Impacts related to a change in visual character are largely subjective and very difficult to quantify. People have different reactions to the visual quality of a project or a project feature, and what is considered "attractive" to one viewer may be considered "unattractive" to other viewers. The Project site currently consists primarily of vacant agricultural lands. Agricultural lands provide visual relief from urban and suburban developments, and help to define the character of a region.

As described above, Project implementation would introduce industrial uses, as well as supporting infrastructure on a site that is currently undeveloped. The proposed Project would include visual components that would assist in enhancing the appearance of the site following site development. The proposed warehouse design is contemporary and uses a variety of massing and materials for the scale of the building. The maximum height of the building components would be 46 feet (for the pewter cast vertical metal panels), while the majority of the warehouse would be 40 feet. Architectural metal with varied textures and horizontal and vertical orientations would be used, while varying parapet cap heights would break up the long elevations both horizontally and vertically in order to conceal rooftop-mounted mechanical equipment. The proposed color palette is composed of warm natural earth tones, which would relate to the adjacent Cordes Ranch Specific Plan development to the north of the project site. These techniques of breaking a long elevation into smaller elements with varied materials and colors would create architecturally interesting warehouse buildings while minimizing the visual impact of the large-scale structures.

As described in Chapter 2.0, Landscaping improvements, such as new street trees and other vegetation landscaping, would be provided throughout the Project site, including along the site boundary. The landscape design and plant palette would complement the existing street and building/development landscape character established by Prologis and the International Park of Commerce providing visual relief from the proposed improvements. Additionally, the proposed Project would also include landscaping buffer zones, pursuant to General Plan Policy OSC-2.2-P1, at the interface of urban development and farmland in order to minimize conflicts between the uses and provide a visual shield.

The proposed Project would result in the conversion of the vacant agricultural land, which would contribute to changes in the regional landscape and visual character of the area. In order to reduce visual impacts, development within the Project site is required to be consistent with the General Plan and the Tracy Zoning Ordinance which includes design standards in order to ensure quality and cohesive design of the Project site and ensure the public views from the transportation corridors would be of high quality. These standards include specifications for building height, massing, and orientation; exterior lighting standards and specifications; and landscaping standards. Implementation of the design standards would ensure quality design throughout the Project site, and result in a Project that would be internally cohesive while maintaining aesthetics similar to surrounding uses.

Nevertheless, the loss of the visual appearance of the existing agricultural land on the site would change the visual character of the Project site in perpetuity. Because the City's General Plan EIR considers public views of agricultural lands to be scenic resources and vistas to be local assets, and the proposed Project includes 104.46 acres of vacant agricultural land, this is considered a ***significant and unavoidable*** impact. There is no additional feasible mitigation available that would reduce this impact to a less than significant level.

Impact 3.1-2: Project implementation may substantially damage scenic resources within a State Scenic Highway. (Less than Significant)

As previously discussed, only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of I-580 from Interstate 5 to Interstate 205. This Designated Scenic Highway is located approximately 0.65 miles southwest of the Project site. The views from I-580 to the Project site are limited because of small hills, commercial buildings along I-580, and high speeds of travel. However, new development proposed by the Project in the viewsheds would have the potential to adversely affect a State-designated route.

The land in the southeastern corner of the Project site is the closest area that can be seen from I-580. However, the land between I-580 and the Project site is developed with several large single-story industrial/warehouse style buildings, located to the west of Hansen Road between the Delta Mendota Canal and the California Aqueduct, and smaller industrial/commercial buildings, located to the east and west of Hansen Road between the California Aqueduct and I-580. The proposed Project would result in development that is consistent in scale and type as compared to the existing and future uses (i.e., Cordes Ranch Specific Plan to the north) within the immediate area. As discussed in Impact 3.1-1, the City's General Plan EIR lists the City's scenic resources and vistas that are considered to be local assets, noting public views of the expansive agricultural lands resource within a State Scenic Highway. While the Project would permanently convert the agricultural land to urbanized use, potential views of the Project site are limited due to the topography and the existing urban development in the Project vicinity reducing potential views of the proposed development from the State Scenic Highway. Thus, implementation of the Project would not substantially damage scenic resources within a State Scenic Highway, as public views of the agricultural land from I-580 are limited; therefore, this is a ***less than significant*** impact.

Impact 3.1-3: In an urbanized area, Project implementation would not conflict with the applicable zoning and other regulations governing scenic quality. (Less than Significant)

The CEQA definition for an "Urbanized area" means a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile. In addition, to be considered an Urbanized area according to CEQA, projects must also be within the boundary of a map prepared by the U.S. Bureau of the Census which designates the area as urbanized area. According to the U.S. Bureau of the Census, the Project site is mapped and designated as urbanized area. In addition, the Project site is located within the City of Tracy, which has an estimated population of

approximately 94,538 people; meaning the Project site is within an urbanized area and subjected to applicable zoning or other regulation governing scenic quality. Future development of the Project site would convert the Project site from its existing state to industrial warehouse use.

The proposed Project would result in a land use consistent with the planned development of the Project area. More specifically, the Project proposes the construction of an industrial warehouse development, which would be aesthetically similar to industrial uses currently developed or anticipated within the immediate area. The proposed Project is located just south of the recently approved Cordes Ranch Specific Plan and Specific Plan EIR, which anticipates the development of approximately 1,780 acres of land with commercial, office, business park industrial, and park and recreational uses. Additionally, the 610-acre Patterson Park Business Park, located to the west of the Project site, just south of the Delta Mendota Canal, is currently developed with a number of similarly-scaled industrial and business park warehouse facilities. Both planned developments would limit public views of the Project site from motorists traveling along transportation corridors in the area, such as I-580 and I-205. Therefore, while the Project would result in a loss of rural agricultural land, it would result in the development of industrial warehouses consistent with the City's design guidelines in an area of Tracy currently planned for and developed with similarly scaled warehouses and industrial.

Overall, Project implementation would not conflict with the applicable zoning and other regulations governing scenic quality. This impact is ***less than significant***.

Impact 3.1-4: Project implementation may result in light and glare impacts. (Less than Significant)

Implementation of the proposed Project would introduce new sources of light and glare into the vacant Project site. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Project site and from vehicles parked at the site. There is also the potential for reflective building materials and windows to result in increases in daytime glare. The main building structures of the Project would be pre-engineered systems that use 80 percent recycled steel materials with building exteriors consisting of pre-manufactured metal wall panels. Additionally, the roof materials would consist of 80 percent recycled standing seam metal panels, which would lessen heat gain. While the pre-manufactured metal and seam metal panels of the main structures would reduce building heat absorption and lower energy requirements, they would introduce reflective building materials to the Project site, thus increasing daytime glare. However, the landscaping on-site would include a variety of shade trees throughout the Project site and the perimeter of the site, including office break areas, would be landscaped with a variety of grasses and oak trees per the preliminary landscape plan. The proposed landscaping would assist in shielding glare resulting from the proposed building materials and glass windows.

According to the City's General Plan EIR, the City's Standard Plans do not have regulations limiting glare. Rather, the City addresses light and glare issues on a case-by-case basis during project approval, which typically involve the addition of requirements as a condition of project approval to shield and protect against light splashing from one development to adjacent properties. The proposed Project would be reviewed by the City during Project approval.

Proposed Project lighting includes street lighting, exterior lighting around the warehouses, and safety lighting throughout the Project site. As noted in Chapter 2.0, Project Description, lighting fixtures would be located approximately every 40 feet around the exterior of the warehouse buildings to provide safety and security. Additionally, employee vehicle parking lot and truck and trailer parking areas would be illuminated with standard downward pointing lights, each containing two LED fixtures affixed to a 38-foot light pole. The lighting fixtures would be of a "shoe-box" style designed to provide even light distribution and to reduce any light spillover onto neighboring rural properties, and utilize less energy compared to a greater number of fixtures at lower heights. However, the LED lamps provide a higher level of perceived brightness with less energy than other lamps.

The City of Tracy Standard Plan #140 establishes street light standards, and requirements for light illumination to assist in reducing light impacts. Additionally, City of Tracy Standard Plan #154 establishes standards for lighting parking areas, requiring that illuminated parking facilities provide a minimum 1-foot candle. Further, Section 10.08.400 of the Municipal Code specifies that the site plan and architectural review package includes an exterior lighting standards and devices review. It should be noted that the City addresses light and glare issues on a case-by-case basis during project approval and would require the Project to shield and protect against light spillover onto adjacent properties. Compliance with these existing City regulations would ensure that his impact is ***less than significant***.

This section provides an overview of the agricultural crops in San Joaquin County and the City of Tracy, agricultural capability of the soils on the Project site, and existing site conditions. This section concludes with an evaluation of the impacts related to agricultural resources and recommendations for mitigating impacts as needed. Information in this section is derived primarily from the California Important Farmlands Map (California Department of Conservation, 2016), the California Land Conservation (Williamson) Act Status Report (California Department of Conservation, 2010), the San Joaquin County Crop Report (San Joaquin County Agricultural Commissioner, 2018), and the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2016).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the following: the California Department of Conservation (September 10, 2020). Comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

As discussed in the Initial Study for the proposed Project, there are no forest resources located on the Project site or in the City of Tracy; thus, this CEQA topic is not relevant to the proposed Project, and ***no impact*** would occur. As such, forest resources will not be addressed further in this EIR. The Initial Study is included in Appendix A.

3.2.1 ENVIRONMENTAL SETTING

SAN JOAQUIN COUNTY AGRICULTURE

San Joaquin County occupies a central location in California's vast agricultural heartland, the San Joaquin Valley. The County's Agricultural Commissioner's most recent published Crop Report (2020) contains the following information about agriculture in the County.

Agricultural Value

San Joaquin County has a total land area of 1,391 square miles. The total acreage of crop land in the county is approximately 784,800 acres. The gross value of agricultural production in San Joaquin County for 2020 was $3,031,279,000 which represents a 15.8 percent increase from 2019 when gross production value totaled $2,617,815,000. Table 3.2-1 lists the top eight crop commodities in San Joaquin County in 2019 and 2020.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

PRODUCT TYPE	*2019 VALUE*	*2020 VALUE*
Field Crops	$204,057,000	$235,304,000
Vegetable Crops	$228,893,000	$260,363,000
Fruit and Nut Crops	$1,354,789,000	$1,603,784,000
Nursery Products	$115,542,000	$132,255,000
Livestock and Poultry	$121,085,000	$124,305,000
Livestock and Poultry Products	$540,204,000	$622,507,000
Seed Crops	$3,281,000	$4,090,000
Apiary Products	$37,853,000	$48,671,000

SOURCE: SAN JOAQUIN COUNTY AGRICULTURAL REPORT, 2020.

AGRICULTURAL CAPABILITY

The California Department of Conservation Farmland Mapping and Monitoring Program identifies lands that have agriculture value and maintains a statewide map of these lands called the Important Farmlands Inventory (IFI). IFI classifies land based upon the productive capabilities of the land, rather than the mere presence of ideal soil conditions.

The suitability of soils for agricultural use is just one factor for determining the productive capabilities of land. Suitability is determined based on many characteristics, including fertility, slope, texture, drainage, depth, and salt content. A variety of classification systems have been devised by the state to categorize soil capabilities. The two most widely used systems are the Capability Classification System and the Storie Index. The Capability Classification System classifies soils from Class I to Class VIII based on their ability to support agriculture with Class I being the highest quality soil. The Storie Index considers other factors such as slope and texture to arrive at a rating. The IFI is in part based upon both of these two classification systems.

Soil Capability Classification System

The Soil Capability Classification System takes into consideration soil limitations, the risk of damage when soils are used, and the way in which soils respond to treatment. Capability classes range from Class I soils, which have few limitations for agriculture, to Class VIII soils that are unsuitable for agriculture. Generally, as the rating of the capability classification increases, yields and profits are more difficult to obtain. A general description of soil classifications, as defined by the NRCS is provided in Table 3.2-2 below.

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

CLASS	*DEFINITION*
I	Soils have slight limitations that restrict their use.
II	Soils have moderate limitations that restrict choice plants or that require moderate conservation practices.
III	Soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.
IV	Soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.
V	Soils are not likely to erode but have other limitations; impractical to remove that limits their use largely to pasture or range, woodland, or wildlife habitat.
VI	Soils have severe limitations that make them generally unsuited to cultivation and limit their use largely to pasture or range, woodland, or wildlife habitat.
VII	Soils have very severe limitations that make them unsuited to cultivation and that restrict their use largely to pasture or range, woodland, or wildlife habitat.
VIII	Soils and landforms have limitations that preclude their use for commercial plans and restrict their use to recreation, wildlife habitat, water supply, or aesthetic purposes.

SOURCE: USDA SOIL CONSERVATION SERVICE.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating) which have few or no limitations for agricultural production, to Grade 6 soils (less than 10) which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor

drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 3.2-3.

TABLE 3.2-3: STORIE INDEX RATING SYSTEM

GRADE	INDEX RATING	DEFINITION
1	80 – 100	Few limitations that restrict their use for crops
2	60 – 80	Suitable for most crops, but have minor limitations that narrow the choice of crops and have a few special management needs
3	40 – 60	Suited to a few crops or to special crops and require special management
4	20 – 40	If used for crops, severely limited and require special management
5	10 – 20	Not suited for cultivated crops, but can be used for pasture and range
6	Less than 10	Soil and land types generally not suited to farming

SOURCE: USDA SOIL CONSERVATION SERVICE, SOIL SURVEY OF YOLO COUNTY, CALIFORNIA, 1972.

In addition to soil suitability, other factors for determining the agricultural value of land include whether soils are irrigated, the depth of soil, water-holding capacity, and physical and chemical characteristics. Areas considered to have the greatest agricultural potential are designated as Prime Farmland or Farmland of Statewide Importance.

Important Farmlands

The Farmland Mapping and Monitoring Program (FMMP) is a farmland classification system administered by the California Department of Conservation. Important farmland maps are based on the Land Inventory and Monitoring criteria, which classify a land's suitability for agricultural production based on both the physical and chemical characteristics of soils, and the actual land use. The system maps five categories of agricultural land, which include important farmlands (prime farmland, farmland of statewide importance, unique farmland, and farmland of local importance) and grazing land, as well as three categories of non-agricultural land, which include urban and built-up land, other land, and water area.

IMPORTANT FARMLANDS IN SAN JOAQUIN COUNTY

Data from the Department of Conservation indicates that approximately 1,245 acres of Prime Farmland in the County was developed for other uses between 2014 and 2016, resulting in an existing total of 381,634 acres of Prime Farmland (51 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (11 percent), Unique Farmland (11 percent), Farmland of Local Importance (9 percent), and Grazing Land (18 percent). The types and acreages of farmland in 2014 and 2016 are shown below in Table 3.2-4.

TABLE 3.2-4: SAN JOAQUIN COUNTY FARMLANDS SUMMARY AND CHANGE BY LAND USE CATEGORY

LAND USE CATEGORY	*2014-2016 ACREAGE CHANGES*							
	TOTAL ACREAGE INVENTORIED				*ACRES LOST*	*ACRES GAINED*	*TOTAL ACREAGE CHANGED*	*NET ACREAGE CHANGED*
	2014		*2016*		*(-)*	*(+)*		
	Acres	*Percent*	*Acres*	*Percent*				
Prime Farmland	382, 879	42%	381,634	42%	4,338	3,093	7,431	-1,245
Farmland of Statewide Importance	82,271	9%	82,618	9%	1,189	1,536	2,725	347
Unique Farmland	76,415	8%	81,920	9%	830	6,335	7,165	5,505
Farmland of Local Importance	73,429	8%	68,903	7%	9,150	4,624	13,774	-4,526
IMPORTANT FARMLAND SUBTOTAL	614,994	67%	615,075	67%	15,507	15,588	31,095	81
Grazing Land	132,950	15%	129,760	14%	3,385	195	3,580	-3,190
AGRICULTURAL LAND SUBTOTAL	747,944	82%	744,835	81%	18,892	15,783	34,675	-3,109
Urban and Built-up Land	93,888	10%	95,329	10%	365	1,806	2,171	1,441
Other Land	59,004	6%	60,602	7%	1,482	3,080	4,562	1,598
Water Area	11,766	1%	11,836	1%	235	305	540	70
TOTAL AREA INVENTORIED	912,602	100%	912,602	100%	20,974	20,974	41,948	0

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2016.

EXISTING SITE CONDITIONS

As described in Chapter 2.0, Project Description, the Project site includes two distinct planning boundaries, including the 104.36-acre Annexation Area (or Project site) and the 103-acre Development Area. The 104.36-acre Project site encompasses undeveloped land previously used for agricultural purposes. The agricultural land on the Project site is not under a Williamson Act contract or conservation easement.

Surrounding Land Uses

The Project site is located immediately south of the intersection of West Schulte Road and Bud Lyons Way. The Project site is bounded on the north by West Schulte Road, on the east by undeveloped agricultural land, on the south by Delta Mendota Canal, and on the west by undeveloped agriculture land and a driveway serving the adjacent rural residential use.

The Project site is surrounded by a variety of undeveloped and developed land uses. Uses immediately adjacent to the east and south of the Project site include undeveloped agricultural land within unincorporated San Joaquin County. The parcel to the west of the Project site is currently undeveloped agricultural land with a ranch-style house, detached garages, barns, and sheds in the southern portion of the parcel. Existing and future industrial uses are also located to the northwest, north, and northeast of the Project site (within the Cordes Ranch Specific Plan Area, located in the City of Tracy). Other nearby uses include the South County Fire Authority Station 94/California Department of Fire Station 26 directly southwest of the intersection of West

Schulte Road and Hansen Road (approximately 800 feet west of the Project site) and the Tracy Biomass Facility (approximately ½ mile to the east past the undeveloped agricultural land).

Project Site Farmland Characteristics

The State of California Department of Conservation FMMP and San Joaquin County GIS data were used to illustrate the farmland characteristics for the Project site. Farmlands on the Project site are identified in Figure 3.2-1. The farmland classifications for the site and surrounding area are described below.

PRIME FARMLAND

Prime farmland is farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

There are 101.78 acres classified as Prime Farmland in the Project site. Prime Farmlands are also located northeast, south, west, and southwest of the Project site.

FARMLAND OF STATEWIDE IMPORTANCE

Farmland of Statewide Importance is farmland with characteristics similar to those of prime farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

There is no Farmland of Statewide Importance within the Project site, or in the immediate vicinity.

UNIQUE FARMLAND

Unique farmland is farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

There is no Unique Farmland within the Project site, or adjacent to the site. Unique Farmland is located southwest of the Project site, west of Interstate 580.

FARMLAND OF LOCAL IMPORTANCE

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by each county's board of supervisors and a local advisory committee.

There are 0.44 acres of Farmland of Local Importance within the Project site. Farmland of Local Importance is located adjacent to the Project site to the east and north. Farmland of Local

Importance is also located in the vicinity of the Project site to the southeast, southwest, northeast, and northwest.

GRAZING LAND

Grazing Land includes land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.

Grazing Land is located in the general vicinity of the Project site to the south (north and south of the California Aqueduct and Interstate 580).

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND

Semi-Agricultural and Rural Commercial Land includes farmsteads, agricultural storage and packing sheds, unpaved parking areas, composting facilities, equine facilities, firewood lots, and campgrounds.

There are 0.35 acres of Semi-Agricultural and Rural Commercial Land in the Project site. Semi-Agricultural and Rural Commercial Land is located in the general vicinity of the Project site to the west (north of the Delta Mendota Canal) and southwest (north and south of the California Aqueduct along Hansen Road).

URBAN AND BUILT-UP LAND

Urban and Built-Up Land includes land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.

Urban and Built-up Land is located to the west of the Project site across Hansen Road, to the north of the Project site north of Hopkins Road, and to the east of the Project site at the Biomass Facility.

Soils and Farmland Characteristics

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.2-5 identifies the soils found in the Project site. The NRCS Soils Map is provided on Figure 3.6-1 in Section 3.6, Geology and Soils.

TABLE 3.2-5: PROJECT SITE SOILS

UNIT SYMBOL	*NAME*	*ACRES IN AOI*	*PERCENT OF AOI*	*CAPABILITY CLASSIFICATION**
118	Capay clay, 0 to 1 percent slopes	95.85	93.4%	II-IV
252	Stomar clay loam, o to 2 percent slopes	6.73	6.6%	II-IV
	Totals	101.71	100.0%	--

** DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING*

SOURCE: NRCS CUSTOM WEB SOIL SURVEY, 2021; SAN JOAQUIN COUNTY SOIL SURVEY, 1992.

Capay clay. The Capay series consists of very deep, moderately well and somewhat poorly drained soils that formed in fine textured alluvium derived from mostly sandstone and shale. Capay soils are on flood basins, alluvial fans, interfan basins and basin rims. They formed in fine textured alluvium derived from sandstone and shale or other mixed rock sources. Slopes are 0 to 15 percent. They have a moderately well and somewhat poor drainage and a slow to very slow permeability. Common uses for this series include: growing irrigated crops such as tomatoes, sugar beets, beans or grain sorghum, dry farmed to small grains, and irrigated and dryland pasture. Native vegetation is a dense stand of annual grasses and forbs.

As shown in Table 3.2-5, 93.4 percent of the site soils are Capay clay soils. This soil type is located throughout the entire Project site, except in the northeastern corner of the site.

Stomar clay loam. The Project site contains 6.73 acres of stomar soils. The Stomar series consists of very deep, well drained soils formed in alluvium from sedimentary rocks sources. Stomar soils are on dissected alluvial fans and terraces. The soils formed in material weathered from sandstone and shale. Slopes are 0 to 2 percent. The annual precipitation is about 9 inches and the annual temperature is about 62 degrees F. This series is well drained; negligible to high runoff; and has a slow permeability. Common uses for this series include: irrigated cropland including field crops, row crops and orchards. It is also used for dryland cropland such as grain. Some areas are used for urban land and there are small areas used for livestock grazing. Typical vegetation where not cultivated is annual grasses and forbs.

As shown in Table 3.2-5, 6.73 percent of the site soils are Stomar clay loam soils. This soil type is located in the northeastern corner of the Project site along the eastern site boundary.

Williamson Act Contracts

The Williamson Act authorizes each County to establish an agricultural preserve. Land that is within the agricultural preserve is eligible to be placed under a contract between the property owner and County that would restrict the use of the land to agriculture in exchange for a tax assessment that is based on the yearly production yield. The contracts have a 10-year term that is automatically renewed each year, unless the property owner requests a non-renewal or the contract is cancelled. If the contract is cancelled the property owner is assessed a fee of up to 12.5 percent of the property value.

The Project site is not under a Williamson Act contract, nor are any of the parcels that are located adjacent to the Project site under a current contract. The nearest parcel (APN: 209-240-01) under a Williamson Act contract is approximately 0.5 miles to the southeast of the Project site.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the extent to which federal programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses. It ensures that, to the extent practicable, federal programs are compatible with state and local units of government as well as private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a federal agency or with assistance from a federal agency. For the purpose of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for crop production. In fact, the land can be forest land, pastureland, cropland, or other land but does not include water bodies or land developed for urban land uses (i.e., residential, commercial, or industrial uses).

The NRCS administers the Farmland Protection Program. NRCS uses a land evaluation and site assessment (LESA) system to establish a farmland conversion impact rating score on proposed sites of federally funded and assisted projects. This score is used as an indicator for the project sponsor to consider alternative sites if the potential adverse impacts on the farmland exceed the recommended allowable level. The assessment is completed on form AD-1006, Farmland Conversion Impact Rating. The sponsoring agency completes the site assessment portion of the AD-1006, which assesses non-soil related criteria such as the potential for impact on the local agricultural economy if the land is converted to non-farm use and compatibility with existing agricultural use.

The Project site and adjacent parcels will not be completed by a federal agency, or with assistance from a federal agency. Therefore, the Project will not be subject to the FPPA.

STATE

Williamson Act

The California Land Conservation Act of 1965, commonly known as the Williamson Act, was established based on numerous State legislative findings regarding the importance of agricultural lands in an urbanizing society. Policies emanating from those findings include those that discourage premature and unnecessary conversion of agricultural land to urban uses and discourage discontinuous urban development patterns, which unnecessarily increase the costs of community services to community residents. As stated above, the Project site is not under a Williamson Act contract, nor are any of the parcels that are located adjacent to the Project site under a current contract.

Farmland Security Zones

In 1998, the state legislature established the Farmland Security Zone (FSZ) program. FSZs are similar to Williamson Act contracts, in that the intention is to protect farmland from conversion. The main difference however, is that the FSZ must be designated as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance. The term of the contract is a minimum of 20 years. The property owners are offered an incentive of greater property tax reductions when compared to the Williamson Act contract tax incentives; the incentives were developed to encourage conservation of prime farmland through FSZs. The non-renewal and cancellation procedures are similar to those for Williamson Act contracts.

The Project site and the adjacent parcels are not within the FSZ program.

California Government Code Section 56064

This section of the Government Codes defines "Prime agricultural land" as follows:

- Prime agricultural land means an area of land, whether a single parcel or contiguous parcels, that has not been developed for a use other than an agricultural use and that meets any of the following qualifications:
    - Land that qualifies, if irrigated, for rating as class I or class II in the USDA Natural Resources Conservation Service land use capability classification, whether or not land is actually irrigated, provided that irrigation is feasible.
    - Land that qualifies for rating 80 through 100 Storie Index Rating.
    - Land that supports livestock used for the production of food and fiber and that has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture in the National Range and Pasture Handbook, Revision 1, December 2003.
    - Land planted with fruit or nut-bearing trees, vines, bushes, or crops that have a nonbearing period of less than five years and that will return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than four hundred dollars ($400) per acre.
    - Land that has returned from the production of unprocessed agricultural plant products an annual gross value of not less than four hundred dollars ($400) per acre for three of the previous five calendar years.

LOCAL

Local Agency Formation Commission Boundary Controls

The San Joaquin Local Agency Formation Commission (LAFCo) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation of the Project site into the City of Tracy would be subject to LAFCo approval, and LAFCo's decision is governed by state law (Gov't Code § 56001 et seq.) and the local LAFCo Policies and Procedures.

State law requires LAFCos to consider agricultural land and open space preservation in all decisions related to expansion of urban development. LAFCO's definition of Prime Agriculture land refers to California Government Code Section 56064, which is described above.

City of Tracy General Plan

The City of Tracy General Plan designates the Project site as Industrial (I). The General Plan includes several policies relevant to agricultural resources. General Plan policies and implementation measures applicable to the Project are identified below:

POLICIES: LAND USE

- LU-6.1-P9. New industrial or mining uses shall be designed to not adversely impact adjacent uses, particularly residential neighborhoods, with respect to, but not limited to, noise, dust and vibration, water quality, air quality, agricultural resources and biological resources.

POLICIES: OPEN SPACE AND CONSERVATION

- OSC-2.1-P1: The City shall support San Joaquin County's efforts to preserve agricultural uses in the Tracy Planning Area.
- OSC-2.1-P2: The City shall support San Joaquin County policies and zoning actions that maintain agricultural lands in viable farming units for those areas not currently designated for urban uses.
- OSC-2.1-P5: The City shall work cooperatively with non-profit organizations, such as land trusts, to preserve agricultural land in the Planning Area.
- OSC-2.2-P1. Development projects shall have buffer zones, such as roads, setbacks and other physical boundaries, between agricultural uses and urban development. These buffer zones shall be of sufficient size to protect the agriculture operations from the impacts of incompatible development and shall be established based on the proposed land use, site conditions and anticipated agricultural practices. Buffers shall be located on the land where the use is being changed, and shall not become the maintenance responsibility of the City.
- OSC-2.2-P2. Land uses allowed near agricultural operations should be limited to those not negatively impacted by dust, noise and odors.

City of Tracy Agricultural Mitigation Fee Program

Tracy Municipal Code Chapter 13.28, establishes the City's Agricultural Mitigation Fee Program, which authorizes the collection of development impact fees to offset costs associated with the loss of productive agricultural lands converted for private urban uses (including residential, commercial, industrial, or other urban uses) within the City. Agricultural mitigation fees are collected by the City at the time that building permits are issued. Fees collected under Chapter 13.28 may be used as fair compensation for farmland conservation easements or farmland deed restrictions that conserve existing agricultural land.

City of Tracy Right to Farm Ordinance

Tracy Municipal Code Chapter 10.24 establishes the City's "Right to Farm" ordinance, which is to declare farming operations not to be a nuisance and to recognize persons and/or entities right to farm. The ordinance establishes the City's policy to preserve, protect and encourage the use of viable agricultural land for the production of food and other agricultural products. Chapter 10.24 identifies that when nonagricultural land uses extend into or approach agricultural areas, conflicts may arise between such land uses and agricultural operations that often result in the involuntary curtailment or cessation of agricultural operations, and discourage investment in such operations.

Municipal Code Chapter 10.24 is intended to reduce the occurrence of such conflicts between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides. The disclosure statement notifies the purchaser that the property being purchased may be located close to agricultural lands and operations and that the purchaser may be subject to inconvenience or discomfort arising from the lawful and proper use of agricultural chemical and pesticides and from other agricultural activities, including without limitation, cultivation, plowing, spraying, irrigation, pruning, harvesting, burning of agricultural waste products, protection of crops and animals from depredation, and other activities which occasionally generate dust, smoke, noise and odor. In addition, prior to issuance of a city building permit for construction of a residential building, the owner of the property upon which the building is to be constructed is required to file a disclosure statement acknowledging the proximity of agricultural operations and the potential for inconvenience or nuisance associated with those uses.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin County Multi-Specific Habitat Conservation and Open Space Plan (SJMSCP) provides comprehensive measures for compensation and avoidance of impacts on various biological resources, which includes ancillary benefits to agricultural resources. For instance, many of the habitat easements that are purchased or facilitated by the SJMSCP program are targeted for the protection of Swainson's hawk or other sensitive species habitat that are dependent on agricultural lands. The biological mitigation for these species through the SJMSCP includes the purchase of certain conservation easements for habitat purposes; however, the conservation easements are placed over agricultural land, such as alfalfa and row crops (not vines or orchards). As such, SJMSCP fees paid to San Joaquin Council of Governments (SJCOG) as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on agricultural resources if it will:

- 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;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- 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.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses. (Significant and Unavoidable)

Development of the proposed Project would result in the permanent conversion of approximately 101.78 acres of Prime Farmland, as shown on Figure 3.2-1, to nonagricultural use. Farmland of Statewide Importance would not be converted as none is found on-site. The loss of Prime Farmland as classified under the FMMP is considered a potentially significant environmental impact.

As previously discussed, Tracy Municipal Code Chapter 13.28 establishes the City's Agricultural Mitigation Fee Program, which authorizes the collection of development impact fees to offset costs associated with the loss of productive agricultural lands converted for private urban uses. In addition to the City's agricultural mitigation fee program, the SJMSCP requires development to pay fees on a per-acre basis for impacts to agricultural lands that function as habitat for biological resources. SJCOG will then use these funds to purchase the conservation easements on agricultural and habitat lands in the Project vicinity. The compensation results in the purchase of conservation easements that are placed over agricultural land. As such, the Project fees paid to SJCOG as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

The purchase of conservation easements and/or deed restrictions through the City's agricultural mitigation fee program and the SJMSCP allows landowners to retain ownership of land and continue agricultural operations, and preserves such lands in perpetuity.

The proposed conversion of the Project site from agricultural to industrial uses is consistent with the City's overall planning vision, as the Tracy General Plan designates the Project site as Industrial, and therefore assumes the site would be developed with Industrial uses. The General Plan EIR anticipated development of the Project site as part of the overall evaluation of the build out of the City. The General Plan EIR addressed the conversion and loss of agricultural land that would result from the build out of the General Plan (Amendments to the General Plan Draft EIR, pp. 67 through 71). The General Plan EIR provides a discussion of the various General Plan policies, such as Objective OSC-2.1-P2 and OSC-2.1-P3, and the agricultural conversion fees, including the City's

agricultural mitigation fee program and SJMSCP fee. The General Plan EIR concluded that although these policies and regulations would somewhat reduce impacts related to the conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance, the permanent loss of farmland would result in a significant and unavoidable impact to agricultural resources.

While the proposed Project would contribute fees toward the purchase of conservation easements on agricultural lands through the City's agricultural mitigation fee program and the SJMSCP (as required by Mitigation Measure 3.4-1 and existing City regulations), those fees and conservation easements would not result in the creation of new farmland to offset the loss that would occur with Project implementation. As such, the loss of Prime Farmland would be a ***significant and unavoidable*** impact relative to this topic.

Impact 3.2-2: The proposed Project has the potential to conflict with existing zoning for agricultural use, or Williamson Act Contracts. (Less than Significant)

The Project site is not under a Williamson Act Contract. The San Joaquin County Zoning Ordinance currently designates the Project site for General Agriculture (AG-40) uses. The AG Zone is established to preserve agricultural lands for the continuation of commercial agriculture enterprises. The San Joaquin County LAFCo would require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning would include the following zoning designation: Light Industrial (M-1). The pre-zoning would go into effect upon annexation into the City of Tracy.

Although the Project site is currently zoned for agricultural use by the County, the proposed Project includes pre-zoning consistent with the proposed industrial use and the City's Industrial land use designation for the site. Conversion of the Project site from agricultural to urban uses has been anticipated by the City since adoption of the General Plan and associated EIR. Therefore, implementation of the proposed Project would have a ***less than significant*** impact relative to this topic and no mitigation is required.

Impact 3.2-3: The proposed Project has the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands. (Less than Significant with Mitigation)

Neighboring agricultural land, including Prime Farmland and Farmland of Local Importance, are located to the north, south, and east the Project site as shown on Figure 3.2-1. Industrial warehouses would be developed on the 103-acre Development Area with implementation of the proposed Project.

The City's General Plan anticipates that agricultural lands to the north, east, south, and west of the Project site would develop with urban uses. Existing agricultural lands that are located adjacent to the Project site to the west may be impacted by the increased human presence on the Project site. It is noted that a development application to develop and annex the parcel west of the site has been submitted to the City. The City's Right-to-Farm Ordinance reduces the potential for conflict

between existing agricultural lands and adjacent uses. The notification procedures in the ordinance serves to inform landowners and developers of non-agricultural uses in the area and the expectations with regard to agricultural activities in order to reduce complaints.

The City of Tracy General Plan Amendment to the Draft EIR (2006) identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan policies (i.e., OSC-2.1-P2, OSC-2.1-P3, OSC-2.2-P1, CC-4.1-P2, and CC-4.1-P3) to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. However, the EIR concluded that implementation of the General Plan would result in a significant and unavoidable impact due to the additional and incompatible urban development adjacent to agricultural uses (City of Tracy General Plan Amendment to the Draft EIR, 2006, pp. 72).

General Plan Policy OSC-2.2-P-1 requires buffer zones, such as roads, setbacks and other physical boundaries, at the interface of urban development and farmland in order to minimize conflicts between the uses. These buffer zones are required to be of sufficient size to protect the agriculture operations from the impacts of incompatible development and be established based on the proposed land use, site conditions and anticipated agricultural practices. Additionally, Policy OSC-2.2-P-2 requires that the land uses near agricultural operations be limited to those not negatively impacted by dust, noise, and odors.

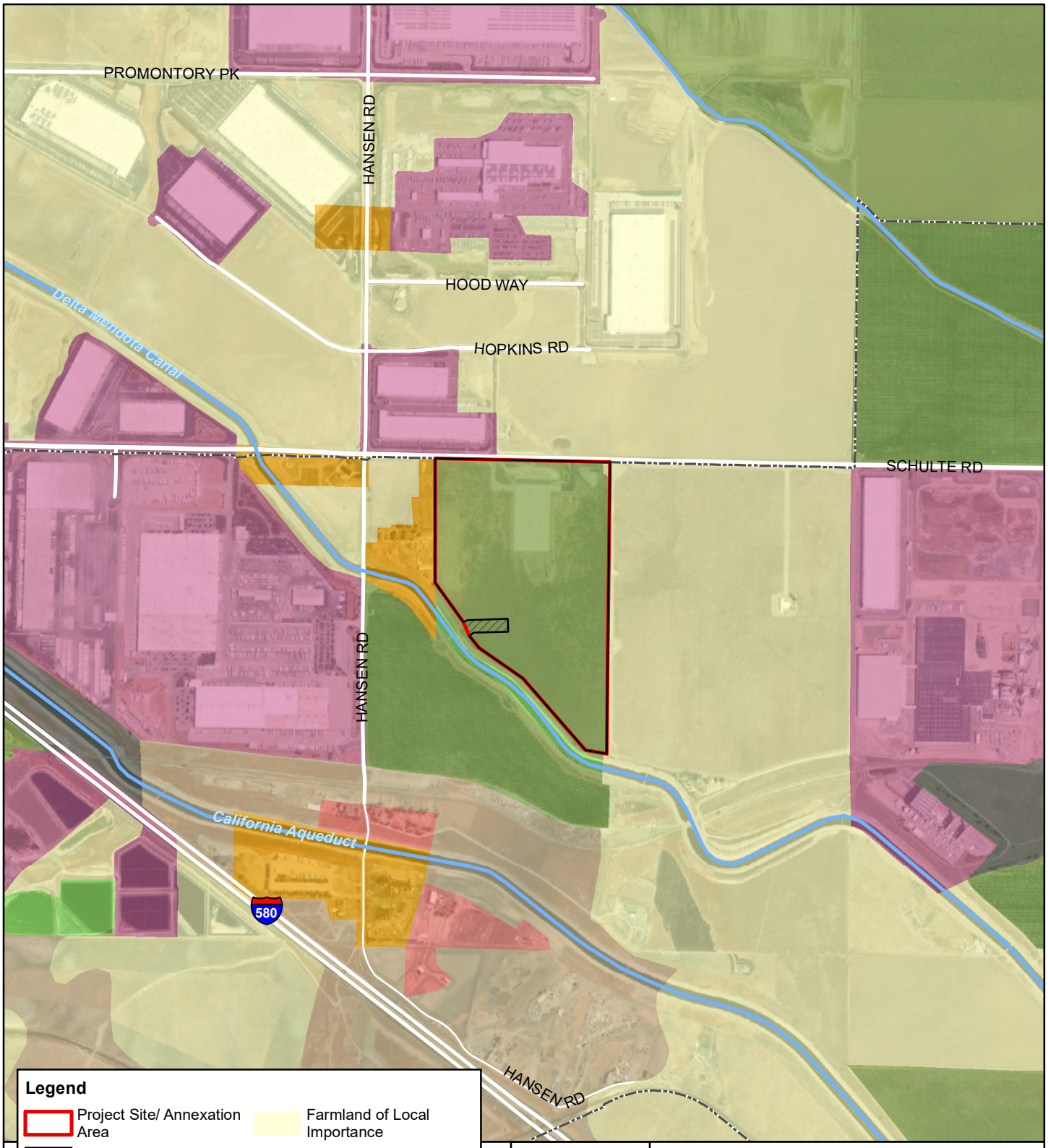
Neither the City's Right-to-Farm Ordinance nor its General Plan Policies define the width or specifics of desired buffer types for agricultural uses. Most of the proposed development would be buffered from existing agricultural operations by Old Schulte Road on the northern side of the Project site and by the Delta Mendota Canal on the southern side of the Project site. Additionally, the proposed Project includes parking areas, stormwater drainage areas, and and landscaping along the perimeter of the site. These areas would provide a buffer between agricultural uses and the Project site. Further, land opposite Old Schulte Road to the north of the Project site is within the recently approved Cordes Ranch Specific Plan, which plans for the development of a 1,780-acre commerce and business park, consisting of 55.1 acres of General Commercial uses, 152.2 acres of General Office uses, 1,476.9-acres of Business Park Industrial uses, and 96.3-acres of Park uses. However, the agricultural land to the west and east of the Project site would not be buffered from the proposed industrial development. As discussed previously, the City's Right to Farm Ordinance is intended to reduce the occurrence of such conflicts between nonagricultural and agricultural land uses within the City through requiring the transferor of any property in the City to provide a disclosure statement describing that the City permits agricultural operations, including those that utilize chemical fertilizers and pesticides. Compliance with the City's Right to Farm Ordinance would be ensured through Mitigation Measure 3.2-1. Implementation of Mitigation Measure 3.2-1 would ensure that the Project includes adequate measures to buffer Project uses from adjacent agricultural uses and would help to reduce adverse effects on neighboring agricultural uses. The proposed project is not anticipated to lead to the permanent indirect conversion of offsite agricultural lands to a non-agricultural use. The project would not extend infrastructure or roadway access to offsite agricultural lands. Implementation of Mitigation Measure 3.2-1 would ensure that the Project applicant complies with the County's right-to-farm

ordinance due to the potential conflicts between the proposed residences in the southern and western portions of the Plan Area and the existing agricultural operations to the south and west of the Plan Area. Implementation of this mitigation measure would ensure that impacts associated with the potential to result in conflicts with adjacent agricultural lands or indirectly cause conversion of agricultural lands are ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.2-1: *Prior to approval of a grading permit for each phase of the Project, the Project applicant shall demonstrate that the Project site plans include adequate measures to buffer adjacent agricultural uses from urban uses on the Project site and to reduce adverse impacts to neighboring agricultural uses. Additionally, the Project applicant shall provide notifications to all operators of uses on the Project site that are adjacent or in the vicinity of existing agricultural land of the City's Right-to-Farm Ordinance.*

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Sources: California Department of Conservation, Farmland Mapping and Monitoring Program, San Joaquin County 2018; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021. Revised: May 26, 2022.

TRACY COSTCO DEPOT PROJECT

Figure 3.2-1. Important Farmlands

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the entire site to urban uses. Following this discussion is an assessment of consistency of the proposed Project with applicable policies and local plans. The Greenhouse Gases, Climate Change, and Energy analysis is located in a separate section of this document (*see* Chapter 3.7 – Greenhouse Gases, Climate Change and Energy). This air quality section is based in part on the following technical studies: *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board [CARB], 2007), *Guide for Assessing and Mitigation Air Quality Impacts* (San Joaquin Valley Air Pollution Control District [SJAVPCD], 2002), *Guidance for Assessing and Mitigating Air Quality Impacts - 2015* (SJAVPCD, 2015), and CalEEMod *(v.2020.4.0)*.

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the San Joaquin Valley Air Pollution Control District (October 29, 2021). The commenter pointed out that the SJVAPCD has the *Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI)* (March 19, 2015) as a technical guidance for the review of air quality impacts from proposed projects within the boundaries of the District. This comment is addressed within this section. The full comment is included in Appendix A.

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

The City of Tracy (City) is in the northern portion of the San Joaquin Valley Air Basin (SJVAB). The SJVAB consists of eight counties: Fresno, Kern (western and central), Kings, Tulare, Madera, Merced, San Joaquin, and Stanislaus. Air pollution from significant activities in the SJVAB includes a variety of industrial-based sources as well as on- and off-road mobile sources. These sources, coupled with geographical and meteorological conditions unique to the area, stimulate the formation of unhealthy air.

The SJVAB is approximately 250 miles long and an average of 35 miles wide. It is bordered by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south. There is a slight downward elevation gradient from Bakersfield in the southeast end (elevation 408 feet) to sea level at the northwest end where the valley opens to the San Francisco Bay at the Carquinez Straits. At its northern end is the Sacramento Valley, which comprises the northern half of California's Central Valley. The bowl-shaped topography inhibits movement of pollutants out of the valley (San Joaquin Valley Air Pollution Control District (SJVAPCD), 2015).

Climate

The SJVAB is in a Mediterranean climate zone and is influenced by a subtropical high-pressure cell most of the year. Mediterranean climates are characterized by sparse rainfall, which occurs mainly in winter. Summers are hot and dry. Summertime maximum temperatures often exceed 100°F in the valley.

The subtropical high-pressure cell is strongest during spring, summer, and fall and produces subsiding air, which can result in temperature inversions in the valley. A temperature inversion can act like a lid, inhibiting vertical mixing of the air mass at the surface. Any emissions of pollutants can be trapped below the inversion. Most of the surrounding mountains are above the normal height of summer inversions (1,500 to 3,000 feet).

Winter-time high pressure events can often last many weeks, with surface temperatures often lowering into the 30°F. During these events, fog can be present and inversions are extremely strong. These wintertime inversions can inhibit vertical mixing of pollutants to a few hundred feet (SJVAPCD, 2015).

Wind Patterns

Wind speed and direction play an important role in dispersion and transport of air pollutants. Wind at the surface and aloft can disperse pollution by mixing and transporting it to other locations.

Especially in summer, winds in the San Joaquin Valley most frequently blow from the northwest. The region's topographic features restrict air movement and channel the air mass towards the southeastern end of the valley. Marine air can flow into the basin from the San Joaquin River Delta and over Altamont Pass and Pacheco Pass, where it can flow along the axis of the valley, over the Tehachapi pass, into the Southeast Desert Air Basin. This wind pattern contributes to transporting pollutants from the Sacramento Valley and the Bay Area into the SJVAB. Approximately 27 percent of the total emissions in the northern portion, 11 percent of total emissions in the central region, and 7 percent of total emission in the south valley of the SJVAB are attributed to air pollution transported from these two areas.[1] The Coastal Range is a barrier to air movement to the west and the high Sierra Nevada range is a significant barrier to the east (the highest peaks in the southern Sierra Nevada reach almost halfway through the Earth's atmosphere). Many days in the winter are marked by stagnation events where winds are very weak. Transport of pollutants during winter can be very limited. A secondary but significant summer wind pattern is from the southeast and can be associated with nighttime drainage winds, prefrontal conditions, and summer monsoons.

Two significant diurnal wind cycles that occur frequently in the valley are the sea breeze and mountain-valley upslope and drainage flows. The sea breeze can accentuate the northwest wind flow, especially on summer afternoons. Nighttime drainage flows can accentuate the southeast movement of air down the valley. In the mountains during periods of weak synoptic scale winds, winds tend to be upslope during the day and downslope at night. Nighttime and drainage flows are especially pronounced during the winter when flow from the easterly direction is enhanced by nighttime cooling in the Sierra Nevada. Eddies can form in the valley wind flow and can recirculate a polluted air mass for an extended period.

[1] SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20ai r%20quality%20in%20the%20San%20Joaquin%20Valley, accessed March 3, 2020.

Temperature

Solar radiation and temperature are particularly important in the chemistry of ozone formation. The SJVAB averages over 260 sunny days per year. Photochemical air pollution (primarily ozone) is produced by the atmospheric reaction of organic substances (such as volatile organic compounds) and nitrogen dioxide under the influence of sunlight. Ozone concentrations are very dependent on the amount of solar radiation, especially during late spring, summer, and early fall. Ozone levels typically peak in the afternoon. After the sun goes down, the chemical reaction between nitrous oxide and ozone begins to dominate. This reaction tends to scavenge and remove the ozone in the metropolitan areas through the early morning hours, resulting in the lowest ozone levels, possibly reaching zero at sunrise in areas with high nitrogen oxides emissions. At sunrise, nitrogen oxides tend to peak, partly due to low levels of ozone at this time and also due to the morning commuter vehicle emissions of nitrogen oxides.

Generally, the higher the temperature, the more ozone formed, since reaction rates increase with temperature. However, extremely hot temperatures can "lift" or "break" the inversion layer. Typically, if the inversion layer does not lift to allow the buildup of contaminants to be dispersed, the ozone levels will peak in the late afternoon. If the inversion layer breaks and the resultant afternoon winds occur, the ozone will peak in the early afternoon and decrease in the late afternoon as the contaminants are dispersed or transported out of the SJVAB.

Ozone levels are low during winter periods when there is much less sunlight to drive the photochemical reaction (SJVAPCD, 2015).

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of particulate matter (PM), including PM that have a diameter of less than 2.5 micrometers ($PM_{2.5}$) and 10 micrometers PM_{10} (SJVAPCD, 2015).

Inversions

The vertical dispersion of air pollutants in the San Joaquin Valley can be limited by persistent temperature inversions. Air temperature in the lowest layer of the atmosphere typically decreases with altitude. A reversal of this atmospheric state, where the air temperature increases with height, is termed an inversion. The height of the base of the inversion is known as the "mixing height." This is the level to which pollutants can mix vertically. Mixing of air is minimized above and below the

inversion base. The inversion base represents an abrupt density change where little air movement occurs.

Inversion layers are significant in determining pollutant concentrations. Concentration levels can be related to the amount of mixing space below the inversion. Temperature inversions that occur on the summer days are usually 2,000 to 2,500 feet above the valley floor. In winter months, overnight inversions occur 500 to 1,500 feet above the valley floor (SJVAPCD, 2015).

CRITERIA POLLUTANTS

All criteria pollutants can have human health and environmental effects at certain concentrations. The United States Environmental Protection Agency (U.S. EPA) uses six "criteria pollutants" as indicators of air quality and has established for each of them a maximum concentration above which adverse effects on human health may occur. These threshold concentrations are called National Ambient Air Quality Standards (NAAQS). In addition, California establishes ambient air quality standards, called California Ambient Air Quality Standards (CAAQS). California law does not require that the CAAQS be met by a specified date as is the case with NAAQS.

The ambient air quality standards for the six criteria pollutants (as shown in Table 3.3-1) are set to public health and the environment within an adequate margin of safety (as provided under Section 109 of the Federal Clean Air Act). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants, and form the scientific basis for new and revised ambient air quality standards. Principal characteristics and possible health and environmental effects from exposure to the six primary criteria pollutants generated by the Project are discussed below.

Ozone (O_3) is a photochemical oxidant and the major component of smog. While O_3 in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O_3 at ground level are a major health and environmental concern. O_3 is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O_3 levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROGs that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O_3 causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O_3 not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O_3 for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. EPA, 2019a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. EPA, 2019b). The average background level of ozone in the California and Nevada is approximately 48.3 parts per billion, which represents approximately 77 percent of the total ozone in the western region of the U.S. (NASA, 2015).

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O_3 can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless and poisonous gas produced by incomplete burning of carbon in fuels. Carbon monoxide is harmful because it binds to hemoglobin in the blood, reducing the ability of blood to carry oxygen. This interferes with oxygen delivery to the body's organs. The most common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies whose mothers experience high levels of CO exposure during pregnancy are at risk of adverse developmental effects. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects to ambient CO (CARB, 2019a).

Very high levels of CO are not likely to occur outdoors. However, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease. These people already have a reduced ability for getting oxygenated blood to their hearts in situations where the heart needs more oxygen than usual. They are especially vulnerable to the effects of CO when exercising or under increased stress. In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina (U.S. EPA, 2016). Such acute effects may occur under current ambient conditions for some sensitive individuals, while increases in ambient CO levels increases the risk of such incidences.

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO_2 is the increased likelihood of respiratory problems. Under ambient conditions, NO_2 can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O_3) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase

susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO_2.

The major mechanism for the formation of NO_2 in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROGs, in the atmospheric reactions that produce O_3. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO_2) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO_2 emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO_2 is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO_2 affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO_2 is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO_2 results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO_2 has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO_2 and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO_2 reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter ($PM_{2.5}$). Inhalation exposure to $PM_{2.5}$ has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO_2 levels would lead to increased risk of such effects.

SO_2 emissions that lead to high concentrations of SO_2 in the air generally also lead to the formation of other sulfur oxides (SOx). SOx can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO_2 and ROGs are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM_{10} is particulate matter 10

micrometers or less in diameter (known as respirable particulate matter), and $PM_{2.5}$ is particulate matter 2.5 micrometers or less in diameter (known as fine particulate matter).

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO_2) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Respirable particulate matter (PM_{10}) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM_{10} causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

$PM_{2.5}$ consists of fine particles that are less than 2.5 microns in size. Similar to PM_{10}, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM_{10}, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for $PM_{2.5}$.

The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly and children. Particulate matter also impacts soils and damages materials and is a major cause of visibility impairment.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lunch function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in $PM_{2.5}$ results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high PM levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM_{10} and $PM_{2.5}$ can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2019c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely

affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

Lead is persistent in the environment and can be added to soils and sediments through deposition from sources of lead air pollution. Other sources of lead to ecosystems include direct discharge of waste streams to water bodies and mining. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals, and neurological effects in vertebrates.

Lead exposure is typically associated with industrial sources; major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2019d). Based on this reduction of lead in the air over this period, and since most new developments to not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

Both the U.S. EPA and the CARB have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels of contaminants that avoid specific adverse health effects associated with each pollutant.

The federal and State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, although both processes were aimed at avoiding health-related effects. As a result, the federal and State standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone, $PM_{2.5}$, and PM_{10}. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, which was effective as of December 28, 2015 (equivalent to the California state ambient air quality eight-hour standard for ozone).

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less ($PM_{2.5}$) were adopted for 24-hour and annual averaging periods. The existing PM_{10} standards were retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

TABLE 3.3-1: FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

POLLUTANT	*AVERAGING TIME*	*FEDERAL PRIMARY STANDARD*	*STATE STANDARD*
Ozone	1-Hour	--	0.09 ppm
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.03 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	0.03 ppm	--
	24-Hour	0.14 ppm	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	--	20 ug/m^3
	24-Hour	150 ug/m^3	50 ug/m^3
$PM_{2.5}$	Annual	12 ug/m^3	12 ug/m^3
	24-Hour	35 ug/m^3	--
Lead	30-Day Avg.	--	1.5 ug/m^3
	3-Month Avg.	0.15 ug/m^3	--

NOTES: PPM = PARTS PER MILLION, UG/M3 = MICROGRAMS PER CUBIC METER

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

Existing air quality concerns within San Joaquin County and the entire air basin are related to increases of regional criteria air pollutants (e.g., ozone and particulate matter), exposure to toxic air contaminants, odors, and increases in greenhouse gas emissions contributing to climate change. The primary source of ozone (smog) pollution is motor vehicles, which account for 70 percent of the ozone in the region. Particulate matter is caused by dust, primarily dust generated from construction and grading activities, and smoke emitted from fireplaces, wood-burning stoves, and agricultural burning.

Attainment Status

In accordance with the California Clean Air Act (CCAA), the CARB is required to designate areas of the State as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria.

Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, carbon monoxide, and nitrogen dioxide as "does not meet the primary standards," "cannot be classified," or "better than national standards." For sulfur dioxide, areas are designated as "does not meet the primary standards," "does not meet the

secondary standards," "cannot be classified," or "better than national standards." However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

San Joaquin County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM_{10} and $PM_{2.5}$. San Joaquin County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and $PM_{2.5}$. Table 3.3-2 presents the state and nation attainment status for San Joaquin County.

TABLE 3.3-2: STATE AND NATIONAL ATTAINMENT STATUS IN SAN JOAQUIN COUNTY

CRITERIA POLLUTANTS	*STATE DESIGNATIONS*	*NATIONAL DESIGNATIONS*
Ozone (O_3)	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO_2)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2022.

San Joaquin County Air Quality Monitoring

The San Joaquin Valley Air Pollution District (SJVAPCD) and the CARB maintain air quality monitoring sites throughout San Joaquin County that collect data for ozone and $PM_{2.5}$. In addition, air quality monitoring sites for PM_{10} are located throughout the San Joaquin Valley (though not in San Joaquin County). The closest air quality monitoring station to the Project site is the Tracy-Airport location. It is important to note that while the State retains the one-hour ozone standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Best available data obtained from the monitoring sites between 2017 and 2020 (latest year of data available) is shown in Table 3.3-3, Table 3.3-4, and Table 3.3-5.

TABLE 3.3-3 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (TRACY-AIRPORT)* - OZONE

YEAR	*DAYS > STANDARD*				*1-HOUR OBSERVATIONS*	*8-HOUR AVERAGES*						*YEAR COVERAGE*	
	STATE		*NATIONAL*			*STATE*	*NAT'L*	*STATE*		*NATIONAL*			
	1-HR	*8-HR*	*1-HR*	*8-HR*	*MAX.*	*D.V.[1]*	*D.V.[2]*	*MAX.*	*D.V.[1]*	*MAX.*	*D.V.[2]*	*MIN*	*MAX*
2020	0	3	0	3	0.086	0.09	0.092	0.078	0.082	0.078	0.070	95	96
2019	1	3	0	3	0.095	0.09	0.092	0.080	0.082	0.079	0.073	97	99
2018	1	8	0	8	0.099	0.10	0.099	0.082	0.085	0.081	0.076	98	99
2017	0	7	0	5	0.093	0.10	0.105	0.082	0.086	0.082	0.077	93	95

*NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. THE NATIONAL 1-HOUR OZONE STANDARD WAS REVOKED IN JUNE 2005 AND IS NO LONGER IN EFFECT. STATISTICS RELATED TO THE REVOKED STANDARD ARE SHOWN IN ITALICS. D.V. [1] = STATE DESIGNATION VALUE. D.V. [2] = NATIONAL DESIGN VALUE. *TRACY-AIRPORT REPRESENTS THE CLOSEST MONITORING STATION TO THE PROJECT SITE.*

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN VALLEY)* – PM_{10}

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		HIGH 24-HR AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2020	38.7	157.0	64.5	60.5	517.2	359.0	0 - 100
2019	16.2	129.7	55.6	55.6	652.2	664.2	0 – 100
2018	9.6	164.4	54.5	53.0	250.2	250.4	0 – 100
2017	7.7	145.5	55.3	48.4	298.4	210.0	0 – 100

*NOTES: THE NATIONAL ANNUAL AVERAGE PM_{10} STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. *THIS DATA REPRESENTS THE HIGHEST VALUES IDENTIFIED WITHIN SAN JOAQUIN VALLEY AS A WHOLE. DATA FOR THE NEAREST MONITORING SITE (TRACY-AIRPORT), AS WELL AS FOR SAN JOAQUIN COUNTY, HAD INSUFFICIENT DATA.*

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

TABLE 3.3-5 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (SAN JOAQUIN COUNTY)* - $PM_{2.5}$

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V.[1]	STATE ANNUAL D.V.[2]	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-HR STD. D.V.[1]	HIGH 24-HOUR AVERAGE		YEAR COVERAGE	
		NAT'L	STATE					NAT'L	STATE	MIN	MAX
2020	24.0	14.8	14.8	13.8	17	91.6	72	140.0	140.0	98	99
2019	6.4	9.3	6.2	13.0	17	32.9	56	50.1	50.1	77	95
2018	25.0	17.6	17.4	13.8	17	96.9	56	188.0	257.5	96	100
2017	16.9	12.1	11.0	12.2	13	44.2	39	53.7	53.7	94	99

*NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. [1] = STATE DESIGNATION VALUE. D.V. [2]= NATIONAL DESIGN VALUE. *THIS DATA REPRESENTS THE HIGHEST VALUES IDENTIFIED WITHIN SAN JOAQUIN COUNTY AS A WHOLE. DATA FOR THE NEAREST MONITORING SITE (TRACY-AIRPORT) HAS INSUFFICIENT DATA.*

SOURCE: CALIFORNIA AIR RESOURCES BOARD (AEROMETRIC DATA ANALYSIS AND MANAGEMENT SYSTEM OR IADAM) AIR POLLUTION SUMMARIES.

ODORS

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

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; in fact, an odor that is offensive to one person (e.g., from a fast-food restaurant) may be perfectly acceptable to another.

It is also important to note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air.

When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases. A sensitive receptor is a location where human populations, especially children, seniors, and sick persons, are present and where there is a reasonable expectation of continuous human exposure to pollutants. Examples of sensitive receptors include residences, hospitals, and schools. The closest sensitive receptors to the Project are located as follows:

- A cluster of farmhouses/residences is located along the western portion of the Project site, adjacent to the Project site;
- A cluster of residences is located approximately 2,000 feet to the southwest of the Project site;
- Additional scattered residences are located approximately 2,200 to 3,000 feet to the south and southwest of the Project site;
- Residences are located approximately 900 feet to the southeast of the Project site; and
- An additional residence is located approximately 2,650 feet to the southeast of the Project site.

3.3.2 REGULATORY SETTING

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to air quality. General Plan policies applicable to the Project are identified below:

POLICIES: AIR QUALITY ELEMENT

- AQ-1.1-P1. The City shall promote land use patterns that reduce the number and length of motor vehicle trips.
- AQ-1.1-P2. To the extent feasible, the City shall maintain a balance and match between jobs and housing.
- AQ-1.1-P4. Employment areas should include a mix of support services to minimize the number of trips.
- AQ-1.2-P1. The City shall assess air quality impacts using the latest version of the CEQA Guidelines and guidelines prepared by the San Joaquin Valley Air Pollution Control District.
- AQ-1.2-P2. The City shall assess through the CEQA process any air quality impacts of development projects that may be insignificant by themselves, but cumulatively significant.
- AQ-1.2-P3. Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.
- AQ-1.2-P4. New development projects should incorporate energy efficient design features for HVAC, lighting systems and insulation that exceed Title 24.
- AQ-1.2-P5. Use of solar water and pool heaters is encouraged.
- AQ-1.2-P6. Installation of solar voltaic panels on new homes and businesses shall be encouraged.
- AQ-1.2-P7. Trees should be planted on the south- and west-facing sides of new buildings or buildings undergoing substantial renovation in order to reduce energy usage.
- AQ-1.2-P9. New developments shall follow the current requirements of the SJVAPCD with respect to wood burning fireplaces and heaters.
- AQ-1.2-P10. Stationary air pollutant emission sources (e.g. factories) shall be located an appropriate distance away and down-wind from residential areas and other sensitive receptors.
- AQ-1.2-P12. New sources of toxic air pollutants shall prepare a Health Risk Assessment as required under the Air Toxics “Hot Spots” Act and, based on the results of the Assessment, establish appropriate land use buffer zones around those areas posing substantial health risks.
- AQ-1.2-P13. Dust control measures consistent with San Joaquin Valley Air Pollution Control District rules shall be required as a condition of approval for subdivision maps, site plans, and all grading permits.
- AQ-1.2-P14. Developments that significantly impact air quality shall only be approved if all feasible mitigation measures to avoid, minimize or offset the impact are implemented.
- AQ-1.2-P15. Encourage businesses to electrify loading docks or implement idling-reduction systems so that trucks transporting refrigerated goods can continue to power cab cooling elements during loading, layovers, and rest periods.
- AQ-1.2-P16. Encourage the use of Best Management Practices in agriculture and animal operations.
- AQ-1.3-P1. The City shall continue to work with the San Joaquin Council of Governments on regional transportation solutions.

- AQ-1.3-P3. The City shall encourage employers to establish Transportation Demand Management programs.
- AQ-1.3-P5. The City shall require direct pedestrian and bicycle linkages from residential areas to parks, schools, retail areas, high-frequency transit facilities and major employment areas.

San Joaquin Valley Air Pollution Control District

The primary role of SJVAPCD is to develop plans and implement control measures in the SJVAB to control air pollution. These controls primarily affect stationary sources such as industry and power plants. Rules and regulations have been developed by SJVAPCD to control air pollution from a wide range of air pollution sources. SJVAPCD also provides uniform procedures for assessing potential air quality impacts of proposed projects and for preparing the air quality section of environmental documents.

AIR QUALITY PLANNING

The U.S. EPA requires states that have areas that do not meet the National AAQS to prepare and submit air quality plans showing how the National AAQS will be met. If the states cannot show how the National AAQS will be met, then the states must show progress toward meeting the National AAQS. These plans are referred to as the SIP. In October 2018, the CARB adopted the 2018 Updates to the California State Implementation Plan.

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment. To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and $PM_{2.5}$ and the California AAQS for PM_{10} in the SJVAB (for California CAA compliance). The following describes the air plans prepared by the SJVAPCD.

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end of 2031.[2,3] More recently, a new ozone attainment plan is under development. Specifically, the 2022 Ozone Plan for the Attainment of the 2015 Federal 8-hour Ozone Standard is anticipated to be submitted in August 2022 to the U.S. EPA.

[2] SJVAPCD. Ozone Plans. http://www.valleyair.org/ Air_Quality_Plans/Ozone_Plans.htm, accessed March 3, 2020.

[3] SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed March 3, 2020.

PM_{10} PLAN

Based on PM_{10} measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM_{10} standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM_{10} Maintenance Plan and Request for Redesignation. This plan demonstrated that the valley would continue to meet the PM_{10} standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM2.5 PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards on November 15, 2018.[4] This plan addresses the U.S. EPA federal 1997 annual $PM_{2.5}$ standard of 15 µg/m³ and 24-hour $PM_{2.5}$ standard of 65 µg/m³; the 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³; and the 2012 annual $PM_{2.5}$ standard of 12 µg/m³. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable (SJVAPCD, 2020).

All of the above-referenced plans include measures (i.e., federal, state, and local) that would be implemented through rule making or program funding to reduce air pollutant emissions in the SJVAB. Transportation control measures are part of these plans.

SJVAPCD RULES AND REGULATIONS

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NOx) and PM_{10} emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to the proposed Project since it proposes more than 25,000 square feet of light industrial uses.

This rule requires the applicants of certain development projects which equal or exceed established applicability thresholds to apply to the SJVAPCD when applying for the development's last discretionary approval. Projects subject to the rule are required to quantify indirect emissions (mobile source emissions), area source emissions and construction exhaust emissions and to mitigate a portion of these emissions. The Indirect Source Rule was adopted December 2005 and last amended December 2017. Rule 9510 was adopted to reduce the impacts of growth in emissions from all new development in the San Joaquin Valley. Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site measures or pay off-site mitigation fees. One hundred percent of all off-site mitigation fees are used by the SJVAPCD to fund emission reduction projects through its Incentive Programs, achieving

[4] SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed March 9, 2020.

emission reductions on behalf of the project. The emission reduction expected from the rule allow the SJVAPCD to achieve attainment of the federal air quality standards for ozone by 2031.

The rule requires all subject, nonexempt projects to mitigate both construction and operational period emissions by (1) applying feasible SJVAPCD-approved mitigation measures, or (2) paying any applicable fees to support programs that reduce emissions. Off-site emissions reduction fees (off-site fees) are required for projects that do not achieve the required emissions reductions through on-site emission reduction measures. Phased projects can defer payment of fees in accordance with an Off-site Emissions Reduction Fee Deferral Schedule (FDS) approved by the SJVAPCD.

To determine how an individual project would satisfy Rule 9510, each project would submit an air quality impact assessment (AIA) to the SJVAPCD as early as possible, but no later than prior to the project's final discretionary approval, to identify the project's baseline unmitigated emissions inventory for indirect sources: on-site exhaust emissions from construction activities and operational activities from mobile and area sources of emissions (excludes fugitive dust and permitted sources). Rule 9510 requires the following reductions, which are levels that the SJVAPCD has identified as necessary, based on its air quality management plans, to reach attainment for ozone and particulate matter:

Construction Equipment Emissions

The exhaust emissions for construction equipment greater than 50 horsepower (hp) used or associated with the development project shall be reduced by the following amounts from the statewide average as estimated by CARB:

- 20 percent of the total NOx emissions
- 45 percent of the total PM_{10} exhaust emissions

AIA mitigation strategies may include those that reduce construction emissions on-site by using less polluting construction equipment, which can be achieved by utilizing add-on controls, cleaner fuels, or newer, lower emitting equipment.

Operational Emissions

- NOx Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NOx emissions over a period of 10 years as quantified in the approved AIA.
- PM_{10} Emissions. Applicants shall reduce 50 percent of the project's operational baseline PM_{10} emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emissions reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM_{10} Prohibitions

SJVAPCD controls fugitive PM_{10} through Regulation VIII, Fugitive PM_{10} Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM_{10} and $PM_{2.5}$ by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

- Regulation VIII, Rule 8021 applies to any construction, demolition, excavation, extraction, and other earthmoving activities, including, but not limited to, land clearing, grubbing, scraping, travel on-site, and travel on access roads to and from the site.
- Regulation VIII, Rule 8031 applies to the outdoor handling, storage, and transport of any bulk material.
- Regulation VIII, Rule 8041 applies to sites where carryout or trackout has occurred or may occur on paved roads or the paved shoulders of public roads.
- Regulation VIII, Rule 8051 applies to any open area having 0.5 acre or more within urban areas or 3.0 acres or more within rural areas, and contains at least 1,000 square feet of disturbed surface area.
- Regulation VIII, Rule 8061 applies to any new or existing public or private paved or unpaved road, road construction project, or road modification project.
- Regulation VIII, Rule 8071 applies to any unpaved vehicle/equipment traffic area.
- Regulation VIII, Rule 8081 applies to off-field agricultural sources.

Sources regulated are required to provide Dust Control Plans that meet the regulation requirements. Under Rule 8021, a Dust Control Plan is required for any residential project that will include 10 or more acres of disturbed surface area, a nonresidential project with 5 or more acres of disturbed surface area, or a project that relocates 2,500 cubic yards per day of bulk materials for at least three days. The Dust Control Plan is required to be submitted to SJVAPCD prior to the start of any construction activity. The Dust Control Plan must also describe fugitive dust control measures to be implemented before, during, and after any dust-generating activity.

Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations

If asphalt paving will be used, then paving operations of the proposed Project will be subject to Rule 4641. This rule applies to the manufacture and use of cutback asphalt, slow cure asphalt and emulsified asphalt for paving and maintenance operations.

Nuisance Odors

SJVAPCD controls nuisance odors through implementation of Rule 4102, Nuisance. Pursuant to this rule, "a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health, or safety of any such person or the public or which cause or have a natural tendency to cause injury or damage to business or property."

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NOx, ROG, and particulate matter (PM_{10} and $PM_{2.5}$). The rule applies to

employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to their employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

Visible Emissions

SJVAPCD controls visible emissions through Rule 4101, Visible Emissions. The purpose of this regulation is to prohibit visible air contaminants in the atmosphere. This rule requires that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three (3) minutes in any one (1) hour which is:

- As dark or darker in shade as that designated as No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines.
- Of such opacity as to obscure an observer's view to a degree equal to or greater than the smoke described in Section 5.1 of this rule.

Architectural Coatings

The purpose of SJVAPCD Rule 4601 is to limit VOC emissions from architectural coatings. This rule specifies architectural coatings storage, cleanup, and labeling requirements. This rule is applicable to any person who supplies, markets, sells, offers for sale, applies, or solicits the application of any architectural coating, or who manufactures, blends or repackages any architectural coating for use within the District.

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control effort, and it is composed of the following basic elements: NAAQS for criteria air pollutants, hazardous air pollutant standards, state attainment plans, motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The U.S. EPA is responsible for administering the FCAA. The FCAA requires the U.S. EPA to set NAAQS for several air pollutants based on human health and welfare criteria. Two types of NAAQS were

established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

NAAQS standards define clean air and represent the maximum amount of pollution that can be present in outdoor air without any harmful effects on people and the environment. Existing violations of the ozone and $PM_{2.5}$ ambient air quality standards indicate that certain individuals exposed to these pollutants may experience certain health effects, including increased incidence of cardiovascular and respiratory ailments.

Although there is some variability among the health effects of the NAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing.

Federal Hazards Air Pollutants Program

The 1977 CAA Amendments required the USEPA to identify National Emissions Standards for Hazardous Air Pollutants (NESHAPs) to protect the public health and welfare. Hazardous air pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

Federal Heavy-duty Engines and Vehicles Fuel Efficiency Standards

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

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021

through 2027 for semi-trucks, large pickup trucks, vans and all types of sizes of buses and work trucks. The final standards are expected to lower carbon dioxide emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.[5]

In August 2017, the USEPA asked for additional information and data relevant to assessing whether the GHG emissions standards for model years 2022-2025 remain appropriate. In early 2018, the USEPA Administrator announced that the midterm evaluation for the GHG emissions standards for cars and light-duty trucks for model years 2022-2025 was completed and stated his determination that the current standards should be revised in light of recent data. Subsequently, in April 2018, the USEPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks and establish new standards, covering model years 2022-2025. Compared to maintaining the post-2020 standards now in place, the pending proposal would increase U.S. fuel consumption.[6] California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. In April 2020, NHTSA and EPA amended the CAFE and GHG emissions standards for passenger cars and light trucks and established new less stringent standards, covering model years 2021 through 2026.

On September 27, 2019, the USEPA and NHTSA published the SAFE Rule (Part One).[7] The SAFE Rule (Part One) went into effect in November 2019, and revoked California's authority to set its own GHGs standards and set zero emission vehicle mandates in California. The SAFE Rule (Part One) freezes new zero emission vehicles (ZEV) sales at model year 2020 levels for year 2021 and beyond, and will likely result in a lower number of future ZEVs and a corresponding greater number of future gasoline internal combustion engine vehicles. In response to the USEPA's adoption of the SAFE Rule (Part One), CARB has issued guidance regarding the adjustment of vehicle emissions factors to account for the rule's implications on criteria air pollutant and greenhouse gas emissions.[8,9] The

[5] USEPA and NHTSA. 2016. Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium and Heavy-Duty Engines and Vehicles – Phase 2. Available at: https://www.gpo.gov/fdsys/pkg/FR-2016-10-25/pdf/2016-21203.pdf. Accessed: February 2022.

[6] NHTSA. 2018. Federal Register, Vol. 83, No. 72, Rules & Regulations, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light Duty Vehicles. April 13. Available at: 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. Accessed: February 2022.

[7] USEPA and NHTSA. 2019. Federal Register, Vol. 84, No. 188, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. September 27. Available at: https://www.govinfo.gov/content/pkg/FR-2019-09-27/pdf/2019-20672.pdf. Accessed: February 2022.

[8] CARB. 2019. EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One. November 20. Available at: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf. Accessed: February 2022.

[9] CARB. 2020. EMFAC Off-Model Adjustment Factors for Carbon Dioxide Emissions to Account for the SAFE Vehicles Rule Part One and the Final SAFE Rule. June 26. Available at: https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf. Accessed: February 2022.

SAFE Rule is subject to ongoing litigation and on February 8, 2021 the D.C. Circuit Court of Appeals granted the Biden Administration's motion to stay litigation over Part 1 of the SAFE Rule. On April 22 and April 28, 2021, respectively, NHTSA and USEPA formally announced their intent to reconsider the Safe Rule (Part One).[10] In August 2021, USEPA proposed to revise existing national greenhouse gas (GHG) emissions standards for passenger cars and light trucks for Model Years 2023- 2026 to make the standards more stringent. On August 5, 2021, USEPA announced plans to reduce greenhouse gas (GHG) emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings over the next three years. The first rulemaking, to be finalized in 2022, will apply to heavy-duty vehicles starting in model year 2027, and will set new standards for criteria pollutants for the entire sector as well as targeted updates to the current GHG emissions standards.[11]

STATE

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and continue to be some of the most severe in the nation and required additional actions beyond the federal mandates. The CARB administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 State air pollutants are the six pollutants subject to federal standards listed above as well as visibility reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The U.S. EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the federal CAA are less stringent than the CCAA; therefore, consistency with the CCAA will also demonstrate consistency with the federal CAA.

CARB Mobile-Source Regulation

The State of California is responsible for controlling emissions from the operation of motor vehicles in the State. Rather than mandating the use of specific technology or the reliance on a specific fuel, the CARB motor vehicle standards specify the allowable grams of pollution per mile driven. In other words, the regulations focus on the reductions needed rather than on the manner in which they are achieved. Towards this end, the CARB has adopted regulations that require auto manufacturers to phase in less-polluting vehicles.

[10] USEPA. 2021. Federal Register, Vol. 86, No. 80, California State Motor Vehicle Pollution Control Standards; Advanced Clean Car Program; Reconsideration of a previous Withdrawal of a Waiver of Preemption; Opportunity for Public Hearing and Public Comment. April 28. Available at: https://www.epa.gov/regulations-emissions-vehicles-and-engines/notice-reconsideration-previous-withdrawal-waiver. Accessed: February 2022.

[11] USEPA. 2021. Clean Trucks Plan. https://www.epa.gov/regulations-emissions-vehicles-and-engines/clean-trucks-plan. Accessed: February 2022.

California Air Quality Standards

Although NAAQS are determined by the U.S. EPA, states have the ability to set standards that are more stringent than the federal standards. As such, California established more stringent ambient air quality standards. Federal and state ambient air quality standards have been established for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, suspended particulates and lead. In addition, California has created standards for pollutants that are not covered by federal standards. Although there is some variability among the health effects of the CAAQS pollutants, each has been linked to multiple adverse health effects including, among others, premature death, hospitalizations and emergency department visits for exacerbated chronic disease, and increased symptoms such as coughing and wheezing. The existing state and federal primary standards for major pollutants are shown in Table 3.3-1.

Tanner Air Toxics Act (TACs)

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and has adopted U.S. EPA's list of Hazardous Air Pollutants (HAPs) as TACs. Most recently, diesel PM was added to the CARB list of TACs. Once a TAC is identified, CARB then adopts an Airborne Toxics Control Measure (ATCM) for sources that emit that particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technologies (BACT) to minimize emissions.

Toxic Air Contaminants Health Effects

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The 10 TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Transportation Control Measures

The State Implementation Plan (SIP) describes the infrastructure (authorities, resources, and programs) California has in place to implement, maintain, and enforce the NAAQS. One particular aspect of the development process is the consideration of potential control measures as a part of making progress towards clean air goals. While most SIP control measures are aimed at reducing emissions from stationary sources, some are typically also created to address mobile or transportation sources. These are known as transportation control measures (TCMs). TCM strategies are designed to reduce vehicle miles traveled and trips, or vehicle idling and associated air pollution. These goals are achieved by developing attractive and convenient alternatives to single-occupant vehicle use. Examples of TCMs include ridesharing programs, transportation infrastructure improvements such as adding bicycle and carpool lanes, and expansion of public transit.

Omnibus Low-NOx Rule

CARB approved the Omnibus Low-NOx Rule on August 28, 2020, which will require engine NOx emissions to be cut to approximately 75% below current standards beginning in 2024, and 90% below current standards in 2027. The rule also places nine additional regulatory requirements on new heavy-duty trucks and engines. Those additional requirements include a 50% reduction in particulate matter emissions, stringent new low-load and idle standards, a new in-use testing protocol, extended deterioration requirements, a new California-only credit program, and extended mandatory warranty requirements. The regulatory requirements in the Omnibus Low-NOx Rule will first become effective in 2024, at the same time as the Advanced Clean Trucks regulations that CARB approved that require manufacturers to convert increasing percentages of their heavy-duty trucks sold in California to zero-emission vehicles.

Low Emission Vehicle Program

The CARB first adopted Low Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, the CARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more

stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.

On September 23, 2020, Governor Gavin Newsom issued Executive Order N-79-20 establishing a goal that 100 percent of new passenger cars and trucks sold in California shall be zero-emission by 2035. The Executive Order also sets a goal that, where feasible, all operations include zero-emission medium- and heavy-duty trucks by 2045, and drayage trucks by 2035. Off-road vehicles have a goal to transition to 100 percent zero-emission vehicles by 2035, where feasible.

On-Road Heavy-Duty Vehicle Program

The CARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. The CARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others.

California Air Resources Board Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the CARB adopted a regulation to reduce DPM and NOx emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The CARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NOx emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014, for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

The latest amendments became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter (PM) filter requirements beginning January 1, 2012. Lighter and older heavier trucks were required to 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.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating

low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.[12]

Diesel Risk Reduction Plan

The CARB's Diesel Risk Reduction Plan has led to the adoption of new State regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.[13]

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with air quality if it will:

- 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; and/or
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

APPROACH TO ANALYSIS

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, the SJVAPCD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project would exceed these air pollution thresholds, the project should be considered to have significant air quality impacts. The applicable SJVAPCD thresholds and methodologies are contained under each impact statement below, as the City, in its discretion, has determined to utilize these thresholds and methodologies, which are based on scientific and factual data.

[12] California Air Resources Board (CARB). 2021. Truck and Bus Regulation. Website: http://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm. Accessed February 16, 2021.

[13] California Air Resources Board (CARB). 2021. Diesel Risk Reduction Plan. Website: https://ww2.arb.ca.gov/our-work/programs/diesel-risk-reduction-plan. Accessed February 16, 2021.

This analysis was performed consistent with the guidance and methodologies provided by the SJVAPCD's GAMAQI.[14] Based on the SJVAPCD New Source Review (NSR) offset requirements for stationary sources, the SJVAPCD has established thresholds of significance for criteria pollutant emissions, shown in Table 3.3-6. These thresholds apply to the project because these air pollutants would be generated during project construction and operation and constitute criteria pollutants or precursor emissions for criteria pollutants, which are regulated by the federal and State Clean Air Acts.

TABLE 3.3-6: SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT SIGNIFICANCE THRESHOLDS

POLLUTANT	*CONSTRUCTION THRESHOLDS (TPY)*	*OPERATIONAL THRESHOLDS (TPY)*
ROG	10	10
NOx	10	10
CO	100	100
SOx	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15

SOURCES: SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD). 2015. GUIDANCE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACT. WEBSITE: HTTPS://WWW.VALLEYAIR.ORG/TRANSPORTATION/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF ACCESSED JUNE 8, 2022.

The SJVAPCD has also established significance thresholds to assess the impacts of project-related construction and operational emissions on regional and local ambient air quality. Table 3.3-7 shows the daily mass emissions screening criteria for construction and operation as adopted by the SJVAPCD for CAP and TAC emissions. The analysis summarized in this report estimates project-related construction and operational mass emissions and compares the emissions to these significance thresholds.

TABLE 3.3-7: SJVAPCD DAILY MASS EMISSIONS SCREENING CRITERIA

POLLUTANT	*CONSTRUCTION THRESHOLDS (POUNDS PER DAY)*	*OPERATIONAL THRESHOLDS (POUNDS PER DAY)*
ROG	100	100
NOx	100	100
CO	100	100
SOx	100	100
PM_{10}	100	100
$PM_{2.5}$	100	100

SOURCES: SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD). 2015. GUIDANCE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACT. WEBSITE: HTTPS://WWW.VALLEYAIR.ORG/TRANSPORTATION/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF ACCESSED

[14] San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impact. Website: https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf Accessed June 8, 2022.

JUNE 8, 2022.

The daily mass emissions screening criteria provided in Table 3.3-7 represent screening-level thresholds that can be used to evaluate whether project-related emissions would cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. In the event that emissions exceed those thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the CAAQS and NAAQS, including appropriate background levels.

CRITERIA POLLUTANT EMISSIONS MODELING

California Emission Estimator Model (CalEEMod)™ (v.2040.4.0), developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project construction was assumed to be completed in late 2024.

The assumptions for the modeling are: Unrefrigerated Warehouse – No Rail (543,330 square feet); Unrefrigerated Warehouse – No Rail (1,201,730 square feet); Other Asphalt Surfaces (60.19 acres). Vehicle trips and fleet mix estimated in the modeling are consistent with those as provided by Kimley Horn in its traffic analysis (see Appendix F for further detail). The construction phase includes site preparation, grading, building construction, paving, and architectural coating phases. See Appendix B.1 for further detail.

IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Project operation would conflict or obstruct implementation of the District's air quality plan. (Significant and Unavoidable)

The CEQA Guidelines indicate that a significant impact would occur if the proposed Project would conflict with or obstruct implementation of the applicable Air Quality Attainment Plan (AQAP). The CARB has developed a three-step approach to determine project conformity with the applicable Air Quality Attainment Plan (AQAP):

- *Determination that an AQAP is being implemented in the area where the project is being proposed.*
- *The proposed project must be consistent with the growth assumptions of the applicable AQAP.*
- *The project must contain in its design all reasonably available and feasible air quality control measures.*

The proposed Project is in conformance with the AQAP, based on these criteria, as follows:

- *Determination that an AQAP is being implemented in the area where the project is being proposed.*

The SJVAPCD has implemented the current, modified 2016 8-hour AQAP as approved by CARB and approved by USEPA for the 2008 8-hour O_3 standard.

- *The proposed project must be consistent with the growth assumptions of the applicable AQAP.*

The SJCOG RTP/SCS growth projections provide for future employment/population factors. The development of the SJVAPCD AQAP is based in part on the land use general plan projections of the various cities and counties that constitute the Air Basin. The City of Tracy General Plan Land Use Element designates the Project site as Industrial, which is intended to accommodate flex/office space, manufacturing, warehousing and distribution, and ancillary uses for workers' needs. Therefore, the proposed Project, which involves the development of light industrial, warehouse and distribution and related uses, is considered consistent with the site's General Plan land use designation and its traffic would be included in volumes projected for analysis of the General Plan. The SJVAPCD AQP is based on the growth assumptions of the City of Tracy General Plan and SJCOG RTP/SCS. Since the Project is consistent with the SJCOG RTP/SCS, and SJCOG RTP/SCS projections are incorporated into the SIP, the Project is also consistent with the SIP.

- *The project must contain in its design all reasonably available and feasible air quality control measures.*

The Project incorporates various policy and rule-required implementation measures that would reduce related emissions, including all of the current Air District rules and regulations.[15] For example, the proposed Project would be required to implement Air District Rule 9510, which ensures that the Project would fulfill the Air District's emissions reduction commitments in the relevant PM_{10} and Ozone Attainment plans. In addition, the Project would comply with all applicable stationary source permitting rules implemented by SJVAPCD, which further confirms the Project would not cause or contribute to any ambient air quality standard exceedances.

Nevertheless, for the sake of a conservative assessment, the proposed Project's potential impact is to this environmental topic is considered ***significant and unavoidable.*** Therefore, the proposed Project would be required to implement Mitigation Measure 3.3-1, as provided below.

MITIGATION MEASURE(S)

Mitigation Measure 3.3-1: *During Project operation, operators of heavy-duty trucks that travel to and from the Project site are required to use trucks that have 2010 model year or newer engines that meet the CARB's 2010 engine emission standards of 0.01 g/bhp-hr for particulate matter (PM) and 0.20 g/bhp-hr of NOx emissions, or newer, cleaner trucks and equipment.*

[15] See here for further detail: https://www.valleyair.org/rules/1ruleslist.htm

Impact 3.3-2: The proposed Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is in nonattainment under an applicable federal or State ambient air quality standard. (Significant and Unavoidable)

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a Project exceeds the regional threshold for that nonattainment pollutant, then it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone. Therefore, if the proposed Project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it would contribute to a cumulatively considerable impact for those pollutants. If the proposed Project exceeds the regional threshold for NOx or ROG (which are precursors to ozone), then it follows that the proposed Project would result in a cumulatively considerable contribution and thus result in a significant cumulative impact for ozone.

Regional emissions include those generated from all on-site and off-site activities. Regional significance thresholds have been established by the SJVAPCD because emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the Air Basin with regional emissions that exceed any of the thresholds presented previously are considered to have a significant regional air quality impact.

CONSTRUCTION EMISSIONS

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Construction-related activities would result in Project-generated emissions from site preparation, grading, paving, building construction, and architectural coatings. CalEEMod™ (v.2020.4.0) was used to estimate construction emissions for the proposed Project. Table 3.3-8, below, provides the construction criteria pollutant emissions and thresholds associated with implementation of the proposed Project. It should be noted that the SJVAPCD recommends the same criteria pollutant thresholds for both construction and operational emissions, as provided within the *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015).

TABLE 3.3-8: CONSTRUCTION PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
YEAR 2023	5.6	4.8	0.7	<0.1	2.6	1.1
YEAR 2024	4.1	2.1	5.1	<0.1	1.3	0.4
MAXIMUM EMISSIONS	5.6	4.8	5.1	0.1	1.5	0.6
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

Additionally, the SJVAPCD has also developed daily mass emissions screening criteria for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ to determine whether project emissions would result in a violation of an AAQS. Because the NAAQS and CAAQS are concentration-based standards presented hourly, daily mass emissions are a more suitable estimate to determine whether a project would contribute to a violation of an AAQS. These screening criteria are 100 pounds per day for any pollutant. The following table (Table 3.3-9) provides the proposed Project's unmitigated construction emissions in pounds per day in comparison to this screening thresholds.

TABLE 3.3-9: CONSTRUCTION PROJECT GENERATED EMISSIONS (POUNDS PER DAY)

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD (POUNDS/DAY)	100	100	100	100	100	100
YEAR 2023	30.7	26.5	3.6	0.1	14.2	5.9
YEAR 2024	22.4	11.5	28.1	0.1	7.2	2.1
MAXIMUM EMISSIONS	30.7	26.5	28.1	0.1	14.2	5.9
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project would have a significant impact on air quality. As shown in Table 3.3-8, the proposed Project, without mitigation, would not exceed the SJVAPCD thresholds of significance for construction criteria pollutants. Additionally, as shown in Table 3.3-9, the proposed Project would not exceed the daily mass screening criteria thresholds during Project construction. Therefore, the Project's construction-related criteria pollutant emissions would be considered to have a ***less than significant*** impact, and no mitigation for construction-related criteria pollutant emissions is warranted.

OPERATIONAL EMISSIONS

The SJVAPCD is tasked with implementing programs and regulations required by the Federal Clean Air Act and the California Clean Air Act. In that capacity, the SJVAPCD has prepared plans to attain Federal and State ambient air quality standards. To achieve attainment with the standards, the SJVAPCD has established thresholds of significance for criteria pollutant emissions in its *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015). Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan", and also to not have a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment. If the proposed Project's emissions will exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation measures are required to be implemented to reduce emissions to below the threshold of significance, to the extent feasible.

A main source of pollution generated by the proposed Project would be due to the generation of mobile source emissions by vehicles traveling to and from the Project site. According to Kimley Horn

(as provided by the Traffic Analysis prepared for the proposed Project), the proposed Project is anticipated to generate approximately 2,576 passenger vehicle trips and 1,224 heavy-duty truck trips per day.

CalEEMod™ (v.2020.4.0) was used to model operational emissions of the proposed Project. The SJVAPCD provides a list of applicable air quality emissions thresholds. Table 3.3-10 shows proposed Project emissions as provided by CalEEMod. As shown in Table 3.3-10 below, unmitigated operational emissions would exceed the SJVACPD thresholds of significance for NOx.

TABLE 3.3-10: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR) - UNMITIGATED

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	12.5	17.4	8.3	0.1	5.9	1.7
EXCEEDS THRESHOLD?	**N**	**Y**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

Additionally, the SJVAPCD has also developed daily mass emissions screening criteria for ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ to determine whether project emissions would result in a violation of an AAQS. Because the NAAQS and CAAQS are concentration-based standards presented hourly, daily mass emissions are a more suitable estimate to determine whether a project would contribute to a violation of an AAQS. These screening criteria are 100 pounds per day for any pollutant. The following table (Table 3.3-11) provides the proposed Project's unmitigated operational emissions in pounds per day in comparison to this screening thresholds. As shown in Table 3.3-11, under the unmitigated scenario, the proposed Project's operational emissions would not exceed any of the daily mass screening criteria thresholds.

TABLE 3.3-11: OPERATIONAL PROJECT GENERATED EMISSIONS (POUNDS PER DAY) - UNMITIGATED

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD (POUNDS/DAY)	100	100	100	100	100	100
EMISSIONS	68.5	95.4	45.6	0.5	32.2	9.4
EXCEEDS THRESHOLD?	**N**	**N**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

Proposed Project mitigated operational emissions are shown in Table 3.3-12 based on implementation of SJVAPCD Rule 9510. While compliance with SJVAPCD Rule 9510 is regulatorily required, the rule itself is an indirect source rule designed to achieve emission reductions from development projects. Thus, it is included here to represent the SJVAPCD regulatory requirement to mitigate the operational emissions.[16] The proposed Project would also be required to implement Mitigation Measure 3.3-1, as provided under Impact 3.3-1. However, due to the difficulty in modeling the emissions (i.e. NOx emissions) reductions that would occur due to implementation of

[16] The NOx emissions were adjusted to reflect the 33.3% reduction required, per compliance with Air District Rule 9510.

Mitigation Measure 3.3-1, and for the sake of a conservative analysis, the emissions reductions associated with Mitigation Measure 3.3-1 were not modeled. There are no further mitigation measures identified and thus Table 3.3-12 provides a conservative estimate of the operational emissions results for the proposed Project.

TABLE 3.3-12: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR) - MITIGATED

POLLUTANT	*CO*	*NOX*	*ROG*	*SOX*	*PM_{10}*	*$PM_{2.5}$*
THRESHOLD	100	10	10	27	15	15
EMISSIONS	12.5	11.6	8.3	0.1	5.9	1.7
EXCEEDS THRESHOLD?	**N**	**Y**	**N**	**N**	**N**	**N**

SOURCES: CALEEMOD (V.2020.4.0)

The emission estimates provided in Table 3.3-12 demonstrate a reasonable worst-case scenario for Project operation. Because the operational emissions shown therein would exceed the SJVAPCD's significance thresholds for NOx, this impact would remain ***significant and unavoidable***.

PROJECT DESIGN FEATURE (REGULATORY COMPLIANCE)

In accordance with SJVAPCD Rule 9510, an Air Impact Assessment (AIA) shall be prepared based on the applicability and exemption criteria of the rule.[17] The rule includes general mitigation requirements for construction and/or operational emissions. Per the general mitigation requirements of Rule 9510, the Project shall reduce the project's operational baseline NOx emissions 33.3% over a period of ten years as quantified in the approved AIA. The project shall pay any off-site fees in full by the invoice due date or prior to generating the emissions associated with the Project or any phase thereof, whichever occurs first.

CONCLUSION

Criteria pollutant emissions generated by the proposed Project during operation would exceed applicable thresholds after compliance with all rules and regulations, even after implementation of Mitigation Measure 3.3-1. Therefore, this impact would be ***significant and unavoidable***.

MITIGATION MEASURE(S)

Implement Mitigation Measure 3.3-1.

Impact 3.3-3: The proposed Project would not expose sensitive receptors to substantial pollutant concentrations. (Less than Significant)

TOXIC AIR CONTAMINANTS

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or

[17] Available at: https://www.valleyair.org/rules/currntrules/r9510-a.pdf. Accessed: September 2022.

cardiovascular illness. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. There are no traditional sensitive receptors such as residences, convalescent facilities, or schools that are proposed as part of the proposed Project. The closest sensitive receptors to the Project are located as follows:

- A cluster of farmhouses/residences is located along the western portion of the Project site, adjacent to the Project site;
- A cluster of residences is located approximately 2,000 feet to the southwest of the Project site;
- Additional scattered residences are located approximately 2,200 to 3,000 feet to the south and southwest of the Project site;
- Residences are located approximately 900 feet to the southeast of the Project site; and
- An additional residence is located approximately 2,650 feet to the southeast of the Project site.

Heavy-duty trucks are a common source of Diesel Particulate Matter (DPM), in contrast to passenger vehicles (such as light-duty cars and trucks). The inhalation of DPM generates cancer and non-cancer health risks, especially where concentrations are chronically elevated for long periods of time, and for younger sensitive receptors. Additionally, Truck Refrigeration Units (TRUs) are expected to be in use on approximately 15% of the heavy-duty trucks that travel to and from the Project site for building 2 (the warehouse for high turnover merchandise sold at warehouse stores and as a pallet repair and a Return to Vendor (RTV) facility), and no trucks for building 1 (the regional ecommerce fulfillment distribution center primarily for large and bulky items).

The SJVAPCD's GAMAQI (SJVAPCD, 2015) includes procedures for evaluating hazardous air pollutants. Based on the guidance provided in the GAMAQI, an air toxics health impact analysis has been prepared for the proposed Project to analyze the Project's anticipated impacts from the heavy-duty diesel trucks generated by the Project. Specifically, the source of TACs for this type of Project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs).

An air toxics health risk assessment was conducted utilizing Lakes Environmental Software AERMOD and the CARB's Hotspots Analysis Reporting Program Version 2 (HARP 2) Air Dispersion, Modelling, and Risk Tool (ADMRT) for the DPM associated with the heavy-duty trucks (including from the truck TRUs). Truck idling, truck on-site mobile, and TRU DPM emissions were calculated. The maximum residential (70-year exposure) cancer, workplace (40-year exposure) cancer, chronic (non-cancer), and acute (non-cancer) risks were assessed and compared to SVJAPCD thresholds. See Appendix B.3 for full model inputs. Table 3.3-10 summarizes the results of the analysis.

TABLE 3.3-10: SUMMARY OF MAXIMUM HEALTH RISKS

RISK METRIC	*MAXIMUM RISK*	*SIGNIFICANCE THRESHOLD*	*IS THRESHOLD EXCEEDED?*
Residential Cancer Risk (70-year exposure)	0.52	20 per million	No
Workplace Cancer Risk (40-year exposure)	0.72	20 per million	No
Chronic (non-cancer)	<0.01	Hazard Index ≥1	No
Acute (non-cancer) [1]	0	Hazard Index ≥1	No

SOURCES: AERMOD (LAKES ENVIRONMENTAL SOFTWARE, 2022); AND HARP-2 AIR DISPERSION AND RISK TOOL.

The maximum residential cancer risk would occur at a residence located on Hansen Road, to the west of the Project site. As shown in Table 3.3-10 above, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD TAC thresholds. Therefore, implementation of the proposed Project would cause a ***less than significant*** impact relative to this topic since it is under the threshold established by the SJVAPCD.

VALLEY FEVER

Valley Fever, or coccidioidomycosis, is an infection caused by inhalation of the spores of the fungus, Coccidioides immitis (C. immitis). The spores live in soil and can live for an extended time in harsh environmental conditions. Activities or conditions that increase the amount of fugitive dust contribute to greater exposure, and they include dust storms, grading, and recreational off-road activities.

The San Joaquin Valley is considered an endemic area for Valley Fever. By geographic region, hospitalizations for Valley Fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley Fever died.[18]

The distribution of C. immitis within endemic areas is not uniform and growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for C. immitis growth. Avoidance, when feasible, of sites favorable for the occurrence of

[18] The Centers for Disease Control and Prevent (CDC). 2009. Increase in Coccidioidomycosis – California, 2000-2007. February 13. Website: https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5805a1.htm. Accessed June 8, 2022.

C. immitis is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of C. immitis:[19]

1. Rodent burrows (often a favorable site for C. immitis, perhaps because temperatures are more moderate and humidity higher than on the ground surface).
2. Prehistoric Indian campsites near fire pits.
3. Areas with sparse vegetation and alkaline soils.
4. Areas with high salinity soils.
5. Areas adjacent to arroyos (where residual moisture may be available).
6. Packrat middens.
7. Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils.
8. Sandy well aerated soil with relatively high-water holding capacities.

Sites within endemic areas less favorable for the occurrence of C. immitis include:

1. Cultivated fields
2. Heavily vegetated areas (e.g., grassy lawns)
3. Higher elevations (above 7,000 feet)
4. Areas where commercial fertilizers (e.g., ammonium sulfate) have been applied
5. Areas that are continually wet
6. Paved (asphalt or concrete) or oiled areas
7. Soils containing abundant microorganisms
8. Heavily urbanized areas where there is little undisturbed virgin soil

The Project site is relatively undeveloped and is surround by undeveloped, agricultural, industrial, and residential land uses which are semi-rural to urban in character. Because the majority of the Project site and the immediately surrounding vicinity consists of urbanized development or cultivated fields, the Project site is an area that would lead to a low probability of having C. immitis growth sites and exposure from disturbed soil.

Construction activities would generate fugitive dust that could contain C. immitis spores. The proposed Project would be required to minimize the generation of fugitive dust during construction activities by complying with the SJVAPCD's District Rule 8021. District Rule 8021 requires limitation of fugitive dust emissions from construction, demolition, excavation, extraction, and other earthmoving activities, by implementing control measures such as pre-watering the Project site, phasing construction work to reduce the amount of disturbed surface at any one time, and applying water or other suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas. Therefore, this regulation would ensure that Valley Fever impacts during construction are less than significant.

[19] United States Geological Survey (USGS). 2000. Operational Guidelines (Version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever). Website: http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.486.1526&rep=rep1&type=pdf. Accessed June 8, 2022.

During operations, dust emissions are anticipated to be negligible, because the Project site would be occupied by buildings, pavement, and landscaped areas after construction is complete. Therefore, Project operations would not occur on undeveloped sites and dust emissions typically associated with activity on unpaved surfaces would be negligible. This condition would preclude the possibility of the proposed Project from generating significant fugitive dust that may contribute to Valley Fever exposure. Impacts would be ***less than significant***.

ASBESTOS AND LEAD-BASED PAINT EXPOSURE

According to a map of areas where naturally occurring asbestos in California are likely to occur, there are no such areas in the vicinity of the Project site.[20] Therefore, development of the proposed Project is not anticipated to expose receptors to naturally occurring asbestos. This impact would be ***less than significant***.

Impact 3.3-4: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Less than Significant)

The following text addresses odors. Other emissions (including criteria pollutants and TACs) are addressed in Impacts 3.3-1 through 3.3-4.

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and the SJVAPCD. The general nuisance rule (Health and Safety Code §41700) is the basis for the threshold.

Examples of facilities that are known producers of odors include: Wastewater Treatment Facilities, Chemical Manufacturing, Sanitary Landfill, Fiberglass Manufacturing, Transfer Station, Painting/Coating Operations (e.g. auto body shops), Composting Facility, Food Processing Facility, Petroleum Refinery, Feed Lot/Dairy, Asphalt Batch Plant, and Rendering Plant.

If a project proposes to locate receptors and known odor sources in proximity to each other, further analysis may be warranted. However, if a project would not locate receptors and known odor sources in proximity to each other, then further analysis is not warranted. The proposed Project does not include new industrial uses that are not already present in the vicinity of the Project site. There is a residence located near to the Project site to the west; however, it is proposed to be removed. Moreover, since the proposed Project would not be a source of offensive odors, sensitive receptors located near to the Project site would not be exposed by the Project to significant odors that would affect a substantial number of people. Air district Rule 402 prohibits any mobile or stationary source generating an objectionable odor, with the exception of odors emanating from certain agricultural operations. The California Health and Safety Code §41700 and Air District Rule

[20] United States Geological Survey (USGS). 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Website: https://pubs.usgs.gov/of/2011/1188/. Accessed June 8, 2022.

402 prohibit emissions of air contaminants from any source that cause nuisance or annoyance to a considerable number of people or that present a threat to public health or cause property damage. Compliance with these rules would preclude land uses proposed under the proposed Project from emitting objectionable odors.

CONCLUSION

The proposed Project does not propose uses that would create new odors that would adversely affect a substantial number of people. The proposed Project also does not introduce any new sensitive receptors. Therefore, operation of the proposed Project would not result in significant objectionable odors. Impacts associated with exposure to odors would be ***less than significant.***

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This section describes the regulatory setting, regional biological resources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a Project-level, and covers impacts associated with the conversion of the entire site to an urban use. This section is based in part on the following technical studies: *San Joaquin County General Plan* (San Joaquin County, 2016), *City of Tracy General Plan* (City of Tracy, 2011), *City of Tracy General Plan EIR* (City of Tracy, 2011), the *Costco E-Commerce Facility Phase I Environmental Site Assessment (ESA)* (Kleinfelder, April 2018), as well as a site-specific survey (2020) and analysis.

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

KEY TERMS

The following key terms are used throughout this section to describe biological resources and the framework that regulates them:

Hydric Soils. One of the three wetland identification parameters, according to the Federal definition of a wetland, hydric soils have characteristics that indicate they were developed in conditions where soil oxygen is limited by the presence of saturated soil for long periods during the growing season. There are approximately 2,000 named soils in the United States that may occur in wetlands.

Hydrophytic Vegetation. Plant types that typically occur in wetland areas. Nearly 5,000 plant types in the United States may occur in wetlands. Plants are listed in regional publications of the U.S. Fish and Wildlife Service (USFWS) and include such species as cattails, bulrushes, cordgrass, sphagnum moss, bald cypress, willows, mangroves, sedges, rushes, arrowheads, and water plantains.

Sensitive Natural Community. A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or Federal agencies. The California Environmental Quality Act (CEQA) identifies the elimination or substantial degradation of such communities as a significant impact. The California Department of Fish and Wildlife (CDFW) tracks sensitive natural communities in the California Natural Diversity Database (CNDDB).

Special-Status Species. Special-status species are those plants and animals that, because of their recognized rarity or vulnerability to various causes of habitat loss or population decline, are recognized by Federal, State, or other agencies. Some of these species receive specific protection that is defined by Federal or State endangered species legislation. Others have been designated as "sensitive" on the basis of adopted policies and expertise of State resource agencies or organizations with acknowledged expertise, or policies adopted by local governmental agencies such as counties, cities, and special districts to meet local conservation objectives. These species are referred to collectively as "special status species" in this report, following a convention that has developed in practice but has no official sanction. For the purposes of this assessment, the term “special status” includes those species that are:

- Federally listed or proposed for listing under the Federal Endangered Species Act (50 CFR 17.11-17.12);

- Candidates for listing under the Federal Endangered Species Act (61 FR 7596-7613);
- State listed or proposed for listing under the California Endangered Species Act (14 CCR 670.5);
- Species listed by the USFWS or the CDFW as a species of concern (USFWS), rare (CDFW), or of special concern (CDFW);
- Fully protected animals, as defined by the State of California (California Fish and Game Code Section 3511, 4700, and 5050);
- Species that meet the definition of threatened, endangered, or rare under CEQA (CEQA Guidelines Section 15380);
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code Section 1900 et seq.); and
- Plants listed by the California Native Plant Society (CNPS) as rare, threatened, or endangered (List 1A and List 2 status plants in Skinner and Pavlik 1994).

Waters of the U.S. The Federal government defines waters of the U.S. as "lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows" [33 C.F.R. §328.3(a)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the U.S. Army Corps of Engineers (USACE) as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

Wetlands. Wetlands are ecologically complex habitats that support a variety of both plant and animal life. The Federal government defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Wetlands require wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to waters of the U.S.

METHODS

Pre-Field Investigation

Prior to the field investigation, numerous maps, databases, and reports were reviewed including:

- U.S. Geological Survey (USGS) 7.5-minute Quadrangle
- USGS National Hydrography Data Set
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps
- National Resource Conservation Service (NRCS) Soil Survey
- California Wildlife Habitat Relationships (CWHR) maps
- California Natural Diversity Database (CNDDB)
- California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants
- U.S. Fish and Wildlife Service’s (USFWS) IPac
- U.S. Fish and Wildlife Service’s (USFWS) Official List

Field Survey

The Project site was subject to a field survey by Principal Biologist Steve McMurtry on April 16, 2020. The site reconnaissance survey served several purposes. First, it served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, and vegetation. The field investigations followed the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFW 2009). Habitat was recorded. Visibility during each survey was excellent.

3.4.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

The City of Tracy is located in the western portion of the Great Valley Geomorphic Province of California. The Great Valley Geomorphic Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is located just south and west of the City. This major river drains the Great Valley Province into the San Joaquin Delta to the north, ultimately discharging into the San Francisco Bay to the northwest.

The City of Tracy is located within the San Joaquin Valley Bioregion, which is comprised of Kings County, most of Fresno, Kern, Merced, and Stanislaus counties, and portions of Madera, San Luis Obispo, and Tulare counties. The San Joaquin Valley Bioregion is the third most populous out of ten bioregions in the state, with an estimated 2 million people. The largest cities within this Bioregion are Fresno, Bakersfield, Modesto, and Stockton. Interstate 5 and State Route 99 are the major north-south roads that run the entire length of the bioregion.

The bioregion is bordered on the west by the coastal mountain ranges. Its eastern boundary joins the southern two-thirds of the Sierra bioregion, which features Yosemite, Kings Canyon, and Sequoia National Parks. At its northern end, the San Joaquin Valley bioregion borders the southern end of the Sacramento Valley bioregion. To the west, south, and east, the bioregion extends to the edges of the valley floor.

Habitat in the bioregion includes vernal pools, valley sink scrub and saltbush, freshwater marsh, grasslands, arid plains, orchards, and oak savannah. Historically, millions of acres of wetlands flourished in the bioregion, but stream diversions for irrigation dried all but about five percent. Remnants of the wetland habitats are protected in this bioregion in publicly owned parks, reserves, and wildlife areas. The bioregion is considered the state's top agricultural producing region with the abundance of fertile soil.

LOCAL SETTING

The Project site is located in the western portion of the City of Tracy's Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is located northwest of I-580, approximately 4.75 miles southwest of Tracy City Hall, and directly south of the Cordes Ranch Specific Plan. The Project site is relatively flat and ranges in elevation from approximately 148 to 187 feet above sea level.

The Project site encompasses approximately 104.36 acres of undeveloped land previously used for agricultural purposes. As a result of site disturbance associated with the previous agricultural operations, there is little native vegetation or naturalized habitat located on the site, and the flat topography of the site renders the site essentially void of prominent natural features. There are no trees or light sources on-site. Additionally, there are no rivers, streams, or other aquatic habitats located on the Project site.

The Project site is surrounded by a variety of undeveloped and existing developed land uses. The parcel to the west of the Project site is currently undeveloped agricultural land with a ranch-style house, detached garages, barns, and sheds in the southern portion of the parcel. A fenced utility substation is located along West Schulte Road, north of the ranch-style homes and associated buildings. The Delta Mendota Canal borders the Project site on the south and the parcels to the south across the canal are designated for agricultural uses by the San Joaquin County General Plan. There is additional undeveloped agricultural land bordering the site to the east, as well as a glassware manufacturer and the Tracy Biomass Plant (approximately ½ mile) to the east past the agricultural land. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site was historically used as an orchard from 1937 to 1982, and from 1993 to 2012, the Project site appeared to be used instead for low-lying crops (Kleinfelder, April 2018). Agricultural areas, including the Project site, are generally flat and well drained, and as a result are well suited for many crops. Alfalfa fields, hay, row crops, orchards, annual grasslands, cattle pasture, and dairies dominate the agricultural areas in the region. Agricultural fields commonly have irrigation canals, ditches, and stock ponds that serve as a water source or drainage for the fields and habitat for a limited variety of plants and animals. The San Luis & Delta-Mendota Water Authority (SLDMWA) provided water supply for the agricultural uses from the Delta Mendota Canal, which generally runs conterminous with the Project site. The SLDMWA maintains an easement for underground pipelines and there are irrigation valves noted near the southeastern portion of the Project site (Kleinfelder, April 2018).

CALIFORNIA WILDLIFE HABITAT RELATIONSHIP SYSTEM

The California Wildlife Habitat Relationship (CWHR) habitat classification scheme has been developed to support the CWHR System, a wildlife information system and predictive model for California's regularly-occurring birds, mammals, reptiles and amphibians. When first published in 1988, the classification scheme had 53 habitats. At present, there are 59 wildlife habitats in the CWHR System: 27 tree, 12 shrub, 6 herbaceous, 4 aquatic, 8 agricultural, 1 developed, and 1 non-vegetated.

The Project site is considered to have low biological diversity due to the conversion of the native habitat of the site for historical agricultural production. According to the California Wildlife Habitat Relationship System there are five cover types (wildlife habitat classifications) in the Project site out of 59 found in the State. The majority of the Project site is labeled deciduous orchard and dryland grain crops with only small portions of the site labeled pasture, irrigated row and field crops, and evergreen orchard. It is noted that there are no orchards currently on the project site, although

orchards were historically planted on the project site. Figure 3.4-1 illustrates the land cover type map for the Project site and below is a brief description of these CWHR habitats.

Deciduous Orchard are typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate harvest. Trees range in height at maturity for many species from 15 to 30 ft, but may be 10 ft or less depending on the species. Crowns usually touch, and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Deciduous orchards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. Though some deciduous orchards are non-irrigated, most are irrigated. Some flat soils are flood irrigated, but many deciduous orchards are sprinkler irrigated. Large numbers of orchards are irrigated by drip or trickle irrigation systems. Most deciduous orchards are in valley or foothill areas, with a few, such as, apples and pears, up to 3,000 feet elevation.

Dryland Drain Crop habitats are often located on flat to gently rolling terrain. When flat terrain is put into crop production, it usually is leveled to facilitate irrigation. Rolling terrain is either dry farmed or irrigated by sprinklers. Vegetation in the dryland (nonirrigated) grain and seed crops habitat includes seed producing grasses, primarily barley, cereal rye, oats, and wheat. These seed and grain crops are annuals. They are usually planted by drilling in rows which produce solid stands, forming 100 percent canopy at maturity in good stands. They are normally planted in fall and harvested in spring. However, they may be planted in rotation with other irrigated crops and winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in late spring.

Pastures are planted on flat and gently rolling terrain. Flat terrain is irrigated by the border and check method of irrigation, except on sandy soils or where water supplies are limited. Pastures established on sandy soils or hills are sprinklered. Hilly lands also use wild flooding; that is, ditches that follow the grade along ridges and hillsides, where water is released at selected points along the ditch. Climate influences the length of the growing season. For example, pastures at higher elevations or in the north have a shorter growing season.

Irrigated Row and Field Crops include a variety of sizes, shapes and growing patterns. Cotton and asparagus can be three or four feet tall while others may be a foot or less high. Most irrigated row and field crops are grown in rows. Some may form 100 percent canopy while others may have significant bare areas between rows. Most are annuals, while others, such as asparagus and strawberries are perennial. The annuals are usually planted in spring and harvested in summer or fall. However, they may be planted in rotation with other irrigated crops and sometimes winter wheat or barley may be planted after harvest of a previous crop in the fall, dry farmed (during the wet winter and early spring months), and then harvested in the late spring. In some areas of southern California three crops may be grown in a year**.**

Evergreen Orchard are typically open single species tree dominated habitats. Depending on the tree type and pruning methods they are usually low, bushy trees with an open understory to facilitate

harvest. Trees range in height at maturity for many species from 15 to 30 ft, but may be 10 ft or less depending on the species. Crowns often do not touch, and are usually in a linear pattern. Spacing between trees is uniform depending on desired spread of mature trees. The understory is usually composed of low-growing grasses, legumes, and other herbaceous plants, but may be managed to prevent understory growth totally or partially, such as along tree rows. Evergreen orchards can be found on flat alluvial soils in the valley floors, in rolling foothill areas, or on relatively steep slopes. All are irrigated. Some flat soils are flood irrigated, but most evergreen orchards are sprinkler irrigated. Large numbers of orchards are irrigated by drip or trickle irrigation systems. Most evergreen orchards are in valley or foothill areas. Except for olive, most evergreen orchard trees are not very frost tolerant.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDB), the California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service's (USFWS) records of listed endangered and threatened species from the IPAC database. The background search was regional in scope and focused on the documented occurrences within 10 miles (9 quad) of the Project site. Table 3.4-1 provides a list of special-status plants and Table 3.4-2 provides a list of special-status animals. Figure 3.4-2 presents the documented occurrences within 10 miles (9 quad) of the Project site. The presence determinations were made by principal biologist, Steve McMurtry (De Novo Planning Group, 2020) and are based on the site survey, review of on-site habitat conditions, and the CNDDB results.

TABLE 3.4-1: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Sharsmith's onion *Allium sharsmithiae*	--/--/1B.3/No	Native to California found in Alameda, San Joaquin, Stanislaus, and Santa Clara Counties within the Coast Ranges	Foothill woodland. March – May.	Not expected to occur; no suitable habitat.
Large-flowered fiddleneck *Amsinckia grandiflora*	E/E/1B.1/Yes	Native to California found in Contra Costa, Alameda, and San Joaquin Counties	Found in grasslands; it grows on sedimentary loam in mesic areas of its range. April - May	Low potential to occur; marginal habitat present along less disturbed field edges; No CNDDB records within 3 miles of the site.
Contra Costa manzanita *Arctostaphylos manzanita ssp. laevigata*	--/--/1B.2/No	Native to California found in San Joaquin, Contra Costa, Santa Rosa, Mendocino, and Yolo Counties.	Chaparral. 490 to 590 m January - March	Not expected to occur; outside elevation range.
Alkali milk-vetch *Astragalus tener var. tener*	--/--/1B.2/Yes	Eastern San Francisco Bay region, the Delta, and western San Joaquin Valley south to the lower Salinas and San Benito valleys	Grassy alkaline flats and vernally moist meadows at elevations below 500 ft. March-June	Not expected to occur; no suitable habitat and no CNDDB records within 3 miles of the site.
Heartscale *Atriplex cordulata var. cordulata*	--/--/1B.2/Yes	Central Valley and interior valleys of the Coast Range from Butte to Kern counties.	Saline or alkaline sandy soils in grassland or saltbush scrub. March-October	Not expected to occur; no suitable habitat.
Brittlescale *Atriplex depressa*	--/--/1B.2/Yes	Western and eastern Central Valley and adjacent foothills on west side of Central Valley	Alkaline clay soils in chenopod scrub, playa, valley and foothill grasslands; below 320 m. May-October	Not expected to occur; no suitable habitat and no CNDDB records within 3 miles of the site.
Lesser saltscale *Atriplex minuscula*	--/--/1B.1/No	Scattered locations in the Central Valley in Alameda, Butte, Fresno, Kings, Kern, Madera, Merced, Stanislaus, Tulare counties	Alkaline, sandy soils. Chenopod scrub, playas, valley and foothill grassland. May-October	Not expected to occur; no CNDDB occurrences in San Joaquin County.
Big-scale balsam root *Balsamorhiza macrolepis*	--/--/1B.2/No	Native to California. Scattered locations in Northern California, including the San Francisco Bay area, Coastal Ranges, Sierra foothills, and Sacramento Valley.	Valley Grassland, Foothill Woodland. 350 to 1710 m. March – June.	Not expected to occur; outside elevation range.
Big tarplant *Blepharizonia plumosa*	--/--/1B.1/No	San Francisco Bay area with occurrences in Alameda, Contra Costa, San Joaquin, Stanislaus, and Solano Counties	Valley and foothill grassland; 30-505 m. July-Oct.	Low potential to occur; marginal habitat present along less disturbed field edges; CNDDB records within 1 mile of the site.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Mt. Diablo fairy-lantern *Calochortus pulchellus*	--/--/1B.2/No	San Francisco Bay area with occurrences in Alameda, Contra Costa, San Joaquin, Santa Clara, and Solano Counties.	Chaparral, Valley Grassland, Foothill Woodland. 140 to 790 m. April - June	Not expected to occur; outside elevation range.
Chaparral harebell *Campanula exigua*	--/--/1B.2/No	Native to California, Southeast San Francisco Bay area and Coastal Ranges from Contra Costa County southeast to Fresno County.	Chaparral. 260 to 1370 m. May – June.	Not expected to occur; no suitable habitat and outside elevation range.
Lemmon's jewelflower *Caulanthus lemmonii*	--/--/1B.2/No	Southeast San Francisco Bay area, south through the south Coast Ranges and adjacent San Joaquin Valley	Dry exposed slopes in grasslands and pinyon-juniper woodland; 80-1,220 m. March-May	Not expected to occur; outside elevation range.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	--/--/1B.1/	Inner Coast Ranges, east and south San Francisco Bay: Alameda, Contra Costa, Santa Clara, San Joaquin, Solano, Santa Cruz, Monterey County, and San Luis Obispo Counties	Occurs in wetlands and non-wetland valley grassland. May – October	Low potential to occur; marginal habitat present along less disturbed field edges; No CNDDB records within 3 mile of the site.
Dwarf soaproot *Chlorogalum pomeridianum var. minus*	--/--/1B.2/No	Scattered along the foothills of the Coastal Ranges and Mendocino National Forest, with occurrences in Tehama, Glenn, Colusa, Napa, Lake, Santa Clara, San Joaquin, and Santa Clara Counties	Chaparral. Serpentine. 120-1220 m. May – August.	Not expected to occur; no suitable habitat and outside elevation range.
Hispid salty bird's-beak *Chloropyron molle ssp. hispidum*	--/--/1B.1/No	Scattered locations throughout the Central and Sacramento Valley	Alkali sink, Valley Grassland, wetland-riparian habitats. 0 to 30 m. June – September	Not expected to occur; no suitable habitat and only one CNDDB record in the 9-quad region of the Project site over 15 miles from the site.
Palmate-bracted bird's-beak *Chloropyron palmatum*	E/E/1B.1/No	Scattered locations in Fresno and Madera counties in the San Joaquin Valley, San Joaquin, Yolo, and Colusa counties in the Sacramento Valley, and the Livermore Valley area of Alameda County	Saline-alkaline soils in seasonally-flooded lowland plains and basins at elevations of less than 500 feet. May-October	Not expected to occur; no suitable habitat and no CNDDB records within 3 miles of the site.
Mt. Hamilton thistle *Cirsium fontinale var. campylon*	--/--/1B.2/No	Native to California, southeast San Francisco Bay area and Coastal Ranges with occurrences in Contra Costa, Alameda, San Joaquin, Stanislaus, Santa Clara, and San Benito Counties.	Chaparral, Valley Grassland, Foothill Woodland, wetland-riparian habitats. 130 to 880 m. April – October.	Not expected to occur; outside elevation range.
Santa Clara red ribbons *Clarkia concinna ssp. automixa*	--/--/4.3/No	Native to California. San Francisco Bay area and Coastal Ranges with occurrences in Contra Costa, Alameda, Santa Clara, San Mateo, Santa Cruz, and San Joaquin Counties	Foothill Woodland habitat. 220 to 1240 m. May – June	Not expected to occur; no suitable habitat and outside elevation range.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Livermore tarplant *Deinandra bacigalupii*	--/E/1B.1/No	Only three known occurrences within 90 acres of the Livermore Valley in Alameda County.	Sensitive alkali meadows and grasslands. June – October	Not expected to occur; no suitable habitat.
Hospital Canyon larkspur *Delphinium californicum ssp. interius*	--/--/1B.2/Yes	Inner Coast Ranges, east San Francisco Bay: Alameda, Contra Costa, Merced, San Benito, Santa Clara, San Joaquin, and San Luis Obispo Counties	Openings in chaparral, cismontane woodland on moist slopes and ravines; 230-1,100 m. April-June	Not expected to occur; outside elevation range.
Recurved larkspur *Delphinium recurvatum*	--/--/1B.2/Yes	Central Valley from Colusa to Kern Counties	Alkaline soils in saltbush scrub, cismontane woodland, valley and foothill grassland; 3-750 m. Blooming Period March – May	Low potential to occur; marginal habitat present on-site; No CNDDB records within 3 miles of the site.
Tracy's eriastrum *Eriastrum tracyi*	--/R/3.2/No	Scattered occurrences in Colusa, Fresno, Glenn, Kern, Lake, Santa Clara, Shasta, Stanislaus, Tehama, Trinity, and Tulare Counties.	Chaparral, Cismontane Woodland, Valley and Foothill Grassland. 315 to 1780 m. June – July	Not expected to occur; no suitable habitat.
Spiny-sepaled button-celery *Eryngium spinosepalum*	--/--/1B.2/No	Contra Costa, Fresno, Kern, Madera, Merced, San Luis Obispo, Stanislaus, Tulare, and Tuolumne Counties.	Valley and foothill grassland, Vernal pools. 80 to 975 meters. Apr – June.	Not expected to occur; no suitable habitat.
diamond-petaled California poppy *Eschscholzia rhombipetala*	--/--/1B.1/Yes	Interior foothills of south Coast Ranges from Contra Costa to Stanislaus Counties, Carrizo Plain in San Luis Obispo County	Grassland, chenopod scrub, on clay soils where grass cover is sparse enough to allow growth of low annuals; below 975 m. March-April	Low potential to occur; marginal habitat present along less disturbed field edges; No CNDDB records within 3 miles of the site.
San Joaquin spearscale *Extriplex joaquinana*	--/--/1B.2/No	Delta region, central valley and central coast	Alkaline. Chenopod scrub, Meadows and seeps, Playas, Valley and foothill grassland. April-October	Low potential to occur; marginal habitat present along less disturbed field edges; No CNDDB records within 5 miles of the site.
Stinkbells *Fritillaria agrestis*	--/--/4.2/No	Occurrences throughout California, including Alameda, Contra Costa, Fresno, Kern, Mendocino, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, Santa Clara, Santa Cruz, San Luis Obispo, San Mateo, Stanislaus, Tuolumne, Ventura, and Yuba Counties.	Chaparral, Cismontane woodland, Pinyon and juniper woodland, valley and foothill grassland. 10 to 1555 m. March – June.	Low potential to occur; marginal habitat present along less disturbed field edges; No CNDDB records within 10 miles of the site.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Talus fritillary *Fritillaria falcata*	--/--/1B.2/No	southeast San Francisco Bay area and Coastal Ranges with occurrences in Alameda, Monterey, San Benito, Santa Clara, Stanislaus Counties.	Serpentinite, often talus. Chaparral, cismontane woodland, lower montane coniferous forest. 300 to 1525 m. Mar to May.	Not expected to occur; outside elevation range.
Diablo helianthella *Helianthella castanea*	--/--/1B.2/No	San Francisco Bay area: Alameda, Contra Costa, Marin, San Francisco, and San Mateo counties.	Usually rocky, axonal soils. Often in partial shade. Broadleafed upland forest, chaparral, cismontane woodland coastal scrub, riparian woodland, valley and foothill grassland. 60 to 1300 m. March – June.	Not expected to occur; no suitable habitat and outside elevation range.
Brewer's western flax *Hesperolinon breweri*	--/--/1B.2/No	Eastern San Francisco Bay region (i.e., Alameda and Contra Costa Counties), as well as Napa and Solano Counties.	Usually serpentinite. Chaparral, cismontane woodland, valley and foothill grassland. 30 to 945 m. May – July.	Not expected to occur; no suitable habitat.
Woolly rose-mallow *Hibiscus lasiocarpos var. occidentalis*	--/--/1B.2/Yes	Central Valley of California, as well as populations in eastern North America	All along the waterways of the Delta. June-September	Not expected to occur; no suitable habitat.
Loma Prieta hoita *Hoita strobilina*	--/--/1B.1/No	South and East San Francisco Bay region, including Alameda, Contra Costa, Santa Clara, and Santa Cruz Counties.	Usually serpentinite, mesic. Chaparral, cismontane woodland, riparian woodland. 30 to 860 m. May – July (August- October)	Not expected to occur; no suitable habitat.
Legenere *Legenere limosa*	--/--/1B.1/Yes	Central Valley or primarily located in the lower Sacramento Valley, also from north Coast Ranges, San Joaquin Valley, and the Santa Cruz Mountains	Deep, seasonally wet habitats such as vernal pools, ditches, marsh edges, and riverbanks; below 150 m. April-June	Not expected to occur; no suitable habitat.
Mt. Hamilton coreopsis *Coreopsis hamiltonii*	--/--/1B.2/Yes	Diablo Range, Mt. Hamilton Range in Alameda, Santa Clara, and Stanislaus Counties	Steep shale talus slopes in cismontane woodland; 550-1300 m. March-May	Not expected to occur; outside elevation range.
Mason's lilaeopsis *Lilaeopsis masonii*	--/R/1B.1/Yes	Sacramento-San Joaquin River Delta and nearby shores of San Francisco Bay.	Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m. Apr-Nov.	Not expected to occur; no suitable habitat.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Delta mudwort *Limosella australis*	--/--/2B.1/Yes	Found in Contra Costa County, Sacramento County, San Joaquin County, and Solano County.	Riparian scrub, marshes and swamps. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with Lilaeopsis masonii. 0-5 m. May-Aug.	Not expected to occur; no suitable habitat.
Showy golden madia *Madia radiata*	--/--/1B.1/Yes	It is endemic to California, where it is known mostly from the Central Coast Ranges and adjacent edges of the San Francisco Bay Area and Central Valley.	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 75-1220 m. Mar-May.	Not expected to occur; outside elevation range.
Hall's bush-mallow *Malacothamnus hallii*	--/--/1B.2/No	Portions of the San Francisco Bay and Central Valley: Contra Costa, Santa Clara, San Mateo, Merced, and Stanislaus Counties.	Chaparral, coastal scrub. 10 to 760 meters. (April) May – September (October)	Not expected to occur; no suitable habitat.
Shining navarretia *Navarretia nigelliformis ssp. radians*	--/--/1B.2/No	Central Valley, Central Coast Ranges, and adjacent edges of the San Francisco Bay Area.	Sometimes clay, cismontane woodland, valley and foothill woodland, vernal pools. 65 to 1000 m. April – June.	Not expected to occur; outside elevation range.
Mt. Diablo phacelia *Phacelia phacelioides*	--/--/1B.2/No	Central Coastal Ranges, including Contra Costa, San Benito, Santa Clara, and Stanislaus Counties.	Rocky, chaparral, cismontane woodland. 500 to 1370 m. April – May	Not expected to occur; outside elevation range.
Hairless popcornflower *Plagiobothrys glaber*	--/--/1A/No	San Francisco Bay area, including Marin, Alameda, San Benito, and Santa Clara Counties.	Alkaline meadows and seeps, coastal salt marshes and swamps. 15 to 180 m. March – May.	Not expected to occur; no suitable habitat.
California alkali grass *Puccinellia simplex*	--/--/1B.2/No	Located throughout California, Oregon, and Utah. Occurrences in Alameda, Butte, Contra Costa, Fresno, Glenn, Kings, Kern, Lake, Los Angeles, Madera, Merced, Napa, San Bernardino, Santa Clara, Santa Cruz, San Luis Obispo, Solano, Stanislaus, Tulare, and Yolo Counties.	Alkaline, vernally mesic; sinks, flats, and lake margins. Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. 2 – 930 m. March – May.	Not expected to occur; no suitable habitat.
Chaparral ragwort *Senecio aphanactis*	--/--/2B.2/No	Generally located along the coast with a few occurrences in the Central Valley. As far north as the San Francisco Bay Area and south into Baja California.	Sometimes alkaline. Chaparral, cismontane woodland, coastal scrub. 15 to 800 m. January – April.	Not expected to occur; no suitable habitat.

SPECIES	*STATUS (FED./CA/ CNPS/SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT AND BLOOMING PERIOD*	*PRESENCE DETERMINATION*
Long-styled sand-spurrey *Spergularia macrotheca var. longistyla*	--/--/1B.2/No	Eastern and Northern San Francisco Bay region and western San Joaquin Valley.	Alkaline. Meadows and seeps, Marshes and swamps. 0 to 255 m. February – May.	Not expected to occur; no suitable habitat.
Saline clover *Trifolium hydrophilum*	--/--/1B.2/No	Eastern and Northern San Francisco Bay region, the Delta, western San Joaquin Valley, southern San Jose	Marshes and swamps, Valley and foothill grassland (mesic, alkaline), and Vernal pools. April-June	Not expected to occur; no suitable habitat.
Caper-fruited tropidocarpum *Tropidocarpum capparideum*	--/--/1B.1/Yes	Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills; currently known from Fresno, Monterey, and San Luis Obispo Counties	Alkaline hills in valley and foothill grassland; below 455 m. March-April.	Low potential to occur; marginal habitat present along less disturbed field edges; CNDDB records within 1 mile of the site.

NOTES: THE PRESENCE DETERMINATIONS WERE MADE BY PRINCIPAL BIOLOGIST, STEVE MCMURTRY (DE NOVO PLANNING GROUP, 2020) AND ARE BASED ON THE SITE SURVEY, REVIEW OF ON-SITE HABITAT CONDITIONS, AND THE CNDDB RESULTS CNPS = CALIFORNIA NATIVE PLANT SOCIETY

SJMSCP = SAN JOAQUIN MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL CALIFORNIA ENDANGERED SPECIES ACT.

R = RARE UNDER THE CALIFORNIA ENDANGERED SPECIES ACT

CALIFORNIA NATIVE PLANT SOCIETY

1B = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA AND ELSEWHERE.

2 = RARE, THREATENED, OR ENDANGERED IN CALIFORNIA, BUT MORE COMMON ELSEWHERE.

3 = A REVIEW LIST – PLANTS ABOUT WHICH MORE INFORMATION IS NEEDED.

4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST

.1 = SERIOUSLY ENDANGERED IN CALIFORNIA (OVER 80% OF OCCURRENCES THREATENED-HIGH DEGREE AND IMMEDIACY OF THREAT).

.2 = FAIRLY ENDANGERED IN CALIFORNIA (20-80% OCCURRENCES THREATENED).

.3 = NOT VERY ENDANGERED IN CALIFORNIA (<20% OF OCCURRENCES THREATENED).

TABLE 3.4-2: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
INVERTEBRATES				
Longhorn fairy shrimp *Branchinecta longiantenna*	E/--/Yes	Eastern margin of central Coast Ranges from Contra Costa County to San Luis Obispo County; disjunct population in Madera County	Small, clear pools in sandstone rock outcrops of clear to moderately turbid clay- or grass-bottomed pools.	No potential to occur. Habitat not present.
Vernal pool fairy shrimp *Branchinecta lynchi*	T/--/Yes	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; they are also found in sandstone rock outcrop pools.	No potential to occur. Habitat not present.
Midvalley fairy shrimp *Branchinecta mesovallensis*	--/--/Yes	Have been found in Sacramento, Solano, Yolo, Contra Costa, San Joaquin, Madera, Merced and Fresno counties. The increase of known locations lends additional support to the idea that the range and distribution of midvalley fairy shrimp is greater than the distribution of known occurrences.	Shallow ephemeral pools, vernal swales, and various artificial ephemeral wetland habitats.	No potential to occur. Habitat not present.
California linderiella *Linderiella occidentalis*	--/--/No	Ranges from near Redding in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin Rivers	Natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities	No potential to occur. Habitat not present.
Crotch bumble bee *Bombus crotchii*	--/C/No	Central California south to Baja California del Norte, Mexico, and includes coastal areas east to the edges of the deserts and the Central Valley	Open grassland and scrub	Low potential; No known CNDDB occurrences within 3-miles of Project site. Potential habitat limited, to non-existent within Project area.
Western bumble bee *Bombus occidentalis*	--/C/No	Western North America, ranging from the tundra region in Alaska and Yukon south along the west coast to southern British Columbia to central California, Arizona and New Mexico and east into southern Saskatchewan and northwestern Great Plains	Open coniferous, deciduous and mixed-wood forests, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones, and along roadsides in taiga adjacent to wooded areas, urban parks, gardens and agricultural areas, subalpine habitats and more isolated natural areas	Low potential; No known CNDDB occurrences within 3-miles of Project site. Potential habitat limited, to non-existent within Project area.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/--/Yes	Stream side habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	No potential to occur. Habitat not present.
AMPHIBIANS				
California tiger salamander *Ambystoma californiense (A. tigrinum c.)*	T/SSC/Yes	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	Low potential; No known CNDDB occurrences within 3-miles of Project site. Appropriate breeding habitat not present. Estivation habitat limited by active agricultural activities in the vicinity and regular weed abatement on-site.
Foothill yellow-legged frog *Rana boylii*	--/C (SSC)/Yes	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	No potential to occur. Habitat not present.
California red-legged frog *Rana aurora draytoni*	T/SSC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	No potential to occur. Habitat not present. Multiple CNDDB occurrences within 3-miles of the site along the base of the Mountains to the south and west, but separated by the Delta Mendota.
Western spadefoot *Spea hammondii*	T/SSC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	No potential to occur. Habitat not present.
BIRDS				
Cooper's hawk *Accipiter cooperii*	--/SSC/Yes	Throughout California except high altitudes in the Sierra Nevada. Winters in the Central Valley, southeastern desert regions, and plains east of the Cascade Range	Nests in a wide variety of habitat types, from riparian woodlands and digger pine-oak woodlands through mixed conifer forests	Low potential; uncommon winter and rare summer visitor in project area. No known CNDDB occurrences within 3 miles of the site. Nesting opportunities

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
				are absent. Highly mobile species could pass through.
Tricolored blackbird *Agelaius tricolor*	BCC/C (SSC)/Yes	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony	Moderate potential; potential nesting and foraging habitat present within region, but not within the Project site. CNDDB occurrences within 1.5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
Grasshopper sparrow *Ammodramus savannarum*	--/SSC/No	Foot hills and mountains throughout California including Mendocino, Trinity, and Tehama counties south, west of the Cascade–Sierra Nevada axis and southeastern deserts, to San Diego County. Also found in the lowlands such as the Central Valley.	Grassland, hayfields, prairies, especially those with fairly tall grass and weeds and a few scattered shrubs.	Moderate potential to occur. Suitable foraging habitat present. There are no CNDDB record within 5 miles of the site. Highly mobile species could pass through.
Golden eagle *Aquila chrysaetos*	BCC/FP/Yes	Foothills and mountains throughout California. Uncommon non-breeding visitor to lowlands such as the Central Valley	Nest on cliffs and escarpments or in tall trees overlooking open country. Forages in annual grasslands, chaparral, and oak woodlands with plentiful medium and large-sized mammals	Low potential; potential foraging habitat present within project area. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
Short-eared owl *Asio flammeus*	BCC/SSC/Yes	Permanent resident along the coast from Del Norte County to Monterey County although very rare in summer north of San Francisco Bay, in the Sierra Nevada north of Nevada County, in the plains east of the Cascades, and in Mono County; small, isolated populations	Freshwater and salt marshes, lowland meadows, and irrigated alfalfa fields; needs dense tules or tall grass for nesting and daytime roosts.	Low potential; potential foraging habitat present within project area. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
Burrowing owl *Athene cunicularia*	BCC/SSC/Yes	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows	High potential to occur. Suitable nesting and foraging habitat present on-site. Nearest CNDDB record on adjacent property to the east. No active nesting observed. Highly mobile species could pass through and could establish nests in future years.
Ferruginous hawk *Buteo regalis*	--/--/Yes	Does not nest in California; winter visitor along the coast from Sonoma County to San Diego County, east-ward to the Sierra Nevada foothills	Open terrain in plains and foothills where ground squirrels and other prey are available	Low potential to occur. Suitable foraging habitat present on-site. There are no CNDDB record within 5 miles of the site.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
		and south-eastern deserts, the Inyo-White Mountains, the plains east of the Cascade Range, and Siskiyou County		Nesting opportunities are absent. Highly mobile species could pass through.
Swainson's hawk *Buteo swainsoni*	BCC/T/Yes	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields	High potential to occur. Suitable foraging habitat present on-site. Nearest CNDDB record 1.2-miles east of site. Nesting opportunities are absent. Highly mobile species could pass through.
Northern harrier *Circus hudsonius*	--/SSC/Yes	Occurs throughout lowland California. Has been recorded in fall at high elevations	Grasslands, meadows, marshes, and seasonal and agricultural wetlands	Low potential to occur. Marginal habitat present on-site. There are no CNDDB record within 5 miles of the site. No active nesting observed. Highly mobile species could pass through and could establish nests in future years.
White-tailed kite *Elanus leucurus*	--/--/Yes	Gulf Coast in Texas and Mexico and in the valley and coastal regions of central and southern California	Grasslands, marshes, row crops and alfalfa, where they hover while foraging for rodents and insects.	Low potential to occur. Suitable habitat present on-site. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
California horned lark *Eremophila alpestris actia*	--/--/Yes	Central Valley and coastal valleys and foothills.	Forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat	Low potential to occur. Suitable habitat present on-site. There are no CNDDB record within 5 miles of the site. No active nesting observed. Highly mobile species could pass through and could establish nests in future years.
Prairie falcon *Falco mexicanus*	--/--/Yes	Permanent resident in the south Coast, Transverse, Peninsular, and northern Cascade Ranges, the southeastern deserts, Inyo-White Mountains, foothills surrounding the Central Valley, and in the Sierra Nevada in Modoc, Lassen, and Plumas Counties. Winters in the Central Valley, along the coast from Santa Barbara County to San Diego County, and in Marin, Sonoma, Humboldt, Del Norte, and Inyo Counties	Nests on cliffs or escarpments, usually overlooking dry, open terrain or uplands	Low potential to occur. Marginal habitat present on-site. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Bald eagle *Haliaeetus leucocephalus*	D/E/No	Nests in Siskiyou, Modoc, Trinity, Shasta, Lassen, Plumas, Butte, Tehama, Lake, and Mendocino Counties and in the Lake Tahoe Basin. Reintroduced into central coast. Winter range includes the rest of California, except the southeastern deserts, very high altitudes in the Sierra Nevada, and east of the Sierra Nevada south of Mono County	In western North America, nests and roosts in coniferous forests within 1 mile of a lake, reservoir, stream, or the ocean	No potential to occur. Habitat not present. Nesting opportunities are absent. Highly mobile species could pass through.
Loggerhead shrike *Lanius ludovicianus*	BCC/SSC/Yes	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Low potential to occur. Marginal habitat present on-site. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
song sparrow ("Modesto" population) *Melospiza melodia*	BCC/SSC/Yes	Restricted to California, where it is locally numerous in the Sacramento Valley, Sacramento–San Joaquin River Delta, and northern San Joaquin Valley. Exact boundaries of range uncertain.	Found in emergent freshwater marshes dominated by tules (*Scirpus* spp.) and cattails (*Typha* spp.) as well as riparian willow (*Salix* spp.) thickets. They also nest in riparian forests of Valley Oak (*Quercus lobata*) with a sufficient understory of blackberry (*Rubus* spp.), along vegetated irrigation canals and levees, and in recently planted Valley Oak restoration sites.	Low potential to occur. Marginal habitat present on-site. There are no CNDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
least Bell's vireo *Vireo bellii pusillus*	E/E/No	Central Valley of California and other low-elevation river valleys.	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak.	No potential to occur. Habitat not present. Nesting opportunities are absent. Highly mobile species could pass through.
FISH				
Delta smelt *Hypomesus transpacificus*	T/T/Yes	Primarily in the Sacramento–San Joaquin Estuary but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay.	Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand.	No potential to occur. Habitat not present.
Central Valley steelhead	T/--/No	Sacramento River and tributary Central Valley rivers.	Occurs in well-oxygenated, cool, riverine habitat with water temperatures from	No potential to occur. Habitat not present.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Oncorhynchus mykiss			7.8°C to 18°C. Habitat types are riffles, runs, and pools.	
Longfin smelt *Spirinchus thaleichthys*	--/SSC/Yes	Occurs in estuaries along the California coast. Adults concentrated in Suisun, San Pablo, and North San Francisco Bays.	Prior to spawning, these fish aggregate in deepwater habitats available in the northern Delta, including, primarily, the channel habitats of Suisun Bay and the Sacramento River. Spawning occurs in fresh water on the San Joaquin River below Medford Island and on the Sacramento River below Rio Vista.	No potential to occur. Habitat not present.
MAMMALS				
Pallid bat *Antrozous pallidus*	--/SSC/No	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	Low potential to occur. No roosting habitat present on-site. There are no CNDDB record within approximately 15 miles of the site.
Pale big-eared bat *Corynorhinus townsendii*	--/SSC/Yes	Coastal regions from Del Norte County south to Santa Barbara County	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings. Very sensitive to disturbances and may abandon a roost after one onsite visit	Low potential to occur. No roosting habitat present on-site. There are no CNDDB record within 5 miles of the site.
Berkeley kangaroo rat *Dipodomys heermanni berkeleyensis*	--/--/Yes	Occurs in Alameda and Contra Costa Counties.	Open grassy hilltops & open spaces in chaparral & blue oak/digger pine woodlands. Needs fine, deep well-drained soil for burrowing	No potential to occur. Appropriate habitat not present in the Project area. Nearest CNDDB record over 16 miles from the site.
Western mastiff bat *Eumops perotis californicus*	--/SSC/Yes	Occurs along the western Sierra primarily at low to mid elevations and widely distributed throughout the southern coast ranges. Recent surveys have detected the species north to the Oregon border	Found in a wide variety of habitats from desert scrub to montane conifer. Roosts and breeds in deep, narrow rock crevices, but may also use crevices in trees, buildings, and tunnels	Low potential to occur. No roosting habitat present on-site. There are no CNDDB record within 5 miles of the site.
hoary bat *Lasiurus cinereus*	--/--/No	The hoary bat is the most widespread North American bat. May be found at any location in California, although distribution patchy in southeastern deserts. This common, solitary	Can be found in foothills, deserts, mountains, lowland, and coastal valleys.	Low potential to occur. No roosting habitat present on-site. There are no CNDDB record within 5 miles of the site.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
		species winters along the coast and in southern California, breeding inland and north of the winter range.		
San Joaquin Pocket Mouse *Perognathus inornatus*	--/--/Yes	Occurs throughout the San Joaquin Valley and in the Salinas Valley	Favors grasslands and scrub habitats with fine textured soils	Moderate potential to occur. Agricultural land use likely precludes this species from maintaining long-term populations on the site. During fallow periods, the habitat improves for this species. One CNDDB record located approximately 4 miles southeast of the site.
Riparian brush rabbit *Sylvilagus bachmani riparius*	E/E/Yes	Limited to San Joaquin County at Caswell State Park near the confluence of the Stanislaus and San Joaquin Rivers and Paradise Cut area on Union Pacific right-of-way lands	Native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees	No potential to occur. Habitat not present.
American badger *Taxidea taxus*	--/SSC/Yes	In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties	Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground	Moderate potential to occur. Suitable foraging habitat on-site; and highly mobile species. Agricultural land use likely precludes this species from maintaining burrows on the site. There are two CNDDB within 5 miles of the site.
San Joaquin kit fox *Vulpes macrotis mutica*	E/T/Yes	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub	Moderate potential to occur. No dens present, but highly mobile species that could forage on the site. Agricultural land use likely precludes this species from maintaining dens on the site. Multiple CNDDB occurrences within 3-miles of the site.
REPTILES				
Northern California legless lizard	--/SSC/No	This lizard is common in suitable habitats in the Coast Ranges from Contra Costa County south to the Mexican border, but only has a spotty occurrence throughout the rest of its range,	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	Low potential to occur. Limited, to no habitat present in the Project area. There are no CNDDB record within 5 miles of the site.

SPECIES	*STATUS (FED/CA/ SJMSCP)*	*GEOGRAPHIC DISTRIBUTION*	*HABITAT REQUIREMENTS*	*PRESENCE DETERMINATION*
Anniella pulchra		which includes the San Joaquin Valley to the west slope of the southern Sierra, the Tehachapi Mountains west of the desert and in the mountains of southern California.		
California glossy snake *Arizona elegans occidentalis*	--/SSC/No	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils	Moderate potential to occur. Marginal habitat present in the Project area. Multiple CNDDB records within 5 miles of the site.
Western pond turtle Emys marmorata	--/SSC/Yes	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of Sierra Nevada	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests	Low potential to occur. Limited aquatic habitat present in the Project area mostly associated with the Delta Mendota Canal. There are no CNDDB record within 5 miles of the site.
San Joaquin coachwhip *Masticophis flagellum ruddocki*	--/SSC/Yes	From Colusa County in the Sacramento Valley southward to the grapevine in the San Joaquin Valley and westward into the inner coast ranges. An isolated population occurs at Sutter Buttes. Known elevational range from 20 to 900 meters	Occurs in open, dry, vegetative associations with little or no tree cover. It occurs in valley grassland and saltbush scrub associations. Often occurs in association with mammal burrows.	Moderate potential to occur. Marginal habitat present in the Project area. One CNDDB records/occurrences within 3 miles of the site.
Alameda whipsnake *Masticophis lateralis euryxanthus*	T/T/No	Found in the inner coast range of California – most of them in Contra Costa and Alameda counties. Some have been found in San Joaquin and Santa Clara counties.	Found in chaparral – northern coastal sage scrub and coastal sage. Rock outcrops, rock crevices and mammal burrows are important features of their habitat.	Low potential to occur. Appropriate habitat not present in the Project area. There are no CNDDB record within 5 miles of the site.
Coast horned lizard *Phrynosoma blainvillii*	--/SSC/No	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	Moderate potential to occur. Habitat present in the Project area. Three CNDDB records within 5 miles of the site. Not an uncommon species in the region even in the absence of records.

NOTES: THE PRESENCE DETERMINATIONS WERE MADE BY PRINCIPAL BIOLOGIST, STEVE MCMURTRY (DE NOVO PLANNING GROUP, 2020) AND ARE BASED ON THE SITE SURVEY, REVIEW OF ON-SITE HABITAT CONDITIONS, AND THE CNDDB RESULTSFP

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

C = CANDIDATE SPECIES FOR LISTING UNDER THE FEDERAL ENDANGERED SPECIES ACT.

D = DELISTED FROM FEDERAL LISTING STATUS.

BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.
C = CANDIDATE SPECIES FOR LISTING UNDER THE STATE ENDANGERED SPECIES ACT.
FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.
SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the natural resources of the state and nation including the California Department of Fish and Wildlife (CDFW), USFWS, U.S. Army Corps of Engineers (USACE), and the Central Valley Regional Water Quality Control Board (CVRWQCB). These agencies often respond to declines in the quantity of a particular habitat or plant or animal species by developing protective measures for those species or habitat type. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), passed in 1973, defines an endangered species as any species or subspecies that is in danger of extinction throughout all or a significant portion of its range. A threatened species is defined as any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Once a species is listed it is fully protected from a "take" unless a take permit is issued by the USFWS. A take is defined as the harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting wildlife species or any attempt to engage in such conduct, including modification of its habitat (16 USC 1532, 50 CFR 17.3). Proposed endangered or threatened species are those species for which a proposed regulation, but not a final rule, has been published in the Federal Register.

Migratory Bird Treaty Act

To kill, posses, or trade a migratory bird, bird part, nest, or egg is a violation of the Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., § 703, Supp. I, 1989), unless it is in accordance with the regulations that have been set forth by the Secretary of the Interior.

Federal Bald and Golden Eagle Protection Act

The Federal Bald and Golden Eagle Protection Act provide regulations to protect bald and golden eagles as well as their nests and eggs from willful damage or injury.

Clean Water Act (CWA) – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. § 328.2(f)].

Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as "those areas that are inundated or

saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" [33 C.F.R. § 328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high water mark (OHWM). The OHWM is defined by the USACE as "that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" [33 C.F.R. § 328.3(e)].

The USACE is the agency responsible for administering the permit process for activities that affect waters of the U.S. Executive Order 11990 is a federal implementation policy, which is intended to result in no net loss of wetlands.

Clean Water Act – Section 401

Section 401 of the CWA (33 U.S.C. 1341) requires an applicant who is seeking a 404 permit to first obtain a water quality certification from the CVRWQCB. To obtain the water quality certification, the CVRWQCB must indicate that the proposed fill would be consistent with the standards set forth by the state.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

Fish and Game Code § 2050-2097 – California Endangered Species Act

The California Endangered Species Act (CESA) protects certain plant and animal species when they are of special ecological, educational, historical, recreational, aesthetic, economic, and scientific value to the people of the State. CESA established that it is State policy to conserve, protect, restore, and enhance endangered species and their habitats.

CESA was expanded upon the original Native Plant Protection Act and enhanced legal protection for plants. To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants. Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code § 1900-1913 – California Native Plant Protection Act

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate

native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as "rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

Fish and Game Code §§ 3503, 3503.5, 3800 – Predatory Birds

Under the California Fish and Game Code, all predatory birds in the order Falconiformes or Strigiformes in California, generally called “raptors,” are protected. The law indicates that it is unlawful to take, posses, or destroy the nest or eggs of any such bird unless it is in accordance with the code. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is considered a take. This generally includes construction activities.

Fish and Game Code §§ 1601-1603 – Streambed Alteration

Under the California Fish and Game Code, CDFW has jurisdiction over any proposed activities that would divert or obstruct the natural flow or change the bed, channel, or bank of any lake or stream. Private landowners or project proponents must obtain a “Streambed Alteration Agreement” from CDFW prior to any alteration of a lake bed, stream channel, or their banks. Through this agreement, the CDFW may impose conditions to limit and fully mitigate impacts on fish and wildlife resources. These agreements are usually initiated through the local CDFW warden and will specify timing and construction conditions, including any mitigation necessary to protect fish and wildlife from impacts of the work.

Public Resources Code § 21000 – California Environmental Quality Act

CEQA identifies that a species that is not listed on the federal or state endangered species list may be considered rare or endangered if the species meets certain criteria. (CEQA Guidelines § 15380) Species that are not listed under FESA or CESA, but are otherwise eligible for listing (i.e. candidate, or proposed) may be protected by the local government until the opportunity to list the species arises for the responsible agency.

Species that may be considered for review are included on a list of “Species of Special Concern,” developed by the CDFW. Additionally, the California Native Plant Society (CNPS) maintains a list of plant species native to California that have low populations, limited distribution, or are otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. List 1A contains plants that are believed to be extinct. List 1B contains plants that are rare, threatened, or endangered in California and elsewhere. List 2 contains plants that are rare, threatened, or endangered in California, but more numerous elsewhere.

California Wetlands Conservation Policy

In August 1993, the California Governor announced the "California Wetlands Conservation Policy.” The goals of the policy are to establish a framework and strategy that will:

- Ensure no overall net loss and to achieve a long-term net gain in the quantity, quality, and permanence of wetland acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.
- Reduce procedural complexity in the administration of State and federal wetland conservation programs.
- Encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetland conservation and restoration.

The Governor also signed Executive Order W-59-93, which incorporates the goals and objectives contained in the new policy and directs the Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy.

Natural Community Conservation Planning Act

The Natural Community Conservation Planning Act provides long-term protection of species and habitats through regional, multi-species planning before the special measures of the CESA become necessary.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the SWRCB to regulate state water quality and protect beneficial uses.

Water Quality Control Plan for the Sacramento-San Joaquin River Basins

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), adopted by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

State and federal laws mandate the protection of designated "beneficial uses" of water bodies. State law defines beneficial uses as "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (Water Code Section 13050[f]). Additional protected beneficial uses of the SJR include groundwater recharge and fresh water replenishment.

LOCAL

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

A Habitat Conservation Plan (HCP) is a federal planning document that is prepared pursuant to Section 10 of the FESA. An approved HCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under FESA during development activities.

A Natural Community Conservation Plan (NCCP) is a state planning document administered by CDFW. An approved NCCP within a defined plan area allows for the incidental take of species and habitat that are otherwise protected under CESA during growth and development activities.

BACKGROUND

The key purpose of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), is to provide a strategy for balancing the need to conserve Open Space and the need to Convert Open Space to non-Open Space uses while protecting the region's agricultural economy; preserving landowner property rights; providing for the long-term management of plant, fish and wildlife species, especially those that are currently listed, or may be listed in the future, under the Federal Endangered Species Act (ESA) or the California Endangered Species Act (CESA); providing and maintaining multiple-use Open Spaces which contribute to the quality of life of the residents of San Joaquin County; and accommodating a growing population while minimizing costs to Project Proponents and society at large.

San Joaquin County's past and future (2001-2051) growth has affected and will continue to affect 97 special status plant, fish and wildlife species in 52 vegetative communities scattered throughout San Joaquin County's 1,400+ square miles and 900,000+ acres, which include 43% of the Sacramento-San Joaquin Delta's Primary Zone. The SJMSCP, in accordance with ESA Section 10(a)(1)(B) and CESA Section 2081(b) Incidental Take Permits, provides compensation for the Conversion of Open Space to non-Open Space uses which affect the plant, fish and wildlife species covered by the Plan, hereinafter referred to as "SJMSCP Covered Species". In addition, the SJMSCP provides some compensation to offset the impacts of open space land conversions on non-wildlife related resources such as recreation, agriculture, scenic values and other beneficial Open Space uses.

The SJMSCP compensates for Conversions of Open Space for the following activities: urban development, mining, expansion of existing urban boundaries, non-agricultural activities occurring outside of urban boundaries, levee maintenance undertaken by the San Joaquin Area Flood Control Agency, transportation projects, school expansions, non-federal flood control projects, new parks and trails, maintenance of existing facilities for non-federal irrigation district projects, utility installation, maintenance activities, managing Preserves, and similar public agency projects. These activities will be undertaken by both public and private individuals and agencies throughout San Joaquin County and within the County's incorporated cities of Escalon, Manteca, Lodi, Manteca, Ripon, Stockton and Tracy. Public agencies including Caltrans (for transportation projects), and the San Joaquin Council of Governments (for transportation projects) also will undertake activities which will be covered by the SJMSCP. In addition, 5,340 acres is allocated for anticipated projects (e.g., annexations, general plan amendments)

The 97 SJMSCP Covered Species include 25 state and/or federally listed species. The SJMSCP Covered Species include 27 plants (6 listed), 4 fish (2 listed), 4 amphibians (1 listed), 4 reptiles (1 listed), 33 birds (7 listed), 15 mammals (3 listed) and 10 invertebrates (5 listed).

IMPLEMENTATION

The SJMSCP is administered by a Joint Powers Authority (the San Joaquin County Joint Powers Authority) consisting of members of the San Joaquin County Council of Governments (SJCOG), the CDFW, and the USFWS. Development project applicants are given the option of participating in the

SJMSCP as a way to streamline compliance with required local, State and federal laws regarding biological resources, and typically avoid having to approach each agency independently. According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

Applicants pay mitigation fees on a per-acre basis, as established by the Joint Powers Authority according to the measures needed to mitigate impacts to the various habitat and biological resources. Different types of land require different levels of mitigation; i.e., one category requires that one acre of a similar land type be preserved for each acre developed, while another type requires that two acres be preserved for each acre developed. The entire County is mapped according to these categories so that land owners, project proponents and project reviewers are easily aware of the applicable SJMSCP fees for the proposed development.

The appropriate fees are collected by the City and remitted to SJCOG for administration. SJCOG uses the funds to preserve open space land of comparable types throughout the County, often coordinating with other private or public land trusts to purchase conservation easements or buy land outright for preservation. Development occurring on land that has been classified under the SJMSCP as "no-pay" would not be required to pay a fee. This category usually refers to already urbanized land and infill development areas. Although the fees are automatically adjusted on an annual basis, based on the construction cost index, they often cannot keep pace with the rapidly rising land prices in the Central Valley.

City of Tracy General Plan

The Tracy General Plan includes a number of policies relevant to biological resources and the conservation of sensitive environmental resources.

POLICIES: OPEN SPACE AND CONSERVATION ELEMENT

- OSC-1.1-P-1. New development shall meet all federal, State and regional regulations for habitat and species protection.
- OSC-1.1-P-2. The City shall continue to participate with the SJCOG and other agencies to implement and enforce the SJMSCP.
- OSC-1.1-P-3. New development should incorporate native, drought tolerant vegetation into landscape plans and reduce the use of invasive, non-native plant species.
- OSC-5.1-P-2. The City shall encourage the establishment and maintenance of trees on public and private property to create an urban forest.

City of Tracy Municipal Code

Chapter 7.08 of the City of Tracy Municipal Code pertains to alteration or removal of street trees. Section 7.08.050 of the Municipal Code prohibits cutting, pruning, removing, injuring, or

interference with any tree, shrub, or plant upon or in any street tree area or other public place in the City without prior approval from the Public Work director. The City is authorized to grant such permission at their discretion and where necessary, as outlined in Section 7.08.040.

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on biological resources if it will:

- 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 Game or U.S. Fish and Wildlife Service;
- 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 Game or US Fish and Wildlife Service;
- 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;
- 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 impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

IMPACTS AND MITIGATION

Impact 3.4-1: The proposed Project implementation may result in direct or indirect effects on special-status invertebrate species. (Less than Significant with Mitigation)

Special-status invertebrates that occur within the 9-quad region (which includes the following USGS quadrangles: Byron Hot Springs, Clifton Court Forebay, Union Island, Altamont, Midway, Tracy, Mendenhall Springs, Cedar Mountain, and Lone Tree Creek) for the Project site include: Longhorn fairy shrimp (*Branchinecta longiantenna*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Midvalley fairy shrimp (*Branchinecta mesovallensis*), California linderiella (*Linderiella occidentalis*), Crotch bumble bee (*Bombus crotchii*), Western bumble bee (*Bombus occidentalis*), and Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). As noted in Table 3.4-2, Longhorn fairy shrimp (*Branchinecta longiantenna*), Vernal pool fairy shrimp (*Branchinecta lynchi*), Midvalley fairy shrimp (*Branchinecta mesovallensis*), and Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) are covered species under the SJMSCP.

Vernal Pool Branchiopods: The record search lists several occurrences of the federally endangered longhorn fairy shrimp (*Branchinecta longiantenna*), the threatened vernal pool fairy shrimp (*Branchinecta lynchi*), and the non-listed California linderiella (*Linderiella occidentalis*) and midvalley fairy shrimp (*Branchinecta mesovallensis*) as occurring within the 9-quad region for the project site. These species exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring. The project site does not provide suitable habitat for this species.

Valley Elderberry Longhorn Beetle: The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) is a federally threatened insect that is dependent upon the elderberry plant (*Sambucus* sp.) as a primary host species. Elderberry shrubs are a common component of riparian areas throughout the Sacramento Valley region. Given that no riparian habitat exists on-site and no elderberry plants were observed during the field survey, valley elderberry longhorn beetle is not anticipated to be directly affected by any individual phase or component of the proposed Project

Other Insects: There are two other insects that are not formally listed, special-status species, but are included in the CNDDB search results. These include Crotch bumble bee (*Bombus crotchii*) and western bumble bee (*Bombus occidentalis*). While these species are documented within the 9-quad region for the Project site, they are not documented on the Project site. The habitat present on the project site is not ideal natural habitat for these species and none are believed to be present.

Conclusion: The Project site is located within the jurisdiction of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan ("Plan" or "SJMSCP") and is located within the Central/Southwest Transition Zone of the SJMSCP. Within the Southwest Transition Zone, the Project site is located in the Category C/Pay Zone B. The Category C/Pay Zone B includes parcels containing habitat types classified as Agricultural Habitat Lands which are not otherwise exempt. Applicants pay mitigation fees on a per-acre basis, as established by the JPA, according to the measures needed to mitigate impacts to the various habitat and biological resources. The project applicant would be required to seek coverage under the SJMSCP and would be subject to the Category C/Pay Zone B fees in order to mitigate for any habitat impacts. Coverage involves compensation for habitat impacts on covered species through payment of development fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. In addition, coverage includes incidental take avoidance and minimization measures for species that could be affected as a result of the proposed project. The valley elderberry longhorn beetle, longhorn fairy shrimp, vernal pool fairy shrimp, and midvalley fairy shrimp are covered species under the SJMCP.

The Project site is currently undeveloped and has been historically used for agricultural uses (orchards). There are five documented special-status invertebrates located within the 9-quad region for the project site. According to the CNDDB records search, there are no documented or observed special-status invertebrate species on the Project site. Additionally, appropriate habitat for these special-status invertebrates were not observed within the Project site or offsite improvement corridors during the field survey and none are expected to be affected by the proposed Project. While there are no special status invertebrate species that are anticipated to be affected by the

proposed project, participation in the SJMSCP will provide the coverage for the incidental take of a species if it were to occur. Mitigation Measure 3.4-1 will ensure coverage under the SJMSCP. Therefore, the proposed project would have a ***less than significant*** impact on special status invertebrate species.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1*: Prior to commencement of any grading activities, the Project proponent shall obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*

Impact 3.4-2: The proposed Project has the potential to have direct or indirect effects on special-status amphibian and reptile species. (Less than Significant with Mitigation)

Special-status amphibians and reptiles that occur within the 9-quad region for the Project site according to the CNDDB include: California tiger salamander (*Ambystoma californiense*), Foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana aurora draytoni*), Western spadefoot (*Spea hammondii*), Northern California legless lizard (*Anniella pulchra)*, California glossy snake (*Arizona elegans occidentalis*), Western pond turtle (*Emys marmorata*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), Alameda whipsnake (*Masticophis ladteralis euryxanthus*), and Coast horned lizard (*Phrynosoma blainvilii*). As noted in Table 3.4-2, California tiger salamander (*Ambystoma californiense*), Foothill yellow-legged frog (*Rana boylii*), California red-legged frog (*Rana aurora draytoni*), Western spadefoot (*Spea hammondii*), Western pond turtle (*Emys marmorata*), and San Joaquin coachwhip (*Masticophis flagellum ruddocki*) are covered species under the SJMSCP.

California Tiger Salamander: The federally and State-listed Threatened California tiger salamander (CTS) is a large terrestrial salamander. It occurs in central California from the Sacramento Valley to the south-central San Joaquin Valley, and in the surrounding foothills of both the Coast Ranges and the Sierra Nevada Mountains. CTS are also recorded from the San Francisco Bay region, Sonoma County, the Monterey Bay region, and the valleys and foothills of San Luis Obispo and Santa Barbara counties.

CTS breed in temporary wetland pools, such as vernal pools, and other seasonal wetland bodies where ponded water is present for a minimum of three to four months, extending into the early spring. Such ponds and temporary wetlands provide necessary breeding and larval-stage habitat for the species. Adults spend most of the year in aestivation, underground in the burrows of small mammals, such as the California ground squirrel and/or Botta's pocket gopher, or within other

suitable subterranean retreats. They emerge at night during winter rain events for brief periods to breed (Trenham et al. 2001). Aquatic juveniles (larvae) are mostly herbivorous (Stebbins 1985). CTS normally begin to reproduce after three to five years.

There are no CNDDB records or mapped occurrences of CTS within 3 miles of the Project site. According to the CNDDB, the nearest occurrence of CTS is approximately 4.3 miles northwest of the Project site along the Altamont Pass Road from Greenville Road east to Midway Road in ditches and creeks adjacent to the roadways. In 2011 and 2012, CTS larvae and eggs were found. It is anticipated that CTS adults will disperse at night up to 1.3 miles to refuge sites. Because the Project site is over four miles away, it is unlikely that the CTS observed in this area would travel to the Project site. There are no other known CTS breeding sites in the vicinity.

While there is a low potential for CTS to occur within the Project site, the Project applicant will be required to obtain coverage under the SJMSCP. The CTS is a covered species under the SJMCP; therefore, it is anticipated that any impacts to CTS would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to seek coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Foothill Yellow Legged Frog: The Foothill yellow-legged frog (FYLF) is a State candidate for listing as Threatened. They occur in partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. They need at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis. Adults often bask on exposed rock surfaces near streams. When disturbed, they dive into the water and take refuge under submerged rocks or sediments. During periods of inactivity, especially during cold weather, individuals seek cover under rocks in the streams or on shore within a few meters of water. Egg clusters are attached to gravel or rocks in moving water near stream margins. Unlike most other ranid frogs in California, this species is rarely encountered (even on rainy nights) far from permanent water. Tadpoles require water for at least three or four months while completing their aquatic development. Significant seasonal movements or migrations from breeding areas have not been reported. Normal home ranges are probably less than 10 m (33 ft) in the longest dimension. Occasional long-distance movements (up to 50 m) (165 ft) may occur during periods with high water conditions. Breeding and egg laying usually await the end of spring flooding and may commence any time from mid-March to May, depending on local water conditions. The breeding season at any locality is usually about two weeks for most populations. Females deposit eggs in clusters of 200 to 300 (range 100 to 1000). They hatch in about five days. Tadpoles reach maximum sizes of 50 to 55 mm (2.2 in) and transform in three to four months.

FYLF is known to occur in aquatic habitats, such as creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. They are usually found near riffles with rocks and sunny banks nearby. The FYLF is not documented in the immediate vicinity of the Project site. Additionally, the Project site does not provide the necessary habitat for FYLF. The FYLF is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to FYLF would be ***less than significant*** through compliance with

Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

California Red-Legged Frog: The federally-listed Threatened and California Species of Special Concern California red-legged frog (CRLF) occurs in lowlands and foothills primarily in perennial or ephemeral ponds, pools, and streams where water remains long enough (14 to 28 weeks) for breeding and metamorphosis of tadpoles. Specific breeding sites include streams, creeks, ponds, marshes, sag ponds, deep pools, backwater areas, dune ponds, lagoons, and estuaries. Habitats with the highest densities of CRLF often contain dense emergent or shoreline riparian vegetation closely associated with fairly shallow (< 0.5 meter) to deep (> 0.5 meter), still or slow-moving water (USFWS 2002). CRLF may disperse from their aquatic breeding habitats to upland habitats during the dry season. They prefer upland habitats that provide moisture to prevent desiccation and protection from predators including downed logs, woody vegetation, boulders, moist leaf litter, or other refugia during the dry season. When there is sufficient water at their breeding location, they may remain in aquatic habitats year-round instead of moving to adjacent uplands. During wet seasons, frogs can move long distances between habitats, traversing upland areas or ephemeral drainages. Dispersal distances are typically less than 0.5 km (0.3 mile), with a few individuals moving 2.0 to 3.6 kilometers (1.2 to 2.2 miles). Seeps and springs in open grasslands can function as foraging habitat or refugia for wandering frogs (Jennings and Hayes 1994).

The CNDDB notes two occurrences for CRLF within 2-miles of the Project site. The first occurrence was in March 2001 where one adult female CRLF was collected at night from Patterson Road, located approximately 1.8 miles southwest of the project site near the intersection of Patterson Road and Via Nicole Road. The second occurrence was approximately 1.8 miles northwest of the Project site along the California Aqueduct, where sediment was removed from a concrete apron structure creating a breeding habitat where none had previously existed. In July 2004, two CRLF tadpoles were captured for ID purposes while many more were observed, and by October 2004, 39 juvenile CRLFs were observed.

The farmland fringe areas, as well as the fallow conditions in the Project site and vicinity area provide some very limited upland habitat. The Delta Mendota Canal along the southern boundary of the Project site would provide marginal habitat for CRLF, however, this aquatic feature has large populations of predatory fish species that inhibit CRLF populations. Because the closest documented occurrences within the Project vicinity are almost outside of the dispersal range of CRLF and the Project site has marginal habitat, there is a low potential for CRLF to occur on-site. This species is not documented on and has not been observed on the Project site. The CRLF is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to CRLF would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Western Spadefoot: The California Species of Special Concern western spadefoot occurs primarily in grassland habitats, but can also be found in valley-foothill hardwood woodlands. The western spadefoot requires shallow, temporary pools or streams during breeding season and egg-laying. Where natural vernal pools are absent, western spadefoots may make use of artificial ponds and stock tanks. Most of the year, western spade foots reside in burrows at depths of up to 3 feet. Adult

western spadefoot movement is limited to rainy or humid nights during the breeding season; adults are rarely found on the surface at other times of the year. This species feeds mainly on invertebrates such as insects and worms.

There are no CNDDB records of this species within five miles of the Project site. Additionally, appropriate habitat for this species is limited within the project site, and this species has a low potential to occur on-site. However, limited habitat is present along the Delta Mendota Canal along the southern boundary of the project site. The western spadefoot is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to western spadefoot would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Western Pond Turtle: The western pond turtle (*Emys marmorata*) is a California Species of Special Concern. Its favored habitats include streams, large rivers and canals with slow-moving water, aquatic vegetation, and open basking sites. Although the turtles must live near water, they can tolerate drought by burrowing into the muddy beds of dried drainages. This species feeds mainly on invertebrates such as insects and worms, but will also consume small fish, frogs, mammals and some plants. Western pond turtle predators include raccoons, coyotes, raptors, weasels, large fish, and bullfrogs. This species breeds from mid to late spring in adjacent open grasslands or sandy banks.

The necessary habitat for this species is not present within the project site, and this species has a low potential to occur on-site. However, marginal habitat (i.e., habitat which supports only a few species or individuals because of the limiting environmental conditions) is present along the Delta Mendota Canal along the southern boundary of the project site. The Project site could provide some upland habitat, including nesting opportunities during fallow periods, however, active agricultural activities in the immediate vicinity, as well as regular disking for weed abatement on-site, largely inhibit upland nesting for this species. The western pond turtle is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to western pond turtle would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

San Joaquin Coachwhip: The San Joaquin coachwhip is a California Species of Special Concern due to extensive habitat loss and fragmentation in its restricted range, including conversion of large areas of suitable habitat to agricultural use in the San Joaquin Valley and urban development in areas of the inner Coast Ranges. The San Joaquin coachwhip occurs generally in dry, desert-like habitats as well as grasslands, chaparral and pastures with little or no cover, and avoids dense vegetation where it cannot move quickly, including mixed oak chaparral woodland.

According to the CNDDB records search, there are no documented or observed San Joaquin coachwhips within the Project site. The CNDDB notes one occurrence within 3-miles of the Project site, located approximately 2.8 miles west of the site along Midway Road north of its junction with Patterson Pass Road. Additionally, there are two other occurrences within 5-miles of the Project site

located along Corral Hollow Road and located north of Corral Hollow Road between Livermore and Tracy.

The Project site is currently undeveloped and has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated the snake's food base and the mammal burrows it uses for refuge; therefore, this species has a low potential to occur. The San Joaquin coachwhip is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to the San Joaquin coachwhip would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Alameda Whipsnake: The federally and State-listed Threatened Alameda whipsnake is typically restricted to valley-foothill hardwood habitat on south-facing slopes with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses. The CNDDB records shows that there are no Alameda whipsnake occurrences within 5 miles of the Project site. This species was not observed during the reconnaissance level survey of the site. Given the flat topography and agricultural nature of the Project site and surrounding area, there is a low potential for this species to occur on-site. Therefore, the proposed project would have a ***less than significant*** impact on the Alameda whipsnake species.

Northern California Legless Lizard: The Northern California legless lizard is a California Species of Special Concern and favors sandy or loose loamy soils under sparse vegetation typically found in chaparral, coastal dunes, and coastal scrub habitats. Their adaptation for burrowing, which requires soils with a high sand fraction, makes legless lizards vulnerable to ground disturbing activities such as agriculture. As shown in Table 3.6-1 in Section 3.6, 93.4 percent of the site soils are Capay clay soils. This soil type is located throughout the entire Project site, except in the northeastern corner of the site. Additionally, 6.73 percent of the site soils are Stomar clay loam soils. This soil type is located in the northeastern corner of the Project site along the eastern site boundary. The majority of the site does not contain sandy or loose loamy soils. Limited to no habitat is present in the Project area. Therefore, the site is unsuitable for silvery legless lizards. Additionally, the CNDDB records shows that there are no Northern California legless lizard occurrences within 5 miles of the Project site. Therefore, the proposed project would have a ***less than significant*** impact on the Northern California legless lizard species.

California Glossy Snake: The California glossy snake is a California Species of Special Concern and is most common in desert habitats but also occur in chaparral, sagebrush, valley-foothill hardwood, pine-juniper, and annual grass at elevations from below sea level to 1830 m. This species prefers open sandy areas with scattered brush, as well as rocky areas. Primarily nocturnal, glossy snakes spend periods of inactivity during the day and during winter in mammal burrows and rock outcrops, and to a lesser extent under surface objects such as flat rocks and vegetation residue.

According to the CNDDB, all nearby occurrences of the California glossy snake occur in the more mountainy/higher elevations west and southwest of Interstate 580 located along either Patterson Run Road (approximately 3.5 to 4.7 miles southwest of the Project site) or Corral Hollow Creek Road (approximately 4.1 to 6.3 miles south of the Project site) where the land cover is more appropriate

for this species. The Project site does not contain open sandy areas with scattered brush or rocky areas. As shown in Figure 3.4-1, the Project site does not contain any shrub/scrub land cover. Regular disking and mowing on-site for agriculture and weed/vegetation abatement is a regular disturbance to refuge and foraging habitat. There is a low potential for this species to occur on-site and the California glossy snake is presumed absent from the site. Therefore, the proposed project would have a ***less than significant*** impact on the California glossy snake species.

Coast Horned Lizard: The coast horned lizard is a California Species of Special Concern that is not an uncommon species in the region even in the absence of records. This species requires loose sandy soil in which it can rapidly dig in order to avoid predators. The soils of the Project site are generally too heavy in clays for this type of digging by horned lizards. In addition, farming practices have disturbed the majority of the topsoil. Therefore, this species is presumed absent from the Project site, even though they are fairly common in the region. There are three CNDDB records within 5 miles of the site. No coast horned lizards were observed within the Project site or offsite improvement corridors during the field survey and none are expected to be affected by the proposed project based on the absence of habitat. Therefore, the proposed project would have a ***less than significant*** impact on the coast horned lizard species.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.4-1**.*

Impact 3.4-3: The proposed Project has the potential to have direct or indirect effects on special-status bird species. (Less than Significant with Mitigation)

Special-status birds that are documented in the CNDDB within a ten-mile radius of the Project site include: Cooper's hawk (*Accipiter cooperii*), tricolored blackbird (*Agelaius tricolor*), grasshopper sparrow (*Ammodramus savannarum*), golden eagle (*Aquila chrysaetos*), short-eared owl (*Asio flammeus*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), northern harrier (*Circus hudsonius*), white-tailed kite (*Elanus leucurus*), California horned lark (*Eremophila alpestris actia*), prairie falcon (*Falco mexicanus*), bald eagle (*Haliaeetus leucocephalus*), loggerhead shrike (*Lanius ludovicianus*), song sparrow ("Modesto" population) (*Melospiza melodia*), and least Bell's vireo (*Vireo bellii pusillus*). Least Bell's vireo is not covered by the SJMSCP; the remaining bird species are covered by the SJMSCP.

The Project site may provide suitable foraging habitat for a variety of potentially occurring special-status birds, including those listed above. Potential nesting habitat is present in a variety of trees located within in the Project vicinity. There is also the potential for other special-status birds that do not nest in this region and represent migrants or winter visitants to forage on the Project site.

Year-Round Birds: Special-status birds that can be present in the region throughout the year include: bald eagle (*Haliaeetus leucocephalus*), grasshopper sparrow (*Ammodramus savannarum*), burrowing owl (*Athene cunicularia*), loggerhead shrike *(Lanius ludovicianus*), song sparrow

(Modesto population) (*Melospiza melodia*), tricolored blackbird *(Agelaius tricolor*), among others. Some of these species are migratory, but also reside year-round in California.

Summering Birds: Special-status birds that are only present in the region in the spring and summer months include: Aleutian goose (*Branta canadensis leucopareia*), least bittern (*Ixobrychus exilis*), Swainson's hawk (*Buteo swainsoni*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least Bell's vireo (*Vireo bellii pusillus*), and yellow-billed magpie (*Pica nuttalli*).

Overwintering Birds: Special-status birds that are only present in the region in the fall and winter months include: fox sparrow (*Passerella iliaca*), lesser yellowlegs (*Tringa flavipes*), Lewis's woodpecker (*Melanerpes lewis*), long-billed curlew (*Numenius americanus*), marbeled godwit (*Limosa fedoa*), merlin *(Falco columbarius*), mountain plover (*Charadrius montanus*), peregrine falcon (*Falco peregrinus*), short-eared owl (*Asio flammeus*), and western grebe (A*echmophorus occidentalis*).

Nesting Raptors (Birds of Prey): All raptors (owls, hawks, eagles, falcons), including species and their nests, are protected from take pursuant to the Fish and Game Code of California Section 3503.5, and the federal Migratory Bird Treaty Act, among other federal and State regulations. Special-status raptors that are known to occur in the region include: bald eagle (*Haliaeetus leucocephalus*), burrowing owl (*Athene cunicularia*), Cooper's hawk *(Accipiter cooperii*), ferruginous hawk *(Buteo rega*), golden eagle *(Aquila chrysaetos*), prairie falcon *(Falco mexicanus*), short-eared owl (*Asio flammeus*), Swainson's hawk *(Buteo swainsoni*), and white-tailed kite *(Elanus leucurus*), among others.

Analysis: Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Powerlines exist throughout the region; however, mature trees are fairly limited in the region, and are absent from the Project site. Least Bell's vireos, a riparian species, depends on dense, low-growing thickets of willows, mulefat, mugwort, and California wild rose. Vireos inhabit areas where an overstory of taller willows, cottonwoods, and sycamores is also present. During the winter, they are known to occur in mesquite scrub vegetation. Foraging sometimes takes place in adjacent chaparral and coastal sage scrub. Nesting or foraging habitat for least Bell's vireo is not found on-site; as such, this species has no potential to be present.

The agricultural land represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions.

The CNDDB currently contains nesting records for Swainson's hawk and burrowing owl in the vicinity of the Project site. In addition to the species described above, common raptors and migratory birds may nest in or adjacent to the Project site.

New sources of noise and light during the construction and operational phases of the project could adversely affect nesters if they located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the agricultural areas on the Project site, which serve as potential foraging habitat for birds throughout the year. Mitigation Measure 3.4-1 requires participation in the SJMSCP. As part of the SJMSCP, SJCOG requires preconstruction surveys for

projects that occur during the avian breeding season (March 1 – August 31). When active nests are identified, the biologists develop buffer zones around the active nests as deemed appropriate until the young have fledged. SJCOG also uses the fees to purchase habitat as compensation for the loss of foraging habitat. Implementation of the proposed Project, with the Mitigation Measure 3.4-1, would ensure that potential impacts to special status birds are reduced to a ***less than significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.4-1**.*

Impact 3.4-4: The proposed Project has the potential to result in direct or indirect effects on special-status mammal species. (Less than Significant with Mitigation)

Special-status mammals that occur within the 9-quad region for the Project site according to the CNDDB include: Pallid bat (*Antrozous pallidus*), Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*), Townsend's big-eared bat (*Eumops perotis californicus*), Western mastiff bat (*Eumops perotis californicus*), hoary bat (*Lasiurus cinereus*), San Joaquin pocket mouse (*Perognathus inornatus*), Riparian brush rabbit (*Sylvilagus bachmani riparius*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). As noted in Table 3.4-2, Berkeley kangaroo rat (*Dipodomys heermanni berkeleyensis*), Townsend's big-eared bat (*Eumops perotis californicus*), Western mastiff bat (*Eumops perotis californicus*), San Joaquin pocket mouse (*Perognathus inornatus*), Riparian brush rabbit (*Sylvilagus bachmani riparius*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*) are covered species under the SJMSCP.

Berkeley Kangaroo Rat and Riparian Brush Rabbit: As noted in Table 3.4-2, Berkeley kangaroo rats prefer open grassy hilltops and open spaces in chaparral and blue oak/digger pine woodlands. This species requires fine, deep well-drained soil for burrowing. Riparian brush rabbits prefer native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees. The Project site does not contain appropriate soil types or habitat for the Berkeley kangaroo rat or the riparian brush rabbit. According to CNDDB, there is only one occurrence of the Berkeley kangaroo rat within the 9-quad region of the Project site located over 15 miles southwest of the site in Alameda County. Additionally, there is only one recorded occurrence of the riparian brush rabbit within the 9-quad region of the Project site located approximately 8.2 miles northeast of the site along the Salmon Slough. While there is low potential for these species to occur on-site, the Berkeley kangaroo rat and riparian brush rabbit are both covered species under the SJMSCP; therefore, it is anticipated that any impacts to these species would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

San Joaquin Pocket Mouse: The Project site is currently undeveloped and has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated high quality habitat for the San Joaquin pocket mouse, which is primarily found in grassland, oak savanna and arid scrubland in areas with fine-textured, sandy, and friable soils. The closest documented occurrence of San

Joaquin pocket mouse is approximately 2.75 miles northwest of the Project site. Additionally, the majority of San Joaquin pocket mouse occurrences are recorded southwest/west of Interstate 580; therefore, it is unlikely that the Project site is used by San Joaquin pocket mouse. It is noted that during fallow periods, the site improves for this species, until it is disked for weed abatement on-site.

While there is low potential for these species to occur on-site, the San Joaquin pocket mouse is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

American Badger: The Project site is currently undeveloped and has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated high quality habitat for the American badger, which is primarily found in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. The closest documented occurrence of American badger is approximately 3.22 miles west of the Project site. Additionally, the majority of American badger occurrences are recorded southwest/west of Interstate 580. This species is highly mobile, and will forage where opportunities exist. During fallow periods, the site improves for this species.

While there is low potential for these species to occur on-site, the American badger is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

San Joaquin Kit Fox: San Joaquin kit fox is known to occur in western San Joaquin County within annual grasslands and alkali scrub communities with suitable prey base and loose-textured sandy soils where dens can be enlarged from California ground squirrel burrows. According to the CNDDB, the nearest occurrence of the San Joaquin Kit Fox is approximately 0.25-miles south of the Project site between the Delta Mendota Canal and the California Aqueduct while the majority of occurrences are reported to the south and west of the California Aqueduct. Suitable grassland foraging habitat occurs in the vicinity of the Project site where ground squirrels are abundant. This is a highly mobile species. Therefore, there is a moderate to high potential for the San Joaquin Kit Fox to forage on the Project site at times, especially during fallow periods. There were no dens present on-site during the reconnaissance level site survey, and the active agricultural operations adjacent to the site, as well as the regular disking of the site for weed abatement, inhibit any establishment of dens. The San Joaquin kit fox is covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Special-Status Bats: The CNDDB also identifies several special-status bats that occur within the 9-quad region of the Project site, including: Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Eumops perotis californicus*), Western mastiff bat (*Eumops perotis californicus*), and hoary bat

(*Lasiurus cinereus*). These species are not federal or state listed; however, they are tracked by the CNDDB. Development of the Project site would eliminate foraging habitat for special status bats by removing the agricultural areas. These special status bat species are covered by the SJMSCP, with the exception of the hoary bat.

Hoary Bat: Hoary bats are the most widespread North American bat and could be found at any location in California. This species prefers open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Specifically, this species is typically located in broadleaved upland forests, cismontane woodlands, lower montane coniferous forests, and north coast coniferous forests.

The Project site does not have appropriate roosting habitat to support the hoary bat. Additionally, there is only one documented occurrence of this species in the 9-quad region of the Project site, located approximately 15 miles southwest of the site just south of Livermore near Veterans Park. While bats are highly mobile, hoary bats are not anticipated to occur within the Project site and the proposed Project would have a ***less than significant*** impact on this species.

Covered Bat Species: The remaining special status bat species (i.e., Pallid bat, Townsend's big-eared bat, Western mastiff bat) have not been documented on the Project site. The Project site does not have appropriate roosting habitat to support the bats, and while they are highly mobile and may be present on adjacent properties, they are not expected to be directly affected by the proposed project. These special status bat species are all covered species under the SJMSCP; therefore, it is anticipated that any impacts to the Pallid bat, Townsend's big-eared bat, and Western mastiff bat would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to provide compensation for the loss of the potential foraging habitat.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.4-1**.*

Impact 3.4-5: The proposed Project has the potential for direct or indirect effects on candidate, sensitive, or special-status plant species. (Less than Significant)

The Project site is currently undeveloped and has been previously used for agricultural uses. As identified in Table 3.4-1, the records search identified 45 documented special-status plant species within the 9-region of the Project site; however, given the existing habitat and elevation of the Project site, only seven special-status plant species have a low to moderate potential to occur on-site, including: Large-flowered fiddleneck (*Amsinckia grandiflora*), Big tarplant (*Blepharizonia plumosa*), Recurved larkspur (*Delphinium recurvatum*), diamond-petaled California poppy (*Eschscholzia rhombipetala*), Stinkbells (*Fritillaria agrestis*), Saline clover (*Trifolium hydrophilum*), and Caper-fruited tropidocarpum (*Tropidocarpum capparideum*). Of these species, Large-flowered fiddleneck (*Amsinckia grandiflora*), Recurved larkspur (*Delphinium recurvatum*), diamond-petaled

California poppy (*Eschscholzia rhombipetala*), and Caper-fruited tropidocarpum (*Tropidocarpum capparideum*) are covered species under the SJMSCP.

Of the seven species with potential to occur on-site, the large-flowered fiddleneck, Big tarplant, diamond-petaled California poppy, and caper-fruited tropidocarpum are CNPS 1B listed species; the recurved larkspur and saline clover are CNPS 2 listed species; and the stinkbells is a CNPS 4 listed species. Additionally, the large-flowered fiddleneck is the only federal listed (endangered) species and state listed (endangered) species.

SJMCP Covered Special-Status Plant Species: Of the seven special status species with potential to occur on-site, the large-flowered fiddleneck, recurved larkspur, diamond-petaled California poppy, and caper-fruited tropidocarpum are covered under the SJMSCP. Therefore, any impacts to these species would be ***less than significant*** through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Remaining Special-Status Plant Species: The remaining three plant species are not covered by the SJMSCP: big tarplant, stinkbells, and saline clover. A field survey/habitat evaluation was performed on April 16, 2020. The field survey coincided with the early blooming period for special status plants known to occur within the region. No special-status plant species were observed within the Project site during the field survey and none are expected to be affected by the proposed Project. As previously mentioned, the Project site was historically an orchard from 1937 to 1982, and farmed from 1993 to 2012 for low-lying crops (Kleinfelder, April 2018). The site was fallow at the time of the field survey, with non-native annual grasses. Due to the extent of past disturbance from agricultural production, canal maintenance, and other development activities in the area, the potential these species-status plant species to occur on the Project site is generally considered to be low. For these reasons, the proposed Project would have a ***less than significant*** impact on special status plants.

Impact 3.4-6: The proposed Project has the potential to effect protected wetlands and jurisdictional waters. (No Impact)

According to Steve McMurtry, Staff Biologist with De Novo Planning Group, the Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the federal or state Clean Water Acts. The Project site is site previously used for agricultural uses that has historically been used for orchards, and more recently for crops. At times the Project site is fallow, and forms an annual grassland composed of non-native annuals, before it is disked for weed abatement on-site. The small basin in the northeast corner of the site is dry most of the year, and is used to collect water runoff. The basin is exempt from jurisdiction due to it being a manmade agricultural ditch/basin. Absent any wetlands or jurisdictional waters, implementation of the proposed Project would have ***no impact*** relative to this topic.

Impact 3.4-7: The proposed Project has the potential to result in adverse effects on riparian habitat or a sensitive natural community. (No Impact)

The CNDDB record search revealed documented occurrences of four sensitive habitats within the 9-quad region for the Project site including: Great Valley Oak Riparian, Sycamore Alluvial Woodland,

Valley Sink Scrub, Alkali Meadow, Alkali Seep, Northern Claypan Vernal Pool, Valley Needlegrass Grassland, and Cismontane Alkali Marsh. According to Steve McMurtry, Staff Biologist with De Novo Planning Group, none of these sensitive natural communities occur within the Project site. Implementation of the proposed Project would have ***no impact*** on riparian habitats or natural communities.

Impact 3.4-8: The proposed Project has the potential to result in interference with the movement of native fish or wildlife species or with established wildlife corridors, or impede the use of native wildlife nursery sites. (Less than Significant)

The CNDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. Special status fish species documented within the region include: Delta smelt (*Hypomesus transpacificus*), Central Valley steelhead (*Oncorhynchus mykiss*), and Longfin smelt (*Spirinchus thaleichthys*). The closest major natural movement corridor for native fish that are documented in the region is the San Joaquin River, located approximately 11 miles east of the Project site, and its tributaries. Additionally, the Delta Mendota Canal generally runs along the southern boundary of the project site and the California Aqueduct is approximately 0.3 miles south of the site. According to the CNDDB, there is only one recorded occurrence for each special status fish species, which are all located adjacent to the Clifton Court Forebay in Contra Costa County within the California Aqueduct and Delta Mendota Canal/Old River. The land uses within the Project site would not have any direct disturbance to the Delta Mendota Canal, California Aqueduct, or the San Joaquin River and its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat.

The ongoing operational phase of the proposed Project requires discharge of stormwater into the City storm drainage system, which ultimately discharges into the Delta. The discharge of stormwater could result in indirect impacts to special status fish and wildlife if stormwater was not appropriately treated through BMPs prior to its discharge to the Delta. The Project is subject to the requirements of Chapter 11.34 of the Tracy Municipal Code – Stormwater Management and Discharge Control. The purpose of this Chapter is to "*Protect and promote the health, safety and general welfare of the citizens of the City by controlling non-stormwater discharges to the stormwater conveyance system, by eliminating discharges to the stormwater conveyance system from spills, dumping, or disposal of materials other than stormwater, and by reducing pollutants in urban stormwater discharges to the maximum extent practicable."*

This Chapter is intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC Section 1251 et seq.), Porter- Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) and National Pollutant Discharge Elimination System ("NPDES") Permit No. CAS000004, as such permit is amended and/or renewed. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would interfere or impede fish or wildlife. Implementation of these required measures would ensure that this potential impact is reduced to a ***less than significant*** level.

Impact 3.4-9: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan. (Less than Significant with Mitigation)

The proposed Project is subject to the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP). The proposed Project does not conflict with the SJMSCP. Mitigation Measure 3.4-1 requires participation in the SJMSCP. Therefore, with this mitigation, the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.4-1**.*

Impact 3.4-10: The proposed Project has the potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (No Impact)

The Open Space and Conservation Element of the General Plan establishes numerous policies and implementation measures related to biological resources as listed below:

Open Space and Conservation Element Policies

OSC-1.1-P-1. New development shall meet all federal, State and regional regulations for habitat and species protection.

- ***Consistent**: This EIR provides a detailed overview of the applicable regulatory requirements to ensure the Project complies with all federal, State, and regional regulations for habitat and species protections. Additionally, this EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable.*

OSC-1.1-P-2. The City shall continue to participate with the SJCOG and other agencies to implement and enforce the SJMSCP.

- ***Consistent**: The proposed Project is subject to the SJMSCP. The proposed Project does not conflict with the SJMSCP. Mitigation Measure 3.4-1 requires participation in the SJMSCP.*

OSC-1.1-P-3. New development should incorporate native, drought tolerant vegetation into landscape plans and reduce the use of invasive, non-native plant species.

- ***Consistent**: The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter.*

OSC-5.1-P-2. The City shall encourage the establishment and maintenance of trees on public and private property to create an urban forest.

- ***Consistent**: As noted above in the discussion for Policy OSC-1.1-P-3, the landscape plan includes a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter.*

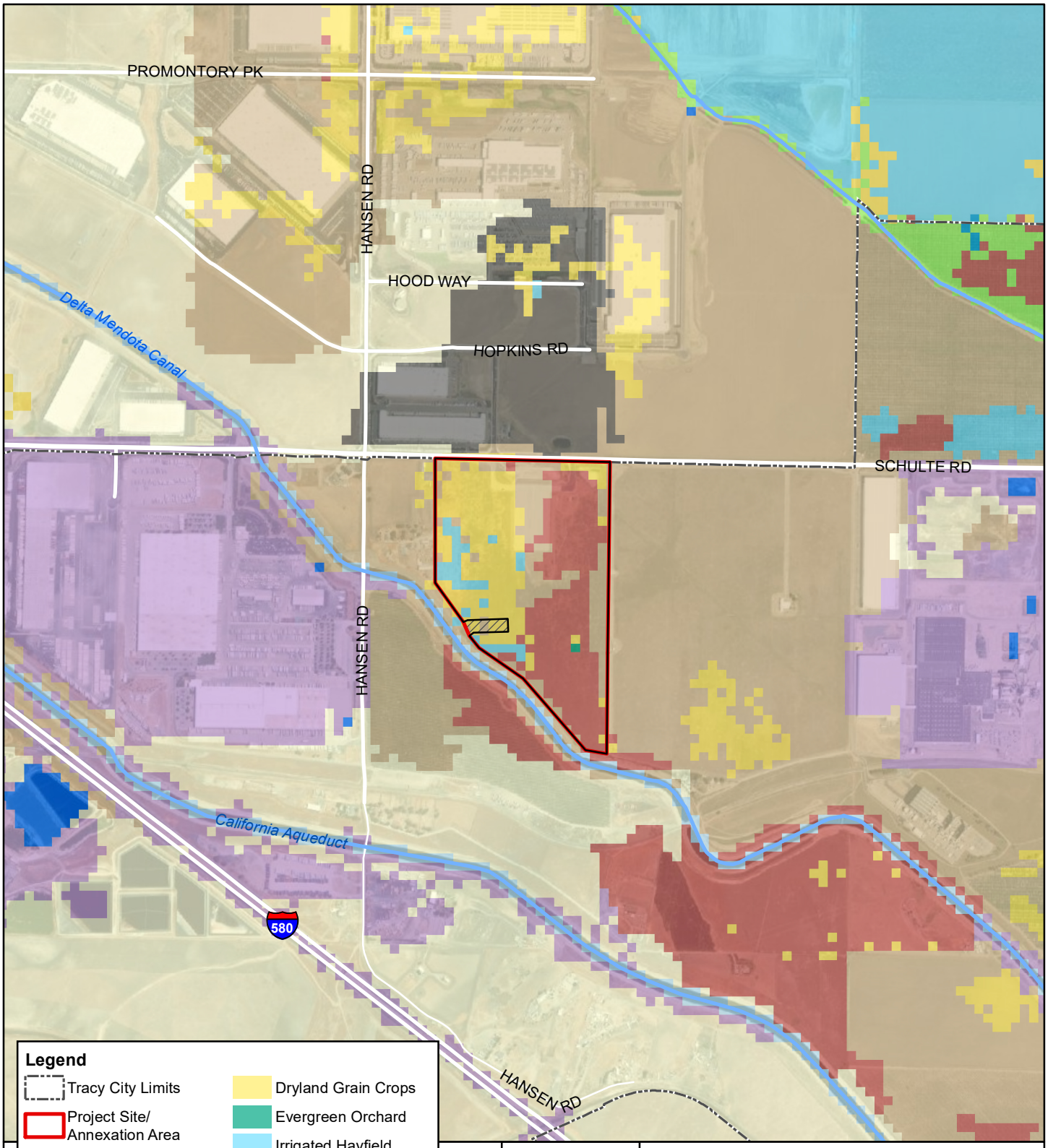
Tracy Municipal Code

The Tracy Municipal Code outlines the Street Tree Removal Criteria under Chapter 7.08. Section 7.08.050 of the Municipal Code prohibits cutting, pruning, removing, injuring, or interference with any tree, shrub, or plant upon or in any street tree area or other public place in the City without prior approval from the Public Work director. The proposed Project does not require the removal of any street trees subject to the regulations outlined under Chapter 7.08; therefore, the proposed Project is consistent with Chapter 7.08.

Conclusion

Based on the analysis above, the proposed Project does not conflict with local policies or ordinances protecting biological resources. Therefore, the proposed Project would have ***no impact*** relative to this topic.

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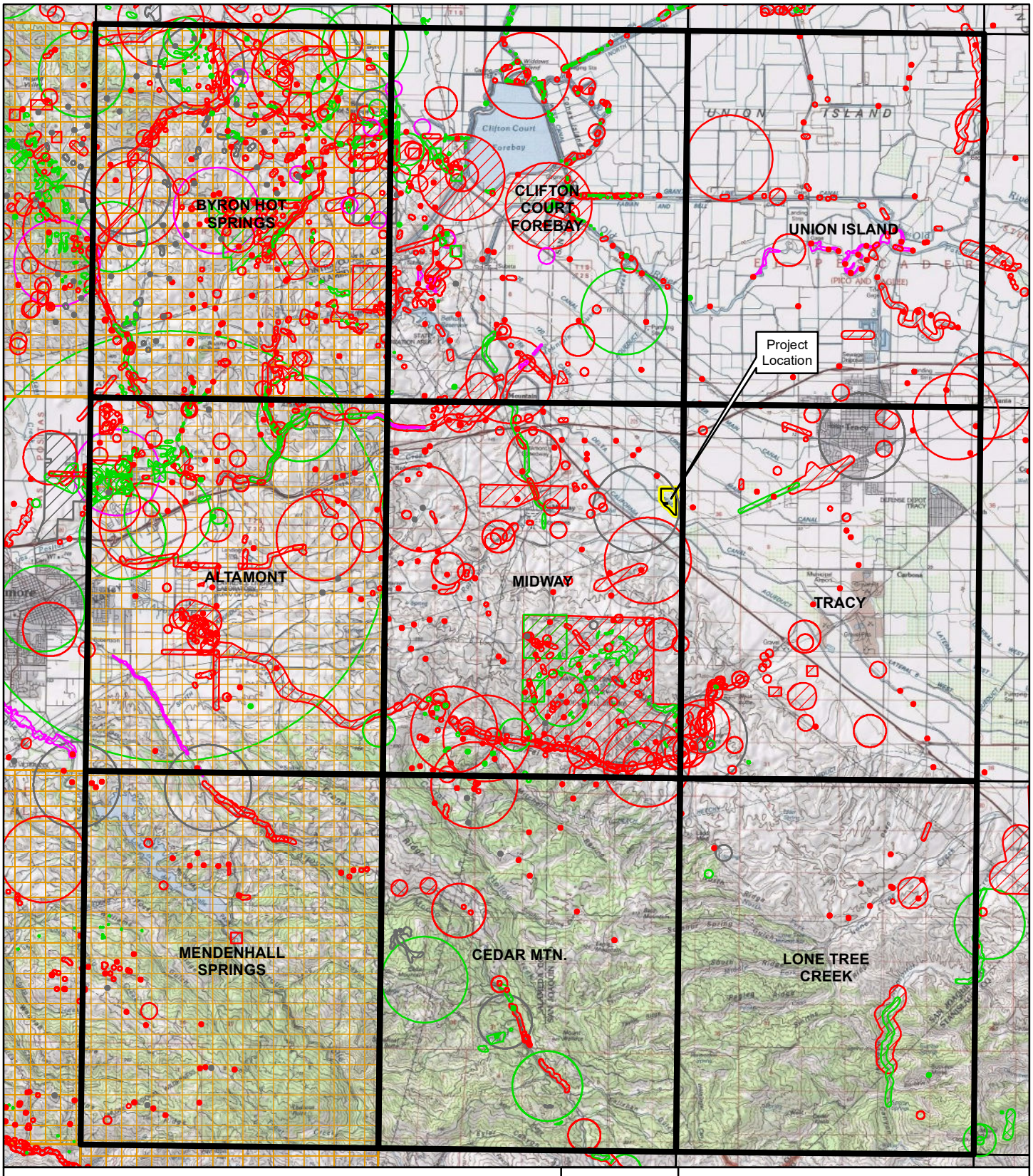
Sources: CalFire FRAP fveg_2015; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021. Revised: May 26, 2022.

TRACY COSTCO DEPOT PROJECT

Figure 3.4-1. Land Cover Types

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Special Status Species Occurrences

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)
- Sensitive Occurrence

CNDDB version 06/2021. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDB about a species or an area can never be used as proof that no special status species occur in an area. Basemap: ArcGIS Online Topographic Map Service. Map date: June 28, 2021.

N

0 1 2
Miles

TRACY COSTCO DEPOT PROJECT

Figure 3.4-2. California Natural Diversity Database

9-Quad Search

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This section provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the San Joaquin County General Plan (San Joaquin County, 2016), City of Tracy General Plan (City of Tracy, 2011), City of Tracy General Plan EIR (City of Tracy, 2011), California Historic Resources Information System (CHRIS) search (Central California Information Center [CCIC], 2019), and the Costco E-Commerce Facility Geotechnical Review (Kleinfelder, August 2018).

No comments were received during the public review period or scoping meeting for the Notice of Preparation (NOP) regarding this topic. Full comments received are included in Appendix A.

KEY TERMS

The following key terms are used throughout this section to describe cultural and tribal resources and the framework that regulates them:

Archaeology. The study of historic or prehistoric peoples and their cultures by analysis of their artifacts and monuments.

Complex. A patterned grouping of similar artifact assemblages from two or more sites, presumed to represent an archaeological culture.

Ethnography. The study of contemporary human cultures.

3.5.1 ENVIRONMENTAL SETTING

CULTURAL AND HISTORICAL BACKGROUND

Prehistory

In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality where survey and excavation studies were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmiller site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons. The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmiller Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave

goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular *Haliotis* beads; *Olivella* shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

The Cosumnes Culture (Middle Horizon) displays considerable changes from the preceding cultural expression. The burial mode is predominately flexed, with variable cardinal orientation and some cremations present. During the Middle Horizon, there is a lower percentage of burials with grave goods, and ocher staining is common in graves. *Olivella* beads of types C1, F and G predominate, and there is abundant use of green *Haliotis* sp. rather than red *Haliotis* sp. Other characteristic artifacts include perforated and canid teeth; asymmetrical and "fishtail" charmstones, usually unperforated; cobble mortars and evidence of wooden mortars; extensive use of bone for tools and ornaments; large projectile points, with considerable use of rock other than obsidian; and use of baked clay.

The Hotchkiss Culture (Late Horizon) burial pattern retains the use of the flexed mode. There is wide spread evidence of cremation, and lesser use of red ocher, heavy use of baked clay, *Olivella* beads of Types E and M, extensive use of *Haliotis* ornaments of many elaborate shapes and forms, shaped mortars and cylindrical pestles, bird-bone tubes with elaborate geometric designs, clam shell disc beads, small projectile points indicative of the introduction of the bow and arrow, flanged tubular pipes of steatite and schist, and use of magnesite (Moratto 1984:181-183). The characteristics noted are not all-inclusive, but cover the more important traits.

Schulz (1981), in an extensive examination of the central California evidence for the use of acorns, used the terms Early, Middle and Late Complexes, but the traits attributed to them remain generally the same. While it is not altogether clear, Schulz seemingly uses the term “Complex” to refer to the particular archeological entities (above called “Horizons”) as defined in this region. Ragir's (1972) cultures are the same as Schulz's complexes.

Bennyhoff and Hughes (1984) have presented alternative dating schemes for the Central California Archeological Sequence. The primary emphasis is a more elaborate division of the horizons to reflect what is seen as cultural/temporal changes within the three horizons and a compression of the temporal span.

There have been other chronologies proposed, including Fredrickson (1973), and because it is correlated with Bennyhoff's (1977) work, it does merit discussion. The particular archeological cultural entities Fredrickson has defined, based upon the work of Bennyhoff, are patterns, phases and aspects. Bennyhoff's (1977) work in the Plains Miwok area is the best definition of the Cosumnes District, which likely conforms to Fredrickson's pattern. Fredrickson also proposed periods of time associated heavily with economic modes, which provides a temporal term for comparing contemporary cultural entities. It corresponds with Willey and Phillips' (1958) earlier “tradition”, although it is tied more specifically to the archeological record in California.

Ethnography

The Project site lies within the northern portion of the ethnographic territory of the Yokuts people. The Yokuts were members of the Penutian language family which held all of the Central Valley, San Francisco Bay Area, and the Pacific Coast from Marin County to near Point Sur. The Yokuts differed from other ethnographic groups in California as they had true tribal divisions with group names (Kroeber 1925; Latta 1949). Each tribe spoke a particular dialect, common to its members, but similar enough to other Yokuts that they were mutually intelligible (Kroeber 1925).

The Yokuts held portions of the San Joaquin Valley from the Tehachapis in the south to Stockton in the north. On the north they were bordered by the Plains Miwok, and on the west by the Saclan or Bay Miwok and Costonoan peoples. Although neighbors were often from distinct language families, differences between the people appear to have been more influenced by environmental factors as opposed to linguistic affinities. Thus, the Plains Miwok were more similar to the nearby Yokuts than to foothill members of their own language group. Similarities in cultural inventory co-varied with distance from other groups and proximity to culturally diverse people. The material culture of the southern San Joaquin Yokuts was therefore more closely related to that of their non-Yokuts neighbors than to that of Delta members of their own language group.

Trade was well developed with mutually beneficial interchange of needed or desired goods. Obsidian, rare in the San Joaquin Valley, was obtained by trade with Paiute and Shoshoni groups on the eastern side of the Sierra Nevada, where numerous sources of this material are located, and to some extent from the Napa Valley to the north. Shell beads, obtained by the Yokuts from coastal people, and acorns, rare in the Great Basin, were among many items exported to the east by Yokuts traders (Davis 1961).

Economic subsistence was based on the acorn, with substantial dependency on gathering and processing of wild seeds and other vegetable foods. The rivers, streams, and sloughs that formed a maze within the valley provided abundant food resources such as fish, shellfish, and turtles. Game, wild fowl, and small mammals were trapped and hunted to provide protein augmentation of the diet. In general, the eastern portion of the San Joaquin Valley provided a lush environment of varied food resources, with the estimated large population centers reflecting this abundance (Cook 1955; Baumhoff 1963).

Settlements were oriented along the water ways and village sites were normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from three to 18 meters (Wallace 1978:470).

Historic Period

In the 1850s and 1860s, ranchers and farmers began to settle in the Tracy area known as the “West Side” (Minor 1994). The Central Pacific Railroad (currently the Southern Pacific) completed a rail line through the area in 1869, which ran from Sacramento to Stockton and continued over the Altamont Pass to ultimately link with the ferry service to San Francisco. Shortly after the rail line

was built, a new town sprang up along its alignment 9 miles from Stockton. The town became known as Lathrop Junction, and consisted of a roundhouse, railroad shop, rail yard, and hotels for railroad employees. The Lathrop Junction soon became the headquarters for the Central Pacific Railroad in the San Joaquin Valley. Regardless of the growth of Lathrop Junction, the railroad found it necessary to build a coaling station at the base of Altamont Pass, 14 miles west of Lathrop. The new station was called Ellis and by 1870 it had about 45 buildings serving the needs of the railroad and its employees and their families (www.ci.tracy.ca.us).

The first extensive wheat-growing in the San Joaquin Valley took place on the sand plains in the region between Stockton and Tracy and on the west side of the valley between Tracy and Newman. The wheat growing was due to an initial experiment of John Wheeler Jones, who planted 160 acres to wheat in 1855 which included the central town site of what is now Tracy. He plowed his fields with a walking plow. The famous Stockton gang-plow was reported to be invented near the present site of Tracy (Smith 1960: 221, 243).

Construction of a new rail line from Oakland along the shores of San Francisco Bay was started in 1878. This rail line passed through Martinez, and intersected the Central Pacific at a point 3 miles east of Ellis. The line was built to avoid hills, eliminate the expense of "helper engines", and increase efficiency of travel along the line. One of the results of the new rail line was the establishment of Tracy, named after Lathrop J. Tracy, an official of the railroad, on September 8, 1878. Soon after the establishment of the new line and the town of Tracy, the railroad discontinued the coaling station at Ellis and moved its employees and their families to Lathrop and Tracy. Indeed, the town of Ellis not only relocated its population to Tracy, but also some of its buildings, including two hotels.

Tracy continued to grow as a railroad center in the late 1800s. A new, fast and cheap rail line to Los Angeles was completed at this time that passed through Tracy and Los Banos and the railroad relocated its headquarters from Lathrop to Tracy in March of 1894. Tracy was incorporated in 1910, and continued to expand because of the opening of State Highway 50 in 1914 and establishment of the West Side Irrigation District in 1915 that stimulated agricultural development of the area. Railroad operations in Tracy began to decline in the 1950s, but the city continued to prosper as an agricultural community. Agriculture is still important in the Tracy area, but the area is shifting from agriculture to residential and commercial uses because of its location near the Altamont Pass and the construction of several highways in the area.

PROJECT SETTING

Project Site

As described in Chapter 2.0, Project Description, the Project site includes two distinct planning boundaries, including the 104.36-acre Annexation Area (or Project site) and the 103.0-acre Development Area. The 104.36-acre Annexation Area encompasses the total Project site while the 103.0-acre Development Area encompasses the portion of the Project site proposed for development.

The Project site is located in the western portion of the City of Tracy's Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is located northeast of Interstate 580 (I-580), approximately 4.75 miles southwest of Tracy City Hall, and directly south of the Cordes Ranch Specific Plan[1]. The Project site is located within Sections 35 of Township 2 South, Range 4 East Mount Diablo Base Meridian (MDBM). The Project site is shown on the Tracy, California, U.S. Geological Survey (USGS) 7.5-minute series quadrangle map.

The Project site is currently undeveloped land with perimeter dirt roads, some graded areas, and sparse scrub vegetation in thick grasses. The site generally grades from low to high toward the northeast. The Project site is relatively flat and ranges in elevation from approximately 148 to 187 feet above sea level. The northern portion of the Project site is topographically higher than the southern portion of the site, which is bound by the Delta Mendota Canal. The Delta-Mendota Canal is used for irrigation of land along the west side of the San Joaquin Valley carrying water southeasterly from the C.W. Jones Pumping Plant to the Mendota Pool[2]. The canal's overflow spillway structure is located in the center of the southern boundary of the site. In addition, there are two existing features within the northeast corner of the site consisting of an existing underground PG&E gas line running northwest and a large depressed area possibly used as a drainage basin or detention pond during previous agricultural use.

Based on historical aerial photographs, the entire Project site was previously used for agriculture and farming (i.e., a former orchard). According to Google Earth historical imagery, the Project site has been undeveloped since at least 1993 (which is the earliest historical image available on Google Earth).

Surrounding Uses

The Project site is surrounded by a variety of undeveloped and developed land uses. The Project site is bordered on the north by West Schulte Road. The parcels to the north of the Project site (across West Schulte Road) are designated Industrial in the Tracy General Plan and are part of the Cordes Ranch Specific Plan, which plans for a commerce and business park on approximately 1,780-acres of land.

Surrounding land uses include warehouse distribution and other industrial uses to the north, vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural

[1] The Cordes Ranch Specific Plan establishes land use, zoning, development standards and regulations for approximately 1,780 acres located in the northwest region of the City of Tracy. The vision for the Cordes Ranch Specific Plan is to create a commerce and business park, consisting of 55.1 acres of General Commercial uses, 152.2 acres of General Office uses, 1,476.9-acres of Business Park Industrial uses, and 96.3-acres of Park uses.

[2] San Luis & Delta-Mendota Water Authority. 2020. Access: https://sldmwa.org/about-sldmwa-facilities/about-the-delta-mendota-canal/

residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

KNOWN CULTURAL RESOURCES

A summary of the record search and Native American consultation that was performed for the Project site is included below.

Record Search

The purpose of the cultural records search is to identify all previously recorded cultural resources (prehistoric and historic archaeological sites, historic buildings, structures, objects, or districts) within the Project site. A search of CHRIS was requested from the CCIC located at California State University, Stanislaus on November 27, 2019, which included the Project area and a one-half mile radius (CCIC File # 11244L).

The search included a review of the CCIC maps for the Project site and immediate vicinity of the Project area, and a review of the: National Register of Historic Places (NRHP); California Register of Historical Resources (CRHR); California Inventory of Historic Resources (1976); California Historical Landmarks; California Points of Historical Interest listing; Built Environment Resource Directory; Office of Historic Preservation; and other pertinent historic data available at CCIC for San Joaquin County. The results of the record search indicate that the Project area does not contain any recorded prehistoric or historic archaeological resources or historic buildings, and the General Land Office Survey Plat does not reference any historic features in the Project area. No historic or prehistoric resources have ever been recorded in or in the immediate vicinity of the Project site.

Native American Consultation

De Novo Planning Group, on behalf of the City, sent a letter to the Native American Heritage Commission (NAHC) requesting a check of the Sacred Lands Files (SLF) for the Project area and a list of the Senate Bill (SB) 18 and Assembly Bill (AB) 52 tribal groups with traditional lands or cultural places located within the Project boundaries. The check failed to reveal any properties listed as Sacred Lands on the Project site. The NAHC provided a list of interested individuals and groups to contact regarding the site.

Pursuant to SB 18 and AB 52, consultation letters were sent via certified mail on January 6, 2020 by De Novo Planning Group, on behalf of the City, requesting information related to cultural resources or heritage sites within the Project area. The letters were sent to the two tribal representatives listed in the NAHC response, including: Katherine Erolinda Perez, Chairperson of the North Valley Yokuts Tribe, and Corrina Gould, Tribal Chairperson of the Confederated Villages of Lisjan.

Corrina Gould, Tribal Chairperson of the Confederated Villages of Lisjan, responded to the consultation letter via email on February 6, 2020 indicating that, while nothing has been found or reported on the Project site to date, their tribal ancestors lived all over this area and there is the possibility of unintentionally finding remains or cultural/tribal cultural resources on the Project site during ground disturbing activities. For these reasons, the tribe asks to be contacted if any remains

or cultural/tribal cultural resources are found during construction activities. No reply was received by the North Valley Yokuts Tribe.

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

The National Historic Preservation Act was enacted in 1966 as a means to protect cultural resources that are eligible to be listed on the NRHP. The law sets forth criterion that is used to evaluate the eligibility of cultural resources. The NRHP is composed of districts, sites, buildings, structures, objects, architecture, archaeology, engineering, and culture that are significant to American History.

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values.

National Register of Historic Places

The eligibility criteria for the NRHP are as follows (36 CFR 60.4):

> *The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and*
>
> *(A) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or*
> *(B) that are associated with the lives of persons significant in our past; or*
> *(C) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
> *(D) that have yielded, or may be likely to yield, information important in prehistory or history.*

American Indian Religious Freedom Act and Native American Graves and Repatriation Act

The American Indian Religious Freedom Act recognizes that Native American religious practices, sacred sites, and sacred objects have not been properly protected under other statutes. It

establishes as national policy that traditional practices and beliefs, sites (including right of access), and the use of sacred objects shall be protected and preserved. Additionally, Native American remains are protected by the Native American Graves and Repatriation Act of 1990.

Other Federal Legislation

Historic preservation legislation was initiated by the Antiquities Act of 1966, which aimed to protect important historic and archaeological sites. It established a system of permits for conducting archaeological studies on federal land, as well as setting penalties for noncompliance. This permit process controls the disturbance of archaeological sites on federal land. New permits are currently issued under the Archaeological Resources Protection Act (ARPA) of 1979. The purpose of ARPA is to enhance preservation and protection of archaeological resources on public and Native American lands. The Historic Sites Act of 1935 declared that it is national policy to "Preserve for public use historic sites, buildings, and objects of national significance."

STATE

California Register of Historic Resources

The California Register of Historic Resources (CRHR) was established in 1992 and codified in the Public Resource Code §§ 5020, 5024 and 21085. The law creates several categories of properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by CEQA Guidelines § 15064.5(b) and Public Resources Code (PRC) §§ 21083.2 and 21084.1.

Cultural resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR if it:

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

California Environmental Quality Act

CEQA Guidelines § 15064.5 provides guidance for determining the significance of impacts to archaeological and historical resources. Demolition or material alteration of a historical resource, including archaeological sites, is generally considered a significant impact. Determining the CRHR eligibility of historic and prehistoric properties is guided by CEQA Guidelines § 15064.5(b) and PRC §§ 21083.2 and 21084.1.

CEQA also provides for the protection of Native American human remains (CEQA Guidelines § 15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

If a prehistoric or historic period cultural resource does not meet any of the four CRHR criteria, but does meet the definition of a "unique" site as outlined in PRC § 21083.2, it may still be treated as a significant resource if it is: an archaeological artifact, object or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information,
- it has a special and particular quality such as being the oldest of its type or the best available example of its type, or
- it is directly associated with a scientifically recognized important prehistoric or historic event.

California Health and Safety Code

California Health and Safety Code § 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the county coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC. The CEQA Guidelines (§ 15064.5) specifies the procedures to be followed in case of the discovery of human remains on non-federal land. The disposition of Native American burials falls within the jurisdiction of the NAHC.

Senate Bill 18 (Burton, Chapter 905, Statutes 2004)

SB 18, authored by Senator John Burton and signed into law by Governor Arnold Schwarzenegger in September 2004, requires local (city and county) governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places ("cultural places") through local land use planning. This legislation, which amended Government Code §§ 65040.2, 65092, 65351, 65352, and 65560, and added Sections 65352.3, 653524, and 65562.5; also requires the Governor's Office of Planning and Research to include in the General Plan Guidelines advice to local governments for how to conduct these consultations. The intent of SB 18 is to provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places. These consultation and notice requirements apply to adoption and amendment of both general plans (defined in Government Code §§ 65300 et seq.) and specific plans (defined in Government Code §§ 65450 et seq.).

Assembly Bill 978

In 2001, AB 978 expanded the reach of the Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

Assembly Bill 52

AB 52, approved in September 2014, creates a formal role in the CEQA environmental review process for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. Tribal cultural resources are defined as:

1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    A) Included or determined to be eligible for inclusion in the CRHR;
    B) Included in a local register of historical resources as defined in PRC § 5020.1(k).
2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §5024.1 (c). In applying the criteria set forth in PRC § 5024.1 (c) the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria above is also a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. In addition, a historical resource described in PRC § 21084.1, a unique archaeological resource as defined in PRC § 21083.2(g), or a "non-unique archaeological resource" as defined in PRC § 21083.2(h) may also be a tribal cultural resource if it conforms with above criteria.

AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation.

Tribal consultation pursuant to AB 52 is discussed in the Existing Setting.

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to cultural and tribal resources. General Plan policies applicable to the Project are identified below:

POLICIES: COMMUNITY CHARACTER

- CC-3.1-P2. Identified cultural and historical landmarks and buildings shall be preserved.
- CC-3.1-P3: New development, redevelopment, alterations, and remodeling projects should be sensitive to surrounding historic context.
- CC-3.1-P4: As part of the development review process, there shall be a standard condition of approval that if any resources are found during construction, all operations within the project area shall halt until an assessment can be made by appropriate professionals regarding the presence of archaeological and paleontological resources and the potential for adverse impacts on these resources.
- CC-3.1-P5: Any archaeological or paleontological resources on private property shall be either preserved on their sites or adequately documented and conserved as a condition of removal. If any resources are found unexpectedly during development, then construction must cease immediately until accurate study and conservation measures are implemented.
- CC-3.1-P6: If Native American artifacts are discovered on a site, the City shall consult representatives of the Native American community to ensure the respectful treatment of Native American sacred places.

City of Tracy Municipal Code

Tracy Municipal Code Title 9 addresses building regulations. Chapter 9.48 adopts the California Historical Building Code. The purpose of the chapter is to "provide regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of buildings or structures designated as qualified historical buildings or properties; provide alternative solutions for the preservation of qualified historical buildings or properties, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of occupants or users."

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project is considered to have a significant impact on cultural or tribal resources if it will:

- Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries;
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC § 21074 as either a site, feature, place, cultural landscape that is geographically defined 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:

- Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC § 5020.1(k);
- 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 PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical resource, as defined in CEQA Guidelines §15064.5. (Less than Significant with Mitigation)

The Project site encompasses approximately 104.46 acres of undeveloped land previously used for agricultural purposes. There are no buildings or structures located on-site. A CHRIS search was requested from the CCIC, which included the Project area and a one-half mile radius (CCIC File #11244L). The results of the CCIC records search indicated that the Project site does not contain any recorded buildings or structures listed on the State Office of Historic Preservation Historic Property Directory (which includes listings of the CRHR, California State Historical Landmarks, California State Points of Historical Interest, and the NRHP). The records search also noted that the General Land Office Survey Plat does not reference any historic features in the Project area.

While, the CCIC records search found nothing documented on-site that could be considered a "historical resource" under Section 15064.5 in the CEQA Guidelines, as with most projects in the region, there is also the potential for discovery of previously unknown historical resources during ground disturbing activities. For the above-stated reasons, the Project will be required to implement Mitigation Measure 3.5-1 to reduce the potential impact to historical resources, resulting in a ***less than significant*** impact on historical resources.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *If any historical resources, cultural resources, including prehistoric or historic artifacts, or other indications of archaeological resources, are found during grading and construction activities during any phase of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, has evaluated the find(s).*

Work shall not continue at the discovery site until the archaeologist conducts sufficient research and data collection to make a determination that the resource is either 1) not cultural in origin; or 2) not potentially significant or eligible for listing on the NRHP or CRHR; or 3) not a significant Public Trust Resource.

In addition, if the resource(s) identified is cultural or tribal in nature, the Confederated Villages of Lisjan shall be contacted to review and identify the resource, prior to work continuing at the discovery site.

If Native American resources are identified, a Native American monitor, following the Guidelines for Monitors/Consultants of Native American Cultural, Religious, and Burial Sites established by the Native American Heritage Commission, would also be required and, if Native American resources are identified, shall be retained at the Project applicant's expense.

Impact 3.5-2: Project implementation has the potential to cause a substantial adverse change to a significant archaeological resource, as defined in CEQA Guidelines § 15064.5, or a significant tribal cultural resource, as defined in Public Resources Code § 21074. (Less than Significant with Mitigation)

The Project site is located in an area known to have archaeological, cultural, and tribal cultural resources. As noted above, a CHRIS search was requested from the CCIC, which included the project area and a one-half mile radius (CCIC File # 11244L). The results indicated that the Project area does not contain any recorded prehistoric or historic archaeological resources or historic buildings, and the General Land Office Survey Plat does not reference any historic features in the Project area. Additionally, the SLF check failed to reveal any resources on the Project site.

As noted previously, two tribal representatives were contacted pursuant to SB 18 and AB 52. The Confederated Villages of Lisjan responded noting their tribal ancestors inhabited this area resulting in the potential for unintentionally finding remains or cultural/tribal cultural resources on the Project site during ground disturbing activities. Additionally, as with most projects in the region that involve ground-disturbing activities, there is also the potential for discovery of a previously unknown archaeological resources and cultural resources, including prehistoric or historic artifacts. Implementation of Mitigation Measures 3.5-1 and 3.5-2 would ensure that the potential impact to archaeological, cultural, and tribal resources is ***less than significant***.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.5-1***

Mitigation Measure 3.5-2: *If human remains are discovered during the course of construction during any phase of the Project, work shall be halted at the site and at any nearby area reasonably suspected to overlie adjacent human remains until the San Joaquin County Coroner has been informed and has determined that no investigation of the cause of death is required. If the remains are of Native American origin, either of the following steps will be taken:*

- *The coroner shall contact the Native American Heritage Commission and the Confederated Villages of Lisjan in order to ascertain the Most Likely Descendant (MLD) from the deceased individual. If a MLD is identified, the MLD, with the permission of the owner of the land, or his or her authorized representative, in accordance with the law, may inspect the site*

discovery site and recommend to the landowner, or his or her representative, means for the treatment or disposition, with appropriate dignity' of the human remains and any associated grave goods. The landowner has no legal obligation to allow the MLD accesses to the property for the purpose of making a recommendation. The MLD must complete their inspection and make their recommendation within 48 hours of their notification by the NAHC. The recommendation may include the scientific removal and analysis of human remains and items associated with Native American burials. The coroner shall make a recommendation to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods, which may include obtaining a qualified archaeologist or team of archaeologists to properly excavate the human remains.

- *The landowner shall retain a Native American monitor, and an archaeologist, if recommended by the Native American monitor, and rebury the Native American human remains and any associated grave goods, with appropriate dignity, on the property and in a location that is not subject to further subsurface disturbance when any of the following conditions occurs:*
    - *The Native American Heritage Commission and Confederated Villages of Lisjan is unable to identify a descendent.*
    - *The descendant identified fails to make a recommendation.*
    - *The City of Tracy or its authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner.*

Impact 3.5-3: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Indications suggest that humans have occupied San Joaquin County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being “any evidence of human activity.” Additionally, Public Resources Code Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains are documented on or near the Project site, implementation of the following mitigation measure would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. The following mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.5-2.***

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The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion, as well as potential impacts to paleontological resources and unique geological units. This section is based in part on the following: the *San Joaquin County General Plan* (San Joaquin County, 2016), *City of Tracy General Plan* (City of Tracy, 2011), *City of Tracy General Plan EIR* (City of Tracy, 2011), *Custom Soils Report for San Joaquin County, California* (NRCS, 2019), *Natural Resources Conservation Service* (NRCS) *Web Soil Survey* (NRCS, 2016), *Interactive Fault Map* provided by the U.S. Geological Survey (USGS, 2019), and the *Costco E-Commerce Facility Geotechnical Review* (Kleinfelder, April 2018).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Full comments received are included in Appendix A.

As discussed in the Initial Study, the proposed Project would connect to the municipal sewer system for wastewater disposal and septic tanks, or septic systems are not proposed as part of the Project. Additionally, the Project site is not designated as a Mineral Resource Zone (MRZ) and there are no significant deposits of mineral resources located on the Project site, as delineated by the Mineral Resources and Mineral Hazards Mapping Program (MRMHMP). ***No impact*** in these areas would occur. These CEQA topics will not be addressed further in this EIR. The Initial Study is included in Appendix A.

3.6.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Regional Geology

The Project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is located in the southern portion of the Great Valley Geomorphic Province. The Great Valley, also known as the Central Valley, is a topographically flat, northwest-trending, structural trough (or basin) about 50 miles wide and 450 miles long. It is bordered by the Tehachapi Mountains on the south, the Klamath Mountains on the north, the Sierra Nevada on the east, and the Coast Ranges on the west.

The San Joaquin Valley (Valley) is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are located on the east side of the Valley, and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Local Setting

As described in Chapter 2.0, Project Description, the Project site includes two distinct planning boundaries, including the 104.36-acre Annexation Area (or Project site) and the 103.0-acre

Development Area. The 104.36-acre Annexation Area encompasses the total Project site while the 103.0-acre Development Area encompasses the portion of the Project site proposed for development.

The Project site is relatively flat with natural gentle slope from southwest to northeast and encompasses undeveloped land previously used for agricultural purposes. Surrounding land uses include existing and future warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, California Department of Forestry and Fire Protection Station 26, and Delta Mendota Canal to the west (within unincorporated San Joaquin County). The Delta-Mendota Canal is a nearly 120-mile-long aqueduct that is part of the Central Valley Project. Its function is to restore water to the San Joaquin River drainage that has been diverted at upstream locations to the southeast, notably, the Friant Dam located roughly 15 miles northeast of Fresno.

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.6-1 and Table 3.6-1 identifies the type and range of soils found in the Project site.

TABLE 3.6-1: PROJECT SITE SOILS

UNIT SYMBOL	*NAME*	*ACRES IN PROJECT SITE*	*PERCENT OF PROJECT SITE*	*CAPABILITY CLASSIFICATION**
118	Capay clay, 0 to 1 percent slopes	95.85	93.4%	II-IV
252	Stomar clay loam, o to 2 percent slopes	6.73	6.6%	II-IV
	Totals	103.00	100.0%	--

** DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING*

SOURCE: NRCS CUSTOM WEB SOIL SURVEY, 2021; SAN JOAQUIN COUNTY SOIL SURVEY, 1992.

Capay clay. The Capay series consists of very deep, moderately well and somewhat poorly drained soils that formed in fine textured alluvium derived from mostly sandstone and shale. Capay soils are on flood basins, alluvial fans, interfan basins and basin rims. They formed in fine textured alluvium derived from sandstone and shale or other mixed rock sources. Slopes are 0 to 15 percent. They have a moderately well and somewhat poor drainage and a slow to very slow permeability. Common uses for this series include: growing irrigated crops such as tomatoes, sugar beets, beans or grain sorghum, dry farmed to small grains, and irrigated and dryland pasture. Native vegetation is a dense stand of annual grasses and forbs.

As shown in Table 3.6-1, 93.4 percent of the site soils are Capay clay soils. This soil type is located throughout the entire Project site, except in the northeastern corner of the site.

Stomar clay loam. The Stomar series consists of very deep, well drained soils formed in alluvium from sedimentary rocks sources. Stomar soils are on dissected alluvial fans and terraces. The soils formed in material weathered from sandstone and shale. Slopes are 0 to 2 percent. The annual

precipitation is about 9 inches and the annual temperature is about 62 degrees F. This series is well drained; negligible to high runoff; and has a slow permeability. Common uses for this series include: irrigated cropland including field crops, row crops and orchards. It is also used for dryland cropland such as grain. Some areas are used for urban land and there are small areas used for livestock grazing. Typical vegetation where not cultivated is annual grasses and forbs.

As shown in Table 3.6-1, 6.73 percent of the site soils are Stomar clay loam soils. This soil type is located in the northeastern corner of the Project site along the eastern site boundary.

FAULTS AND SEISMICITY

Faults

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

The State of California designates faults as active, potentially active, and inactive depending on how recent the movement that can be substantiated for a fault. Table 3.6-2 presents the California fault activity rating system.

TABLE 3.6-2: FAULT ACTIVITY RATING

FAULT ACTIVITY RATING	*GEOLOGIC PERIOD OF LAST RUPTURE*	*TIME INTERVAL (YEARS)*
Active (A)	Holocene	Within last 11,000 years
Potentially Active (PA)	Quaternary	11,000-1.6 Million Years
Inactive (I)	Pre-Quaternary	Greater than 1.6 Million

SOURCE: CALIFORNIA GEOLOGICAL SURVEY

Figure 3.6-2 provides a map of known nearby faults in relation to the Project site. While no faults cross the Project site, relatively large earthquakes have historically occurred in the Bay Area and along the margins of the Central Valley. The nearest earthquake fault zoned as active by the State of California Geological Survey is the Black Butte Fault, located approximately 1.1 miles to the south of the site. However, the Black Butte fault is not considered an active fault that would trigger evaluation under the Alquist-Priolo Earthquake Fault Zoning Act. Other active and potentially active faults near the Project site include the Midway fault (2.3 miles west), the Corral Hollow-Carnegie fault zone (6.1 miles southwest), and the San Joaquin fault (5.7 miles southeast of the site).

Seismicity

The amount of energy available to a fault is determined by considering the slip-rate of the fault, its area (fault length multiplied by down-dip width), maximum magnitude, and the rigidity of the displaced rocks. These factors are combined to calculate the moment (energy) release on a fault. The total seismic energy release for a fault source is sometimes partitioned between two different recurrence models, the characteristic and truncated Gutenberg-Richter (G-R) magnitude-frequency distributions. These models incorporate our knowledge of the range of magnitudes and relative frequency of different magnitudes for a particular fault. The partition of moment and the weights for multiple models are given in the following summary.

Earthquakes are generally expressed in terms of intensity and magnitude. Intensity is based on the observed effects of ground shaking on people, buildings, and natural features. By comparison, magnitude is based on the amplitude of the earthquake waves recorded on instruments, which have a common calibration. The Richter scale, a logarithmic scale ranging from 0.1 to 9.0, with 9.0 being the strongest, measures the magnitude of an earthquake relative to ground shaking. Table 3.6-3 provides a description and a comparison of intensity and magnitude.

TABLE 3.6-3: MODIFIED MERCALLI INTENSITY SCALE FOR EARTHQUAKES

RICHTER MAGNITUDE	*MODIFIED MERCALLI*	*EFFECTS OF INTENSITY*
0.1 – 0.9	I	Earthquake shaking not felt.
1.0 – 2.9	II	Shaking felt by those at rest.
3.0 – 3.9	III	Felt by most people indoors, some can estimate duration of shaking.
4.0 – 4.5	IV	Felt by most people indoors. Hanging objects rattle, wooden walls and frames creak.
4.6 – 4.9	V	Felt by everyone indoors, many can estimate duration of shaking. Standing autos rock. Crockery clashes, dishes rattle and glasses clink. Doors open, close and swing.
5.0 – 5.5	VI	Felt by all who estimate duration of shaking. Sleepers awaken, liquids spill, objects are displaced, and weak materials crack.
5.6 – 6.4	VII	People frightened and walls unsteady. Pictures and books thrown, dishes and glass are broken. Weak chimneys break. Plaster, loose bricks and parapets fall.
6.5 – 6.9	VIII	Difficult to stand. Waves on ponds, cohesionless soils slump. Stucco and masonry walls fall. Chimneys, stacks, towers, and elevated tanks twist and fall.
7.0 – 7.4	IX	General fright as people are thrown down, hard to drive. Trees broken, damage to foundations and frames. Reservoirs damaged, underground pipes broken.
7.5 – 7.9	X	General panic. Ground cracks, masonry and frame buildings destroyed. Bridges destroyed, railroads bent slightly. Dams, dikes and embankments damaged.
8.0 – 8.4	XI	Large landslides, water thrown, general destruction of buildings. Pipelines destroyed, railroads bent.
8.5 +	XII	Total nearby damage, rock masses displaced. Lines of sight/level distorted. Objects thrown into air.

SOURCE: UNITED STATES GEOLOGICAL SURVEY

According to the California Geological Survey's Probabilistic Seismic Hazard Assessment Program, San Joaquin County is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent

within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong.

Alquist-Priolo Special Study Zone

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a Project site.

As shown in Figure 3.6-2, the Project site is not within an Alquist-Priolo Special Study Zone. The nearest Alquist-Priolo fault zone, the Greenville fault zone, is located approximately 8.7 miles west of the Project site.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the Project site is expected during the life of the proposed Project. All structures will be built in accordance with the California Building Code's seismic design standards.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e. earthquake) or slow (i.e. fault creep). The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. The Project site does not have surface expression of active faults and fault rupture is not anticipated.

Liquefaction

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesionless soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. Under certain circumstances, the ground shaking can temporarily transform an otherwise solid material to a fluid state. Liquefaction is a serious hazard because buildings in areas that experience liquefaction may subside and suffer major structural damage. Liquefaction is most

often triggered by seismic shaking, but it can also be caused by improper grading, landslides, or other factors. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet.

The potential for liquefaction is greater in certain geologic and hydrologic environments that may be characterized by loosely consolidated, silty sediments together with shallow groundwater. In the vicinity of the Project area, the sediments most susceptible to liquefaction include Holocene (less than 10,000-year-old) delta, river channel, flood plain, and aeolian deposits, and poorly compacted fills. By contrast, dense soils, including well-compacted fills, are less susceptible to liquefaction. The Geotechnical Review prepared for the Project notes subsurface conditions consist of topsoil over native basin deposits underlain and interbedded with alluvial fan deposits. The basin deposits are anticipated to consist of stiff hard, lean to fat clay and silt and extend up to a depth of about 50 feet below ground surface (bgs). Additionally, the Geotechnical review notes groundwater level is generally greater than 40 to 50 feet bgs, based on available groundwater data and maps.

To date, the CGS Seismic Hazards Zonation Program has not identified any seismically-induced liquefaction zones in the City of Tracy or the Project site. Additionally, the Tracy General Plan EIR identifies the majority of the Tracy Planning Area as low risk for liquefaction, including the Project site, with the exception for the river banks within the Planning Area. Therefore, the potential for liquefication within the Project site is low.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Because the potential for liquefaction is low on-site, the potential for lateral spreading is also considered low.

Landslides

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The Project site is essentially flat; therefore, the potential for a landslide in the Project site is non-existent.

NON-SEISMIC HAZARDS

Expansive Soils

Expansive soils can undergo significant volume change with changes in moisture content, such as a result of seasonal rain events, and can cause damage to foundations, concrete slabs, roadway improvements, and pavement sections. The soils shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation

systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering.

Expansion is a typical characteristic of clay-type soils. The more clayey, critically expansive surface soil and fill materials will be subjected to volume changes during seasonal fluctuations in moisture content. As indicated in the Tracy General Plan EIR, Tracy does have a moderate to high risk for expansive soils, depending on the location and soil type, and according to the Geotechnical Review, the near surface soils on-site exhibit medium to high expansion characteristics.

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

Because the Project site contains high clay content surface soils, the Project site would potentially be subject to water erosion. As previously mentioned, a Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program, which identified the erosion factor K for on-site soils. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf varies from 0.24 to 0.32, which is considered a moderate potential for erosion.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors. Collapsible soils have not been identified in the Tracy General Plan EIR or the Project-specific Geotechnical Review as an issue in the Tracy area.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils. Typically, significant subsidence occurs only in areas underlain by soft soils such as marsh deposits or in areas susceptible to liquefaction. According to the Tracy General Plan EIR, area subsidence potential has not been documented in the Tracy Planning Area. The Geotechnical Review does not identify the subsidence potential of the site. Overall, the subsidence potential on-site is considered low.

PALEONTOLOGICAL RESOURCES

There are several rock formations in the Tracy area that could be indicators of potential paleontological resources. These include the Neroly Formation, Moreno Shale deposits, and Panoche Formations. However, these rock formations do not constitute a unique geologic feature.

According to a records search of the University of California Museum of Paleontology (UCMP) Collections Date, eighty fossils have been found and recorded within San Joaquin County. Over half of them are dated to the tertiary period, with quaternary being the second most frequent period. These are the first and second periods of the Cenozoic Era respectively, during which modern flora, apes, large mammals, and eventually humans developed. The majority of fossils found within the Tracy area have been vertebrate in nature. According to the Cordes Ranch Specific Plan EIR, the UCMP database lists five localities in the Specific Plan Area, located north of the Project site, where Pleistocene vertebrate finds were made in 1948 during construction of the Delta Mendota Canal. These fossils include mammoth/mastodon, horse, pocket gopher, and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone.

3.6.2 REGULATORY SETTING

FEDERAL

Uniform Building Code

The purpose of the Uniform Building Code (UBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. UBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

The State of California has established a variety of regulations and requirements related to seismic safety and structural integrity, including the California Building Code, the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act.

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts including: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CALGreen Code), and California Reference Standards Code. Through the CBSC, the state provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls and site demolition. It also regulates grading activities, including drainage and erosion control.

California Building Code

The California Building Code, Title 24, Part 2, Chapter 16 addresses structural design, Chapter 17 addresses structural tests and special inspections, and Chapter 18 addresses soils and foundations. Section 1610 provides structural design standards for foundation walls and retaining walls to ensure resistance to lateral soil loads. Section 1613 provides structural design standards for earthquake loads. Section 1704.7 requires special inspections for existing site soil conditions, fill placement and load-bearing requirements during the construction as specified in Table 1704.7 of this section. Sections 1704.8 through 1704.16 provide inspection and testing requirements for various foundation types, and construction material types. Section 1803.1.1.1 requires each city and county enact an ordinance which requires a preliminary soil report and that the report be based upon adequate test borings or excavations, of every subdivision, where a tentative and final map is required pursuant to Section 66426 of the Government Code. Section 1803.5.3 defines expansive soils and specifies that in areas likely to have expansive soil, the building official shall require soil tests to determine where such soils do exist. Section 1803.5.4 specifies that a subsurface soil investigation must be performed to determine whether the existing ground-water table is above or within 5 feet (1524 mm) below the elevation of the lowest floor level where such floor is located below the finished ground level adjacent to the foundation. Section 1803.5.8 provides specific standards where shallow foundations will bear on compacted fill material more than 12 inches (305 mm) in depth. Section 1803.5.11 and 1803.5.12 provide requirements for geotechnical investigations for structures assigned varying Seismic Design Categories in accordance with Section 1613. Section 1804 provides standards and requirements for excavation, grading, and fill. Section 1808, 1809, and 1810 provides standards and requirements for the construction of varying foundations.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments' responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

"Sufficiently Active" and "Well Defined" are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various "seismic hazard zones."

- Cities and Counties, or other local permitting authority, must regulate certain development "projects" within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria, to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.
- Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to geological hazards and soils. General Plan policies applicable to the Project are identified below:

POLICIES: SAFETY ELEMENT

- SA-1.1-P1. Underground utilities, particularly water and natural gas mains, shall be designed to withstand seismic forces.
- SA-1.1-P2. Geotechnical reports shall be required for development in areas where potentially serious geologic risks exist. These reports should address the degree of hazard, design parameters for the project based on the hazard, and appropriate mitigation measures.
- SA-1.2-P1. All construction in Tracy shall conform to the California Building Code and the Tracy Municipal Code including provisions addressing unreinforced masonry buildings.

City of Tracy Municipal Code

In accordance with Tracy Municipal Code Title 9, Chapter 9.04, Section 9.04.030, the City has adopted the 2010 California Building Code (CBC), Volumes 1 and 2, by reference. As previously noted, the CBC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on geology and soils if it will:

- Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
    - 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;
    - Strong seismic ground shaking;
    - Seismic-related ground failure, including liquefaction;
    - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- 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;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed Project may cause substantial adverse effects, including the risk of loss, injury, or death involving: rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, or landslides (Less than Significant)

GROUND RUPTURE

The Project site is not within an Alquist-Priolo Special Study Zone. The nearest earthquake fault zoned as active by the CGS is the Black Butte Fault, located approximately 1.1 miles to the south of the Project site. However, this fault is not considered an active fault that would trigger evaluation under the Alquist-Priolo Earthquake Fault Zoning Act. Therefore, because no faults are located on the Project sites, the potential for ground rupture (cracking or breaking of the ground during an earthquake) would be less than significant.

GROUND SHAKING

Tracy is considered to be within an area that is predicted to have a 10 percent probability that a seismic event would produce horizontal ground shaking of 10 to 20 percent within a 50-year period. This level of ground shaking correlates to a Modified Mercalli intensity of V to VII, light to strong. Further, the City and the Project site are located within an area of California considered a seismic hazard zone. According to the Geotechnical Review prepared for the Project, the proposed Project is geotechnically feasible.

To reduce the impact of seismic ground shaking on the development, the Project would be required to be constructed using standard engineering and seismic safety design techniques of the California Building Code, consistent with General Plan Policy SA-1.2-P1. Seismic design provisions of current building codes generally prescribe minimum lateral forces, applied statically to the structure, combined with the gravity forces of dead-and-live loads. The code-prescribed lateral forces are generally considered to be substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures would be able to: (1) resist minor earthquakes without damage, (2) resist moderate earthquakes without structural damage but with some nonstructural damage, and (3) resist major earthquakes without collapse but with some structural as well as nonstructural damage. Design in accordance with these standards and policies would reduce any potential impact to a less than significant level.

LIQUEFICATION

The Tracy Planning Area, including the Project site, is at low risk for liquefaction. The Geotechnical Review prepared for the Project notes subsurface soil conditions consist of stiff hard, lean to fat clay and silt extending up to a depth of about 50 feet bgs. Additionally, the Geotechnical Review notes groundwater level is generally greater than 40 to 50 feet bgs, based on available groundwater data and maps. Therefore, the potential for liquefication on site would be low, resulting in a less than significant impact.

LANDSLIDES

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is non-existent. Some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, according to the CGS Information Warehouse: Regulatory Maps, the site is not located within a Landslide and Liquefication Zone. As a result, the probability of landslides causing substantial adverse effects on people or structures is less than significant.

CONCLUSION

A Geotechnical Review was prepared to review readily-available geotechnical and geologic information in order to identify potential geotechnical-related risks associated with the Project site. According to the Geotechnical Review, the proposed Project is geotechnically feasible and concerns related to ground rupture, ground shaking, liquefication, or landslides were not identified; refer to the discussion below regarding expansive soils. As described above, the Project would be required to be constructed using standard engineering and seismic safety design techniques of the California Building Code, which would reduce any potential impact to a less than significant level. Because development in the Project site must be designed in conformance with these state and local standards and policies, any potential impact would be considered ***less than significant***.

Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil. (Less than Significant with Mitigation)

The Project site contains high clay content surface soils; therefore, the Project site would potentially be subject to water erosion. The Custom Soil Survey identified the Project site as having a moderate potential for erosion. Further, there is the potential for human caused erosion associated with construction activities or through the operational phase of a project. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities temporarily expose soils and increase the potential for soil erosion and sedimentation during rain events. Construction activities can also result in soil compaction and wind erosion effects that can adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

In accordance with the NPDES Stormwater Program, Mitigation Measure 3.9-1 in Section 3.9, Hydrology and Water Quality, requires an approved Stormwater Pollution Prevention Plan (SWPPP) designed to control erosion and the loss of topsoil to the extent practicable using Best Management Practices (BMPs) that the Regional Water Quality Control Board (RWQCB) has deemed effective in controlling erosion, sedimentation, runoff during construction activities. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or

innovative approaches currently available or being developed. The BMPs and overall SWPPP is reviewed by the RWQCB as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. Implementation of Mitigation Measure 3.9-1 would ensure that the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

Implement ***Mitigation Measure 3.9-1.***

Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse. (Less than Significant with Mitigation)

LANDSLIDE AND LIQUEFACTION

As discussed in Impact 3.6-1, the Project site is essentially flat and has not been identified as being located within a seismically-induced liquefaction or landslide zone. Therefore, the probability of a landslide or liquefication on the Project site is low.

LATERAL SPREADING

Oftentimes, lateral spreading is also directly associated with areas of liquefaction. Based on the stiff hard, lean to fat clay and silt anticipated in the basin deposits and very dense silty and clayey sand in the alluvial deposits coupled with the low groundwater table generally greater than 40 to 50 bgs, the potential for liquefaction is low. For these reasons, generally the probability of lateral spreading occurring on the Project site is considered low.

COLLAPSIBLE SOILS

Collapsible soils have not been identified in the Tracy General Plan EIR as an issue in the Tracy area; therefore, the probability of collapsible soils occurring on the Project site is considered low.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. Subsidence has not been identified in the Tracy General Plan EIR as an issue in the Tracy area.

CONCLUSION

The Project site does not have a significant risk of becoming unstable as a result landslide, subsidence, or soil collapse. There is a low potential for liquefaction, liquefaction induced settlement, and lateral spreading. As described above, the Geotechnical Review determined development of the Project is geotechnically feasible. The Project would be required to be

constructed using standard engineering and seismic safety design techniques of the California Building Code, which would reduce potential impacts associated with unstable geologic and soil conditions. Additionally, the Project would be required to comply with Mitigation Measure 3.6-1, which requires a final geotechnical evaluation be prepared and design recommendations identified to address any soil conditions within the Project site. Implementation of recommendations identified by the final geotechnical evaluation conducted for the Project site would reduce potential impacts associated with unstable geology and soils conditions and impacts would be considered ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1*: Prior to earthmoving activities for each phase of the Project, a certified geotechnical engineer shall perform a final geotechnical evaluation of the soils at a design-level as required by the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 related to expansive soils and other soil conditions. The geotechnical evaluation shall be funded by the Project applicant.*

The evaluation shall be prepared in accordance with the standards and requirements outlined in California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation shall include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures, including threats from liquefaction or lateral spreading. The grading and improvement plans, as well as the storm drainage and building plans for each phase of the Project shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.

Impact 3.6-4: The proposed Project has the potential for expansive soils to create substantial risks to life or property. (Less than Significant with Mitigation)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. Soil expansion can damage structures by cracking foundations, causing settlement and distorting structural elements. According to the Geotechnical Review, the near surface soils in the Project site exhibit moderate to high expansion characteristics and are moderately compressible. Additionally, the Geotechnical Review anticipates site grading activities would expose expansive clays. Therefore, measures to reduce potentially significant impacts related to expansive site soils would be necessary. Measures may include importing non-expansive fill for placement over the subgrade (in fill areas), removing and replacing with non-expansive fill at subgrade level, or using cement or lime treating the upper 12 to 18 inches of the subgrade. In addition, due to the tendency of expansive clays to swell and heave, site drainage would need to be directed away from building footprints to minimize moisture and volume change underneath floor slabs or foundations.

As discussed in Impact 3.6-3, the California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected,

would lead to structural defects. The City of Tracy also requires a geotechnical evaluation be prepared for developments in areas where potentially serious geologic risks exist, such as expansive soils, that address the degree of hazard, design parameters for the project based on the hazard, and appropriate measures be incorporated into the overall design and construction. Mitigation Measure 3.6-1, provides the requirement for a final geotechnical evaluation in accordance with the standards and requirements outlined in the California Building Code, Title 24, Part 2, Chapter 16, Chapter 17, and Chapter 18, which addresses structural design, tests and inspections, and soils and foundation standards. The final geotechnical evaluation would include design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures. The grading and improvement plans, as well as the storm drainage and building plans, would be required to be designed in accordance with the recommendations provided in the final geotechnical evaluation.

With the implementation of Mitigation Measure 3.6-1 (requiring a final Geotechnical Evaluation, and site recommendations) the proposed Project would have a ***less than significant*** impact relative to this topic.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.6-1**.*

Impact 3.6-5 The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Less than Significant with Mitigation)

The Project site is located in an area known to have paleontological resources. As previously mentioned, the Cordes Ranch Specific Plan EIR, prepared for the 1,780-acres north of the Project site, indicated the UCMP database lists five localities north of the Project site, specifically, where Pleistocene vertebrate finds were found in 1948 during construction of the Delta Mendota Canal. These fossils include mammoth/mastodon, horse, pocket gopher, and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone. Because the Delta Mendota Canal borders the southern boundary of the Project site, ground disturbing activities have the potential to reveal previously unknown significant paleontological resources, resulting in a potentially significant impact to paleontological resources or unique geologic features.

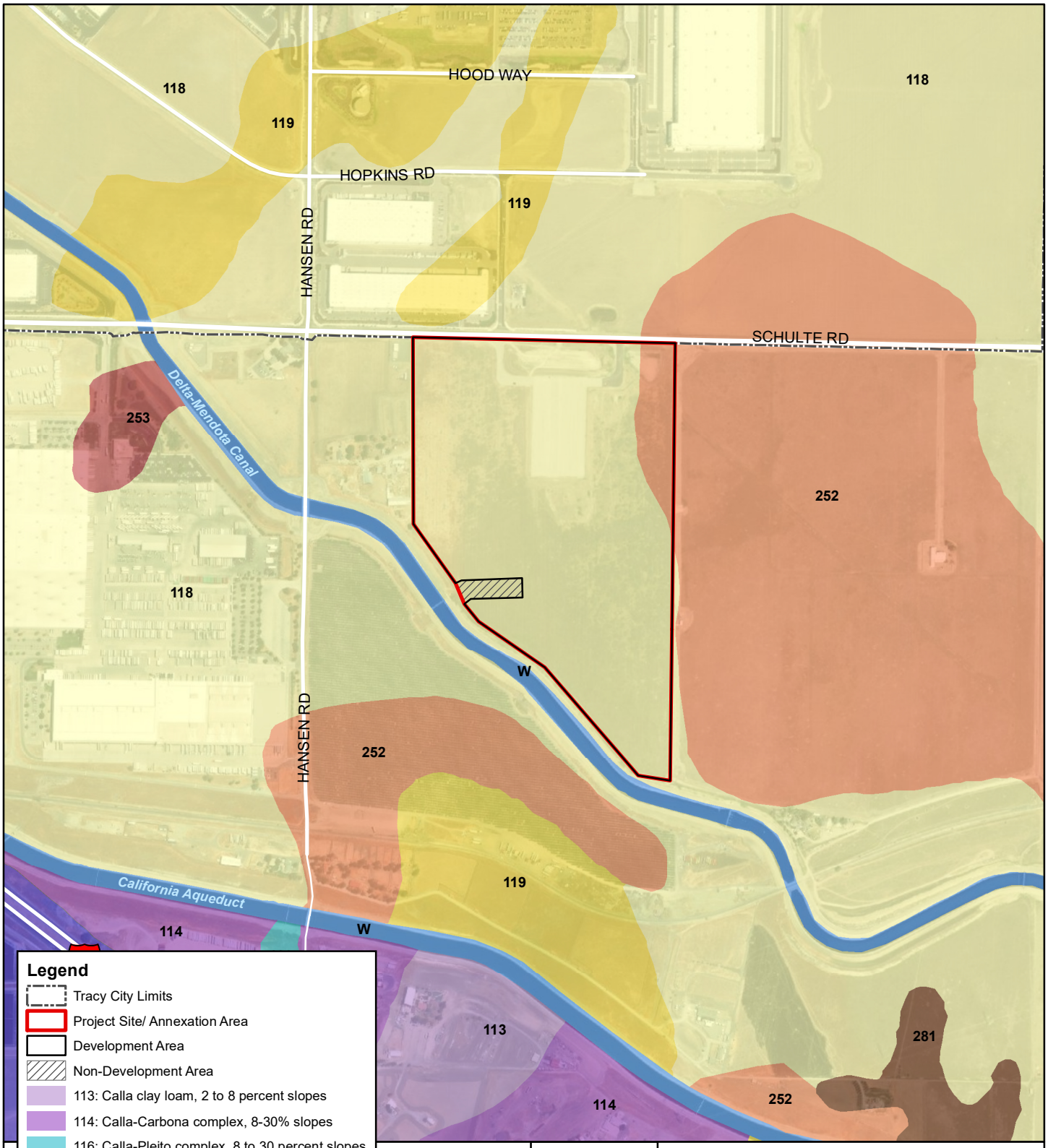
Implementation of Mitigation Measure 3.6-2, would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction. Mitigation Measure 3.6-2 requires that if subsurface deposits believed to be paleontological in origin are discovered during construction, all work must halt within a 200-foot radius of the discovery and a qualified paleontologist must be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius as appropriate, using professional judgment. Implementation of this mitigation measure would reduce this impact to a ***less-than-significant*** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-2: *If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. A paleontologist is a scientist with an advanced degree (Master's or Doctorate) who studies the history of life on Earth through the fossil record.*

Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology. The paleontologist recommendations shall be implemented.

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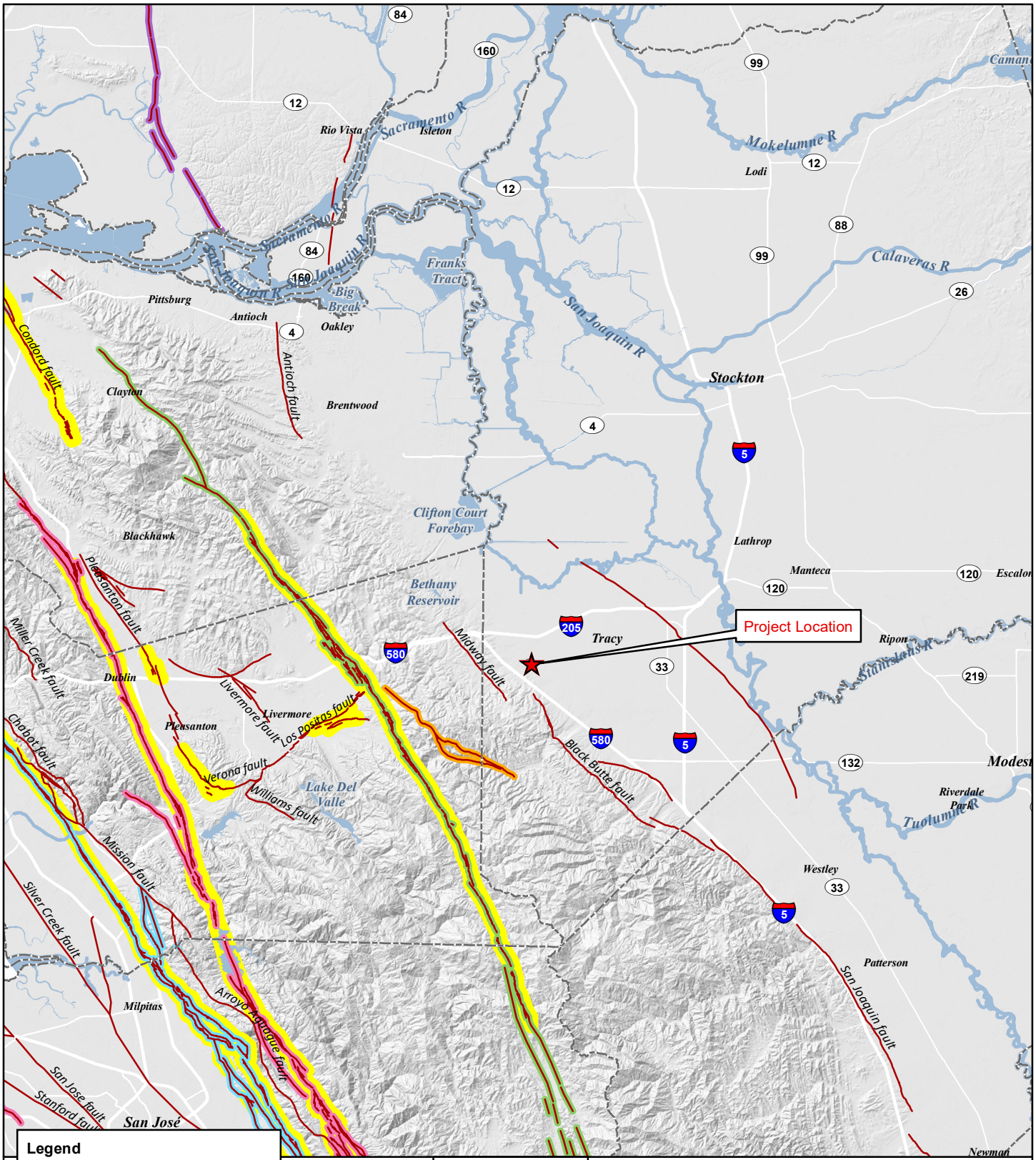
Sources: NRCS soil survey area CA077, 9/16/2019; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021. Revised: May 26, 2022.

TRACY COSTCO DEPOT PROJECT

Figure 3.6-1. Soil Types

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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Project Location
Legend
Fault Line
Fault Zone
Calaveras fault zone
Corral Hollow-Carnegie fault zone
Greenville fault zone
Hayward fault zone
Vaca fault zone
Alquist-Priolo Zone
Data sources: US Geologic Survey; CalAtlas. Map date: December 11, 2019.
N
0 2½ 5
Miles
1:500,000
TRACY COSTCO DEPOT PROJECT
Figure 3.6-2. Earthquake Fault Map
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A Land Use Planning, Design, and Environmental Firm

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from Project implementation. The analysis contained in this section is intended to be at a Project level, and covers impacts associated with the conversion of the entire site to urban uses. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the proposed Project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed Project. Disclosure and discussion of the Project's estimated energy usage and greenhouse gas emissions are provided.

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the San Joaquin Valley Air Pollution Control District (October 29, 2021). This comment is addressed within this section. The full comment is included in Appendix A.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H_2O), carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and ozone (O_3). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO_2, CH_4, and N_2O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO_2), methane (CH_4), ozone (O_3), water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2020).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 440 million gross metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2016 (California Air Resources Board, 2018a).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41% of total GHG emissions in the state. This category was followed by the industrial sector (24%), the electricity generation sector (including both in-state and out of-state sources) (15%), the agriculture sector (8%), the residential energy consumption sector (7%), and the commercial energy consumption sector (5%) (California Air Resources Board, 2020c).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the

Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and 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. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming 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 large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would 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 State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large as those expected if temperatures were to rise to the higher warming range. How much

snow pack will 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 snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

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 are likely to 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, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large wildfires. 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 will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to 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 is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are the most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 60 percent of electricity generated by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under SB 100). The 2021 SB 100 Joint Agency Report was published in 2021, which found that the long-term goals contained in SB 100 are technically achievable through multiple pathways, although achieving 100 clean electricity would increase the total annual electricity system cost by 6% relative to the cost under the state's Renewables Portfolio Standard requirement of having at least 60 percent clean electricity by the end of 2030. These estimates will change over time as markets change, new technologies are commercialized, and additional factors such as grid reliability are included in future analyses.

Overall, in 2019, California's per capita energy usage was ranked second-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970s, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and a very small amount of nuclear generation resources. In 2020, nearly one-half of the electricity supply came from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from

nuclear generating stations (U.S. EIA, 2022). In 2020, approximately 41 percent of California's utility-scale net electricity generation was fueled by natural gas. In addition, about 48 percent of the State's utility-scale net electricity generation came from renewable sources, such as solar, wind, geothermal, hydropower, and biomass. Nuclear energy powered an additional 11 percent. The amount of electricity generated from coal was effectively zero (U.S. EIA, 2022). The percentage of renewable resources as a proportion of California's overall energy portfolio is increasing over time, as directed the State's Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2020b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2021, the latest year for which data is available, statewide consumption was 277,205 GWh (California Energy Commission, 2022). In 2020, electricity consumption in San Joaquin County was 5,737 GWh (California Energy Commission, 2021).

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2019, world consumption of oil had reached approximately 98 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 95 percent of the State's transportation energy needs.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). In As of March 2022, California produced 11.4 billion cubic feet of natural gas per month (U.S. EIA, 2022). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the San Joaquin County area. In 2018, natural gas consumption in San Joaquin County was 259 million therms (California Energy Commission, 2020).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

The Federal Clean Air Act (FCAA) was first signed into law in 1970. In 1977, and again in 1990, the law was substantially amended. The FCAA is the foundation for a national air pollution control

effort, and it is composed of the following basic elements: National Ambient Air Quality Standards (NAAQS) for criteria air pollutants, hazardous air pollutant standards, State attainment plans, NAAQS motor vehicle emissions standards, stationary source emissions standards and permits, acid rain control measures, stratospheric ozone protection, and enforcement provisions.

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

In 2007, in the court case of *Massachusetts et al. vs. the USEPA et al*. (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not 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. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) 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 themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been

20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Federal Climate Change Policy

According to the U.S. EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The U.S. EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs.

The following are actions taken at the federal level relating to GHG emissions.

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 United States. On April 1, 2010, the U.S. EPA and the Department of Transportation's National Highway Safety Administration 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 United States.

The first phase of the national program applies to passenger cars, light duty trucks, and medium duty 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 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 National Highway Safety Administration 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.[1] The new standards for model years 2017 through 2025 apply to passenger cars, light duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

[1] United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. Website: http://www.epa.gov/otaq/climate/documents/420f12051.pdf. Accessed January 21, 2021.

The U.S. 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 and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies adopted engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies adopted separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Finally, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the U.S. EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States 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 or more per year of GHG emissions are required to submit annual reports to the U.S. EPA.

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. 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 Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the cap-and-trade program.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB "Scoping Plans" intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directed the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that "[i]n adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030." In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

Statutes Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State's electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities were required to meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].) SB 350, discussed below, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 ("Pavley Bill") (Stats. 2002, ch. 200), which directed CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the "Pavley standards." In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are commonly known as the "Pavley II standards." (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035.[2] Each of California's metropolitan planning

[2] The San Joaquin COG region was assigned reduction targets of 12% by 2020 and 16% by 2035.

organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed that demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provided additional direction for developing the scoping plan. In response, CARB adopted an updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks.
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 SCOPING PLAN UPDATE

The Draft 2022 Scoping Plan Update was released on May 10, 2022, but has yet to be adopted. The 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term

climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2019 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost-effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2019 Title 24 standards. The 2019 Building Energy Efficiency Standards improve upon the 2016 Energy Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. Buildings permitted on or after January 1, 2020, must comply with the 2019 Standards. The California Energy Commission updates the standards every three years.

Single-family homes built with the 2019 standards will use about 7 percent less energy due to energy efficiency measures versus those built under the 2016 standards. Once rooftop solar electricity generation is factored in, homes built under the 2019 standards will use about 53 percent less energy than those under the 2016 standards. This will reduce greenhouse gas emissions by 700,000 metric tons over three years, equivalent to taking 115,000 fossil fuel cars off

the road. Nonresidential buildings will use about 30 percent less energy due mainly to lighting upgrades.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

CEQA Direction

In 2007, SB 97 was enacted and directed OPR and the California Natural Resources Agency to prepare amendments to the CEQA Guidelines addressing the analysis of GHG emissions under CEQA. Following formal rulemaking, a series of amendments to the CEQA Guidelines were adopted to provide the general framework for the analysis of GHG emissions, and became effective in 2010. The amendments do not provide a mandatory, quantitative rubric for GHG emissions analysis, but instead provide general guidance and recognize longstanding CEQA principles regarding the discretion afforded to lead agencies where supported by substantial evidence. More specifically, CEQA Guidelines Section 15064.4(a) recognizes that the "determination of the significance" of GHG emissions "calls for careful judgment by the lead agency" in accordance with the more general provisions of CEQA Guidelines Section 15064; each agency "shall have discretion to

determine" whether to conduct quantitative or qualitative analysis, provided its determination is supported by substantial evidence. Section 15064.4 was most recently amended by the California Natural Resources Agency in 2018.

California Supreme Court Decisions

THE "NEWHALL RANCH" CASE

On November 30, 2015, the California Supreme Court released its opinion on *Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204 (hereafter referred to as the Newhall Ranch Case).

Because of the importance of the Supreme Court as the top body within the California Judiciary, and because of the relative lack of judicial guidance regarding how GHG issues should be addressed in CEQA documents, the opinion provides very important legal guidance to agencies charged with preparing EIRs.

The case involved a challenge to an EIR prepared by the California Department of Fish and Wildlife (CDFW) for the Newhall Ranch development project in Los Angeles County, which consists of approximately 20,000 dwelling units as well as commercial and business uses, schools, golf courses, parks and other community facilities in the City of Santa Clarita.

In relation to GHG analysis, the Newhall Ranch Case illustrates the difficulty of complying with statewide GHG reduction targets at the local level using CEQA to determine whether an individual project's GHG emissions will create a significant environmental impact triggering an EIR, mitigation, and/or statement of overriding consideration. The EIR utilized compliance with AB 32's GHG reduction goals as a threshold of significance and modelled its analysis on CARB's business-as-usual (BAU) emissions projections from the 2008 Scoping Plan. The EIR quantified the project's annual emissions at buildout and projected emissions in 2020 under a BAU scenario, in which no additional regulatory actions were taken to reduce emissions. Since the Scoping Plan determined a reduction of 29 percent from BAU was needed statewide to meet AB 32's 2020 reduction goal, the EIR concluded that the project would have a less-than-significant impact because the project's annual GHG emissions were projected to be 31 percent below its BAU estimate.

The Supreme Court concluded that the threshold of significance used by the EIR was permissible; however, the BAU analysis lacked substantial evidence to demonstrate that the required percentage reduction from BAU is the same for an individual project as for the entire State. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the Supreme Court determined that the EIR's GHG analysis was not sufficient to support the conclusion that GHG impacts would be less than significant.

In addition, the Supreme Court provided the following guidance regarding potential alternative approaches to GHG impact assessment at the project level for lead agencies:

1. The lead agency may determine a level of 'GHG emission reduction' from the business-as-usual (BAU) projection that a new land development at the proposed location would need to achieve to comply with statewide goals, using the data behind the Scoping Plan's business-as-usual emission projections. The lead agency must provide substantial evidence and account for the disconnect between the Scoping Plan, which dealt with the State as a whole, and an analysis of an individual project's land use emissions (the same issues with CEQA compliance addressed in this case);

2. The lead agency may use a project's compliance with performance based standards – such as high building energy efficiency – adopted to fulfill a statewide plan to reduce or mitigate GHG emissions to assess consistency with AB 32 to the extent that the project features comply with or exceed the regulation (See Guidelines Section 15064.4(a)(2), (b)(3); see also Guidelines Section 15064(h)(3)). A significance analysis would then need to account for the additional GHG emissions – such as transportation emissions – beyond the regulated activity. Transportation emissions are in part a function of the location, size, and density or intensity of a project, and thus can be affected by local governments' land use decision making. Additionally, the lead agency may use a programmatic effort including a general plan, long range development plan, or a separate plan to reduce GHG emissions (such as Climate Action Plan or a SB 375 metropolitan regional transportation impact Sustainable Communities Strategy) that accounts for specific geographical GHG emission reductions to streamline or tier project level CEQA analysis pursuant to Guidelines 15183.5(a)-(b) for land use and Public Resources Code Section 21155.2 and 21159.28 and Guidelines Section 15183.5(c) for transportation.

3. The lead agency may rely on existing numerical thresholds of significance for GHG emissions (such as the Bay Area Air Quality Management District's proposed threshold of significance of 1,100 MT CO_2E in annual emission for CEQA GHG emission analysis on new land use projects). The use of a numerical value provides what is "normally" considered significant but does not relieve a lead agency from independently determining the significance of the impact for the individual project (See Guidelines Section 15064.7).

SAN JOAQUIN AIR POLLUTION CONTROL DISTRICT

Climate Change Action Plan

On August 21, 2008, the Valley Air District Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA Guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Governing Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.

- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD [Valley Air District's] existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the Valley Air District Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The Valley Air District concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The Valley Air District found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The Valley Air District found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

The Valley Air District's approach is intended to streamline the process of determining whether project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as a Best Performance Standard, to reduce GHG emissions. The Best Performance Standards (BPS) have not yet fully been established, though they must be designed to effect a 29 percent reduction when compared with the BAU projections identified in the ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. These standards thus would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The Valley Air District has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction, storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, the ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to Valley Air District guidance, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an EIR is required, regardless of whether the project incorporates BPS.

Nevertheless, it should be noted that, in light of the Newhall Ranch case, the Supreme Court concluded that a BAU analysis requires substantial evidence to demonstrate what the required percentage reduction from BAU would be for an individual project. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the BAU analysis as identified by SJVAPCD is not employed for this EIR.

San Joaquin Valley Carbon Exchange

The Valley Air District initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the Valley Air District has pursued an alternative strategy that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. The Valley Air District is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding (MOU) with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality, GHG exchange for credits created in California. The GHG Rx is intended to help fulfill compliance obligations, or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations.

Rule 2301

While the CCAP indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the Valley Air District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301-Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to air quality. General Plan policies applicable to the Project are identified below:

POLICIES: AIR QUALITY ELEMENT

- AQ-1.1-P1. The City shall promote land use patterns that reduce the number and length of motor vehicle trips.
- AQ-1.1-P2. To the extent feasible, the City shall maintain a balance and match between jobs and housing.
- AQ-1.2-P1. The City shall assess air quality impacts using the latest version of the CEQA Guidelines and guidelines prepared by the San Joaquin Valley Air Pollution Control District.
- AQ-1.2-P2. The City shall assess through the CEQA process any air quality impacts of development projects that may be insignificant by themselves, but cumulatively significant.
- AQ-1.2-P3. Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.
- AQ-1.2-P4. New development projects should incorporate energy efficient design features for HVAC, lighting systems and insulation that exceed Title 24.
- AQ-1.2-P5. Use of solar water and pool heaters is encouraged.
- AQ-1.2-P6. Installation of solar voltaic panels on new homes and businesses shall be encouraged.
- AQ-1.2-P7. Trees should be planted on the south- and west-facing sides of new buildings or building undergoing substantial renovation in order to reduce energy usage.

- AQ-1.2-P12. New sources of toxic air pollutants shall prepare a Health Risk Assessment as required under the Air Toxics "Hot Spots" Act and, based on the results of the Assessment, establish appropriate land use buffer zones around those areas posing substantial health risks.
- AQ-1.2-P13. Dust control measures consistent with San Joaquin Valley Air Pollution Control District rules shall be required as a condition of approval for subdivision maps, site plans, and all grading permits.
- AQ-1.2-P14. Developments that significantly impact air quality shall only be approved if all feasible mitigation measures to avoid, minimize or offset the impact are implemented.
- AQ-1.2-P15. Encourage businesses to electrify loading docks or implement idling-reduction systems so that trucks transporting refrigerated goods can continue to power cab cooling elements during loading, layovers, and rest periods.
- AQ-1.3-P3. The City shall encourage employers to establish Transportation Demand Management programs.
- AQ-1.4-P1. The City shall continue to consult with other local, regional and State agencies on air quality planning efforts as well as encourage community participation in air quality planning.
- AQ-1.4-P2. The City shall be proactive in educating the public about the linkages between land use, transportation and air quality.
- AQ-1.4-P3. The City shall be proactive in reducing greenhouse gas emissions from City operations as well as new or renovated development.

City of Tracy Sustainability Action Plan

The City of Tracy Sustainability Action Plan was adopted in 2011 to achieve sustainability in numerous sectors including GHG emissions, energy, and transportation and land use. The Sustainability Action Plan includes specific measures to be implemented that the City estimates will reduce GHG emissions by 378,461 to 482,154 metric tons (MT) of CO_2e. These reductions would come in part from reductions in Vehicle Miles Traveled (VMT) and energy consumption. However, is should be noted that the sustainability measures included with the City of Tracy Sustainability Action Plan do not apply to land use projects.

3.7.3 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

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

2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). The City of Tracy does not currently have a formal GHG emissions reduction plan or recommended emissions thresholds for determining significance associated with GHG emissions from development projects.

Since no other local or regional Climate Action Plan is in place, the Project is assessed for its consistency with CARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with relevant Scoping Plan measures contained in the CARB's 2017 Scoping Plan Update, as well as the latest RTP/SCS for the region the Project is located within (i.e. the San Joaquin Council of Governments 2018 RTP/SCS, or the SJCOG 2018 RTP/SCS). Therefore, this analysis provides a qualitative assessment of the Project's compliance with the applicable plans, policies, and regulations for the purposes of reducing greenhouse gas emissions to determine whether the project would have a significant impact on the environment relative to GHGs.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Less than Significant)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to Project development would be primarily associated with increases of CO_2 and other GHG pollutants, such as methane (CH_4) and nitrous oxide (N_2O), from mobile sources and utility usage.

The Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)™ (v.2020.4.0). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use

planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO_2 equivalent units of measure (i.e., MT CO_2e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum GHG emissions associated with construction of the proposed Project are summarized in Table 3.7-1. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the Project applicant, the proposed Project is assumed to commence construction in 2023 and finish in late 2024. While the Project could be built in two phases given the two buildings, these estimates conservatively assume that the Project would be constructed within a single phase.

TABLE 3.7-1: TOTAL CONSTRUCTION GHG EMISSIONS (MT CO_2E/YEAR)

YEAR	*BIO- CO_2*	*NON-BIO- CO_2*	*TOTAL CO_2*	*CH_4*	*N_2O*	*CO_2E*
2023	0	1,769	1,769	<1	<1	1,803
2024	0	1,430	1,430	<1	<1	1,457
Total	**0**	**3,199**	**3,199**	**<1**	**<1**	**3,206**

SOURCES: CALEEMOD (V.2020.4.0)

As presented in the table, short-term construction emissions of GHGs are estimated to be 3,206 MT CO_2e.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions. Estimated GHG emissions associated with operation of the proposed Project are summarized in Table 3.7-2, below. It should be noted that CalEEMod does not account for Governor Newsom's Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035. This is anticipated to substantially reduce the operational emissions associated with passenger vehicles (i.e. mobile emissions) over time. The operational emissions results provided in Table 3.7-2 are likely an overestimate for mobile emissions, given the state's ongoing effort to increase electric vehicles and trucks. As shown in the following table, the annual GHG emissions associated with the proposed Project would be approximately 12,273 MT CO_2e.

TABLE 3.7-2: OPERATIONAL GHG EMISSIONS AT BUILDOUT (METRIC TONS/YEAR)

	BIO- CO_2	*NON-BIO- CO_2*	*TOTAL CO_2*	*CH_4*	*N_2O*	*CO_2E*
Area	0	<1	<1	<1	0	<1
Energy	0	1,298	1,298	<1	<1	1,309
Mobile	0	9,054	9,054	<1	1.1	9,386
Waste	333	0	333	20	0	825
Water	128	202	330	13	<1	753
Total	**461**	**10,554**	**11,015**	**33**	**1.4**	**12,273**

SOURCES: CALEEMOD (V.2020.4.0)

CONSISTENCY WITH 2017 SCOPING PLAN POLICIES

The 2030 goal was codified under SB 32 and is now addressed by the 2017 Scoping Plan Update. The new plan provides a strategy that is capable of reaching the SB 32 target if the measures included in the plan are implemented and achieve reductions within the ranges expected. Under the Scoping Plan Update, local government plays a supporting role through its land use authority and control over local transportation infrastructure. The 2017 Scoping Plan Update includes reductions from implementation of SB 375 that apply to VMT from passenger vehicles. San Joaquin County targets for SB 375 are a 12 percent per capita reduction by 2020 and a 16 percent per capita reduction by 2035 relative to 2005 levels. SB 375 is implemented with the SJCOG RTP/SCS. The RTP/SCS envisions an increase in development density that would encourage fewer and shorter trips and more trips by transit, walking, and bicycling in amounts sufficient to achieve the SB 375 targets. The 2017 Scoping Plan Update includes the strategy that the State intends to pursue to achieve the 2030 targets of Executive Order S-3-05 and SB 32. The 2017 Scoping Plan includes the following summary of its overall strategy for reaching the 2030 target:

- SB 350
  - Achieve 50 percent Renewables Portfolio Standard by 2030.
  - Doubling of energy efficiency savings by 2030.
- Low Carbon Fuel Standard
  - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).
- Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
  - Maintaining existing GHG standards for light- and heavy-duty vehicles.
  - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
  - Increase ZEV buses, delivery, and other trucks.
- Sustainable Freight Action Plan
  - Improve freight system efficiency.

  - Maximize use of near Zero-Emission Vehicles and equipment powered by renewable energy.
  - Deploy over 100,000 zero-emission trucks and equipment by 2030.
- Short-Lived Climate Pollutant (SLCP) Reduction Strategy
  - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
  - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
- SB 375 Sustainable Communities Strategies
  - Increased stringency of 2035 targets.
- Post-2020 Cap-and-Trade Program
  - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
  - The CARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
- By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Table 3.7-3 provides an analysis of the Project's consistency with the 2017 Scoping Plan Update measures.

TABLE 3.7-3: CONSISTENCY WITH SB 32 2017 SCOPING PLAN UPDATE

SCOPING PLAN MEASURE	*PROJECT CONSISTENCY*
SB 350 50 percent Renewable Mandate. Utilities subject to the legislation will be required to increase their renewable energy mix from 33 percent in 2020 to 50 percent in 2030.	**Consistent**. The proposed Project will be supplied by the Pacific Gas & Electric Company (PG&E). Currently, 33% of electricity delivered by PG&E is supplied by renewable sources. As such, a significant portion of the electricity usage associated with the Project would come from renewable resources.
SB 350 Double Building Energy Efficiency by 2030. This is equivalent to a 20 percent reduction from 2014 building energy usage compared to current projected 2030 levels.	**Consistent**. While this measure applies to existing buildings, the proposed Project would be required to comply with Title 24 Energy Efficiency Standards that have increased in stringency over time.
Low Carbon Fuel Standard. This measure requires fuel providers to meet an 18 percent reduction in carbon content by 2030.	**Consistent**. The proposed Project would not conflict with implementation of LCFS.

Mobile Source Strategy (Cleaner Technology and Fuels Scenario). Vehicle manufacturers will be required to meet existing regulations mandated by the LEV III and Heavy-Duty Vehicle programs. The strategy includes a goal of having 4.2 million ZEVs on the road by 2030 and increasing numbers of ZEV trucks and buses.	**Consistent**. The proposed Project will include electric vehicle charging parking spaces to support the transition to cleaner technologies.
Sustainable Freight Action Plan. The plan's target is to improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030. This would be achieved by deploying over 100,000 freight vehicles and equipment capable of zero-emission operation and maximize near zero-emission freight vehicles and equipment powered by renewable energy by 2030.	**Consistent**. The proposed Project would not conflict with implementation of the California Sustainable Freight Action Plan.
Short-Lived Climate Pollutant (SLCP) Reduction Strategy. Approve and implement SLCP strategy to reduce highly potent GHGs	**Consistent**. The proposed Project would not conflict with implementation of SB 1383. Primary areas of focus under the SLCP reduction strategy are dairy and livestock emissions, oil and natural gas production, processing, and storage and stationary hydrofluorocarbon.
Post-2020 Cap-and-Trade Program. The Post 2020 Cap-and-Trade Program continues the existing program for another 10 years. The Cap-and-Trade Program applies to large industrial sources such as power plants, refineries, and cement manufacturers.	**Consistent**. The proposed Project would not conflict with implementation of the Cap-and-Trade Program.
Natural and Working Lands Action Plan. The ARB is working in coordination with several other agencies at the federal, State, and local levels, stakeholders, and with the public, to develop measures as outlined in the Scoping Plan Update and the governor's Executive Order B-30-15 to reduce GHG emissions and to cultivate net carbon sequestration potential for California's natural and working land.	**Consistent**. The Project site is designated as Industrial (I) by the City of Tracy General Plan; the Project site is not considered natural and working land and thus it would not inhibit the Natural and Working Lands Action Plan.

SOURCE: CALIFORNIA AIR RESOURCES BOARD (CARB). 2017. THE 2017 CLIMATE CHANGE SCOPING PLAN UPDATE. JANUARY 20. WEBSITE: HTTPS://WW2.ARB.CA.GOV/OUR-WORK/PROGRAMS/AB-32-CLIMATE-CHANGE-SCOPING-PLAN/2017-SCOPING-PLAN-DOCUMENTS. ACCESSED JUNE 8, 2022.

CONSISTENCY WITH SJCOG'S 2018 RTP/SCS

The proposed Project is analyzed for consistency with the strategies contained in the latest adopted SJCOG RTP/SCS (i.e. SJCOG's 2018 RTP/SCS). With the passage of SB 375 in 2008, metropolitan planning organizations were required to develop an SCS, which must demonstrate an ambitious, yet achievable, approach to how land use development and transportation can work together to meet greenhouse gas emission reduction targets for cars and light trucks. These

targets, set by the California Air Resources Board, call for the region to reduce per capita emissions. Table 3.7-4 below provides this consistency analysis.

TABLE 3.7-4: CONSISTENCY WITH SJCOG'S 2018 RTP/SCS

RTP/SCS POLICY	*PROJECT CONSISTENCY*
Policy 1: Enhance the Environment for Existing and Future Generations and Conserve Energy	**Consistent**. The proposed Project would meet the requirements of Title 24 for energy efficient design.
Policy 2: Maximize Mobility and Accessibility	**Consistent**. The proposed Project is compatible to the surrounding area. The proposed Project's location will provide strategic access for goods.
Policy 3: Increase Safety and Security	**Consistent**. The proposed Project is located in an Industrial area, away from sensitive land uses that are more vulnerable to vehicle safety risks.
Policy 4: Preserve the Efficiency of the Existing Transportation System	**Consistent**. The proposed Project will facilitate goods movement in the Tracy area and thereby increasing the efficiency of the existing transportation system.
Policy 5: Support Economic Vitality	**Consistent**. The proposed Project improves freight access to a key strategic economic center, promotes the safe and efficient movement of goods by truck, and supports the implementation of transportation improvements adjacent to the Project site (since the Project would pay its fair share of traffic improvements).
Policy 6: Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts	**Not Applicable**. The proposed Project is not a transportation project.
Policy 7: Maximize Cost-Effectiveness	**Consistent**. The proposed Project is located in an area that has been planned for in the City's General Plan for industrial uses such as the proposed Project. Moreover, the proposed Project utilizes existing transportation corridors.
Policy 8: Improve the Quality of Life for Residents	**Consistent**. The proposed Project implements an industrial Project in an area that has been planned for in the General Plan for industrial land uses, located away from sensitive land uses such as large residential communities. Therefore, the proposed Project avoids being sited in an area that would be highly sensitive to the physical environmental impacts associated with the proposed Project, thereby maintaining quality of life for residents in the City of Tracy and the region.

SOURCE: SAN JOAQUIN COUNCIL OF GOVERNMENTS (SJCOG). 2018. THE 2018 REGIONAL TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY (RTP/SCS). ADOPTED JUNE 2018. WEBSITE: HTTPS://WWW.SJCOG.ORG/DOCUMENTCENTER/VIEW/4156/FINAL-COMPILED-RTPSCS-2018. ACCESSED JUNE 8, 2022.

EXECUTIVE ORDER S-3-05

The Executive Order S-3-05 2050 target has not been codified by legislation. However, studies have shown that, in order to meet the 2050 target, aggressive pursuit of technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. Because of the technological shifts required and the unknown parameters of the

regulatory framework in 2050, quantitatively analyzing the project's impacts further relative to the 2050 goal is speculative for purposes of CEQA.[3]

The CARB recognizes that AB 32 establishes an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: "These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate." In addition, the CARB's First Update to the Scoping Plan "lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050," and many of the emission reduction strategies recommended by the CARB would serve to reduce the proposed project's post-2020 emissions level to the extent applicable by law:

- Energy Sector: Continued improvements in California's appliance and building energy efficiency programs and initiatives, such as the State's zero net energy building goals, would serve to reduce the proposed project's emissions level. Additionally, further additions to California's renewable resource portfolio would favorably influence the project's emissions level.

- Transportation Sector: Anticipated deployment of improved vehicle efficiency, zero-emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.

- Water Sector: The project's emissions level will be reduced as a result of further utilization to water conservation technologies.

- Waste Management Sector: Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level.

In his January 2015 inaugural address, Governor Brown expressed a commitment to achieve "three ambitious goals" that he wanted to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;

- Cutting the petroleum use in cars and trucks in half; and

- Doubling the efficiency of existing buildings and making heating fuels cleaner.

These expressions of executive branch policy may be manifested in adopted legislative or regulatory action through the State agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change.[4]

[3] California Air Resources Board (CARB). 2014. First Update to the Climate Change Scoping Plan. Website: http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm. Accessed February 5, 2020.

Further, studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.[5]

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies also show that relatively new trends—such as the increasing importance of web-based shopping, the emergence of different driving patterns, and the increasing effect of web-based applications on transportation choices—are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions. For the reasons described above, the proposed project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets.

Regarding goals for 2050 under Executive Order S-3-05, at this time it is not possible to quantify the emissions savings from future regulatory measures, as they have not yet been developed; nevertheless, it can be anticipated that operation of the project would be required to comply with whatever measures are enacted that State lawmakers decide would lead to an 80 percent reduction below 1990 levels by 2050. In its 2008 Scoping Plan, the CARB acknowledged that the "measures needed to meet the 2050 are too far in the future to define in detail." In the 2017 Scoping Plan Update, however, the ARB generally described the type of activities required to achieve the 2050 target: "energy demand reduction through efficiency and activity changes; large scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and rapid market penetration of efficiency and clean energy technologies that requires significant efforts to deploy and scale markets for the cleanest technologies immediately." The 2017 Scoping Plan Update provides an intermediate target that is intended to achieve reasonable progress toward the 2050 target.

[4] Brown, Edmund G. Jr. 2015. Press Release: California Establishes Most Ambitious Greenhouse Gas Goal in North America. April 29.
Website: https://www.gov.ca.gov/news.php?id=18938. Accessed February 2, 2021.

[5] Energy and Environmental Economics, 2015. Pathways to Deep Carbonization in the United States.
Website: http://deepdecarbonization.org/wp-content/uploads/2015/11/US_Deep_Decarbonization_Technical_Report_Exec_Summary.pdf. Accessed June 8, 2022.

CONCLUSION

The proposed Project would be consistent with relevant plans, policies, and regulations associated with GHGs, notably the SB 32 2017 Scoping Plan Update, and the SJCOG's 2018 RTP/SCS. Taking into account the proposed Project's emissions, and the progress being made by the State toward reducing emissions in key sectors such as transportation, industry, and electricity, the Project would be consistent with State GHG Plans and would not impede the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. The proposed Project would make a reasonable fair share contribution to the State's GHG reduction goals, and therefore, the proposed Project's GHG emissions would be considered to have a ***less than significant*** impact.

THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the proposed Project would do the following:

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

In order to determine whether or not the proposed Project would result in a significant impact on energy use, this EIR includes an analysis of proposed Project energy use, as provided under *Impacts and Mitigation Measures* below.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources, and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency (Less than Significant)

According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate State and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with an applicable plan, policy, or regulation.

The proposed Project includes various characteristics that reduce the inefficient, wasteful, or unnecessary use of energy. For example, the proposed Project would comply with all of the energy efficiency requirements of the latest version of the California Title 24 Energy Efficiency Standards. Moreover, it should be noted that, over time, electrification of the vehicles will increase due to

state requirements, and state and national trends. Furthermore, the proposed Project includes a Transportation Demand Management (TDM) strategy for passenger vehicles, as described under Mitigation Measure 3.13-1 (see Section 3.13: Transportation and Circulation, for further detail).

The amount of energy used by the proposed Project during operation with include the amount of energy used by Project buildings and outdoor lighting, and the fuel used by vehicle trips generated during Project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by Project maintenance activities during Project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed Project, as provided by applicable modelling software (i.e. CalEEMod v2020.4.0 and the CARB EMFAC2021). Additional assumptions and calculations are provided within Appendix B.2 of this EIR.

ELECTRICITY AND NATURAL GAS

Electricity and natural gas used by the proposed Project would be used primarily to generate energy for Project buildings, as well as for outdoor parking lot lighting. As shown in the Table 3.7-2 (above), and as provided in further detail in the CalEEMod modeling outputs provided in Appendix B, "Energy" is one of the categories that was modeled for GHG emissions. As also shown in the CalEEMod modeling outputs as provided in Appendix B, the proposed Project is anticipated to consume approximately 7,939,980 kWh of electricity per year and approximately 10,557,560 kBTU per of natural gas per year. The CalEEMod model accounted for the latest version of Title 24.

ON-ROAD VEHICLES (OPERATION)

The proposed Project would generate vehicle trips (i.e. passenger vehicles for employees and heavy-duty trucks for hauling) during its operational phase. Requirements to limit the idling of vehicles and equipment would result in fuel savings. Similarly, compliance with applicable State laws and regulations would limit idling and a part of a comprehensive regulatory framework that is implemented by the CARB. A description of Project operational on-road mobile energy usage is provided below.

According to the Traffic Study prepared for the proposed Project (Kimley Horn, 2021), and as described in more detail in Section 3.13 of this EIR, the proposed Project would increase total vehicle trips by approximately 3,800 new daily trips. In order to calculate operational on-road vehicle energy usage, De Novo Planning Group used fleet mix data from the CalEEMod (v2020.4.0) output for the proposed Project, and Year 2025 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, to derive weighted average gasoline and diesel MPG factors for the vehicle fleet as a whole. Based on these calculations, as provided in Appendix B, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 969 gallons of gasoline and 2,240 gallons of diesel per day, or 353,602 gallons of gasoline and 817,549 gallons of diesel per year.

The proposed project's buildings would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the State's Title 24 Energy

Efficiency Standards for Nonresidential Buildings and Green Building Code Standards. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting, are widely regarded as the some of the most advanced and stringent building energy efficiency standards in the country. Moreover, as specified in Chapter 5, Part 11 of the Title 24 standards, the proposed project would be required to incorporate electrical conduit to facilitate future installation of EV charging infrastructure. In addition, as specified in Subchapter 6, Part 6 of the Title 24 standards, the proposed project would be required to design the proposed buildings to structurally accommodate future installation of a rooftop solar system. As such, the design of the proposed project would facilitate the future commitment to renewable energy resources. Therefore, building energy consumption would not be considered wasteful, inefficient, or unnecessary.

Moreover, as discussed in Section 3.13: Transportation and Circulation, the proposed project would be required to implement various Transportation Demand Management (TDM) strategies that would contribute to fuel savings through incentives for project staff to utilize non-motorized transportation modes. Thus, transportation fuel consumption would not be wasteful, inefficient, or unnecessary.

ON-ROAD VEHICLES (CONSTRUCTION)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2023 gasoline and diesel MPG factors provided by EMFAC2021 (year 2023 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity and to be conservative, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table 3.7-5, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the building construction phase. See Appendix B.2 of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

TABLE 3.7-5: ON-ROAD MOBILE FUEL GENERATED BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

CONSTRUCTION PHASE	*# OF DAYS*	*TOTAL DAILY WORKER TRIPS(A)*	*TOTAL DAILY VENDOR TRIPS(A)*	*TOTAL HAULER WORKER TRIPS(A)*	*TOTAL GALLONS OF GASOLINE FUEL(B)*	*TOTAL GALLONS OF DIESEL FUEL(B)*
Site Preparation	90	18	0	0	1,048	0
Grading	90	20	0	750	1,164	2,680
Building Construction	150	1,884	750	0	182,770	86,547
Paving	60	15	0	0	582	0
Architectural Coatings	120	377	0	0	29,259	0
Total	**N/A**	**N/A**	**N/A**	**N/A**	**214,823**	**89,227**

NOTE: (A) PROVIDED BY CALEEMOD OUTPUT. (B) SEE APPENDIX B.3 OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD (V.2020.4.0); EMFAC2021.

OFF-ROAD EQUIPMENT (CONSTRUCTION)

Off-road construction equipment would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive equipment expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO_2 emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed Project would use a total of approximately 62,514 gallons of diesel fuel for off-road construction equipment. Detailed calculations are provided in Appendix B.2 of this EIR.

State laws and regulations would limit idling from both on-road and off-road diesel-powered equipment and are part of a comprehensive regulatory framework that is implemented by the CARB. Additionally, as a practical matter, it is reasonable to assume that the overall construction schedule and process would be designed to be as efficient as feasible in order to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for further future efficiency gains during construction are limited. For the foregoing reasons, it is anticipated that the construction phase of the project would not result in wasteful, inefficient, and unnecessary consumption of energy.

COMPLIANCE WITH CITY'S SUSTAINABILITY ACTION PLAN

The City's Sustainability Action Plan and General Plan contain goals, objectives and policies related to energy conservation that are relevant to this analysis, as provided Section 3.7.2. While several of these goals, objectives and policies are voluntary or cannot be implemented by an individual development project, compliance with applicable Title 24 standards would ensure that the proposed Project would not conflict with any of the Sustainability Action Plan energy conservation policies related to the proposed project's building envelope, mechanical systems, and indoor and outdoor lighting.

CONCLUSION

The proposed Project would use energy resources for the operation of Project buildings (natural gas and electricity), outdoor lighting (electricity), on-road vehicle trips (e.g. gasoline and diesel fuel) generated by the proposed Project, and off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, including through the mitigation measures provided throughout this EIR, as well as through the implementation of statewide and local measures.

The proposed Project would comply with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric and natural gas provider to the proposed Project, is responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. PG&E has already achieved renewable energy mix of 50% (as of 2021)[6], and is on track to achieve the required renewable energy mix of 60% by 2030. Other statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time. Moreover, the proposed Project would comply with the City's Sustainability Action Plan and General Plan goals, objectives and policies related to energy conservation that are relevant to this analysis.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the energy-related thresholds as described by the *CEQA Guidelines*. This is a ***less than significant*** impact.

[6] See here for more detail: https://www.pge.com/en_US/about-pge/environment/what-we-are-doing/clean-energy-solutions/clean-energy-solutions.page

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The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project site and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. This section is based in part on the following: *San Joaquin County General Plan* (San Joaquin County, 2016), *City of Tracy General Plan* (City of Tracy, 2011), *City of Tracy General Plan EIR* (City of Tracy, 2011), and the *Costco E-Commerce Facility Phase I Environmental Site Assessment (Phase 1 ESA)* (Kleinfelder, April 2018).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Full comments received regarding other topics are included in Appendix A.

As discussed in the Initial Study (see Appendix A), there would be ***no impacts*** associated with the handling of hazardous materials or substances within one-quarter mile of a school, hazardous materials sites pursuant to Government Code Section 65962.5, airports, and private air strips from implementation of the proposed Project. The Initial Study (see Appendix A) also found impacts related to adopted emergency response plans, adopted emergency evacuation plans, and wildfires would be ***less than significant***. Additionally, the Project site is not located within a very high fire hazard severity zone; therefore, the thresholds associated with the Project's proximity to state responsibility areas or lands classified as very high fire hazard severity zones are not applicable to the Project and there is no impact associated with these thresholds. As such, these CEQA topics are not relevant to the Project and will not be addressed further.

3.8.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

As described in Chapter 2.0, Project Description, the Project site includes two distinct planning boundaries, including the 104.36-acre Annexation Area (or Project site) and the 103.0-acre Development Area. The 104.36-acre Annexation Area encompasses the total Project site while the 103.0-acre Development Area encompasses the portion of the Project site proposed for development.

Project Location

The Project site is located in the western portion of the City of Tracy's Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is located northwest of I-580, approximately 4.75 miles southwest of Tracy City Hall, and directly south of the Cordes Ranch Specific Plan. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

Existing Site Uses

The Project site encompasses approximately 104.46 acres of undeveloped land previously used for agricultural purposes. As a result of site disturbance associated with the previous agricultural operations, there is little native vegetation or naturalized habitat located on the site, and the

relatively flat topography of the site renders the site essentially void of prominent natural visual features. There are no trees or light sources on-site.

The site contains pipeline markers indicating the presence of below grade irrigation pipelines/infrastructure related to the previous agricultural uses is located on-site. In addition, there are two existing features within the northeast corner of site consisting of an existing PG&E gas line running northwest and a large, depressed area possibly used as a drainage basin or detention pond during previous agricultural use. The depth of the basin is up to approximately 10 feet below the surrounding grades at its center.

Existing Surrounding Uses

The Project site is surrounded by a variety of undeveloped and developed land uses. Uses immediately adjacent to the east and south of the Project site include agricultural land within unincorporated San Joaquin County. The parcel to the west of the Project site is currently agricultural land with a ranch-style house, detached garages, barns, and sheds in the southern portion of the parcel. Existing and future industrial uses are also located to the northwest, north, and northeast of the Project site (within the Cordes Ranch Specific Plan Area, located in the City of Tracy). Other nearby uses include the South County Fire Authority Station 94/California Department of Fire Station 26 directly southwest of the intersection of West Schulte Road and Hansen Road (approximately 800 feet west of the Project site) and the Tracy Biomass Facility (approximately ½ mile to the east past the undeveloped agricultural land).

Site Topography

The Project site is relatively flat and ranges in elevation from approximately 148 to 187 feet above sea level.

Site Soils

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. The NRCS Soils Map is provided in Figure 3.6-1 in Section 3.6, Geology and Soils. Table 3.8-1 identifies the type and range of soils found in the Project site.

TABLE 3.8-1: PROJECT SITE SOILS

UNIT SYMBOL	*NAME*	*ACRES IN AOI*	*PERCENT OF AOI*
118	Capay Clay, 0 to 1 percent slopes, MLRA 17	95.85	93.4%
252	Stomar Clay Loam, 0 to 2 percent slopes	6.73	6.6%

SOURCE: NRCS CUSTOM SOIL SURVEY 2019.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE)), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

Adjoining Properties

The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant land.

Properties surrounding the site appeared to be used for agricultural purposes. Farm-related structures are located west of the Site. Various aboveground storage tanks (ASTs) were visible; some appeared empty, while others appeared to be in use. However, these ASTs did not appear immediately adjacent to the western Site boundary and are not considered to be an environmental concern to the Site.

Site Reconnaissance

According to the *Phase I ESA*, site reconnaissance was conducted on April 17, 2018. The Project site was observed to be unpaved and the vacant land was covered with grasses. A retention basin was observed in the northeastern site corner. The basin is surrounded by mounds of dirt that appear to be retention basin excavation spoils and a corrugated metal pipe was noted in the deepest portion of the basin. Evidence of discolored water, stressed vegetation, underground storage tanks (USTs), ASTs, wells, pits, ponds (other than the retention basin), or lagoons were not observed on the site during the reconnaissance.

Historical Use Information

Historical information was reviewed to develop a history of the previous uses on the Project site and surrounding area, in order to evaluate the Project site and adjoining properties for evidence of Recognized Environmental Conditions (RECs). Standard historical sources reviewed during the preparation of the *Phase I ESA* included the following, as available: Aerial Photographs, Environmental Records, and Databases.

AERIAL PHOTOGRAPHS

The *Phase I ESA* included a review of aerial photographs of the Project site and general vicinity obtained from historical photograph collections. Agricultural operations appear to have occurred throughout the majority of the Project site from 1937 to 2012. In 1937, the Project site appeared to contain orchards while the surrounding area contained several residential or farm-related structures to the west of the site with the remaining areas used for agricultural purposes. From 1937 to 1982, the Project site appeared to still be used as an orchard, and from 1993 to 2012, the Project site appeared to be used instead for low-lying crops. The surrounding area appeared

relatively the same from 1937 to 2012, with the exception of the construction of the Delta Mendota Canal along the southern boundary of the Project site. Additionally, between 1975 and 1993 an unimproved road was identified on aerial photographs that follows the alignment of an existing PG&E right-of-way easement noted on the San Joaquin County Assessor's parcel map.

ENVIRONMENTAL RECORDS

A search of local, state, and federal agency databases for the Project site and known contaminated sites in the vicinity was performed. None of the parcels in the Project site were found to contain any known contamination.

The U.S. Environmental Protection Agency (EPA) Toxic Release Inventory (TRI) does not list data on disposal or other releases of toxic chemicals on the Project site (USEPA, 2015). The nearest TRI site is located at 14700 West Schulte Road, approximately 0.52 miles east of the Project site.

The California Department of Toxic Substances Control (DTSC) maintains the *Envirostor Data Management System*, which provides information on hazardous waste facilities (both permitted and corrective action) as well as any available site cleanup information. There are no sites listed in the Envirostor database within the Project site or within one half mile of the Project site. The nearest site listed on the Envirostor database is located at 24606 S. Lammers Road, approximately 1.66 miles northeast of the Project site. This site, the Kimball High School Parcel 4 site, was investigated for potential contaminants of concern. The investigation concluded that there are no contaminants of concern at the Kimball High School Parcel 4 site and the site received a "No Action" cleanup status on October 4, 2007.

GeoTracker is the State Water Resources Control Board's (SWRCB's) Internet-accessible database system used by the SWRCB, regional boards, and local agencies to track and archive compliance data from authorized or unauthorized discharges of waste to land, or unauthorized releases of hazardous substances from USTs. According to a *GeoTracker* database search on October 22, 2020, no sites are identified within 0.5 miles of the Project site.

The Solid Waste Information System (SWIS) is a database of solid waste facilities that is maintained by the California Integrated Waste Management Board (CIWMB). The SWIS data identifies active, planned and closed sites. The Project site does not have any active or planned solid waste facilities listed in the database. The nearest active facility, Tracy Material Recovery & T.S. (39-AA-0024), is located approximately 5.19 miles southeast of the Project site at 30703 S. Macarthur Drive, Tracy.

The Pipeline and Hazardous Materials Safety Administration's online National Pipeline Mapping System (NPMS) website contains pipeline information. Based on a search of the PHMSA/NPMS data, the *Phase I ESA* notes the following pipelines are present beneath the Project site.

- Crimson Pipeline, L.P. operates a crude oil pipeline, identified as Los Medanos Pipeline ID 499, which runs generally southeast-northwest across the northeastern portion of the Project site. The NPMS database does not list accidental releases along this pipeline near the Project site. Kleinfelder also forwarded a request to Crimson Pipeline, L.P. for

information regarding potential accidental releases or incidents along their pipeline beneath the Project site. A response had not been received according to the *Phase I ESA*.

- PG&E operates two natural gas pipelines, identified as Pipeline IDs 002_481377 and 401-1422906, which run generally southeast-northwest across the northeastern portion of the Project site. No incidents were reported along these natural gas pipelines.

These pipelines appear to pass through the northeastern portion of the Project site within and near a PG&E easement depicted on the San Joaquin County Assessor's parcel map. Although releases were not reported along Crimson Pipeline, L.P.'s crude oil pipeline, the potential exists for undocumented releases to have occurred, which represents a REC. The *Phase I ESA* notes that there is there is no evidence of any other RECs located on-site.

DATABASES

There is a broad list of federal and state databases that provide information for sites with varying potential for risk from the possible existence of hazardous materials. There are numerous redundancies among these various database listings. Below is a brief summary of each.

National Priorities List: The National Priorities List (NPL) of Superfund Sites and Proposed NPL Sites is EPA's database of more than 1,200 sites designated or proposed for priority cleanup under the Superfund program. NPL sites may encompass relatively large areas. The Project site is not listed in this database.

RCRIS System: The Resource Conservation and Recovery Information System (RCRIS) is an EPA database that includes selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Identification on this list does not indicate that there has been an impact on the environment. The Project site is not listed in this database.

CERCLIS Data: Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) is an EPA database that contains information on potential hazardous waste sites that have been reported to the EPA by states, municipalities, private companies, and individuals, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites that are either proposed for or on the NPL, as well as sites that are in the screening and assessment phase for possible inclusion on the NPL. The Project site is not listed in this database.

CORRACTS: Corrective Action Report (CORRACTS) is an EPA database that identifies hazardous waste handlers with RCRA corrective action activity. The Project site is not listed in this database.

Cortese Database: The Cortese database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release, and all solid waste disposal facilities from which there is known hazardous substance migration. The source of this database is the California Environmental Protection Agency (Cal-EPA) and are found in the GeoTracker database. The Project site is not listed in this database.

GeoTracker has replaced past databases, such as the Leaking Underground Storage Tank Information System (LUSTIS) and the Underground Storage Tank (UST) database. Permitted USTs are not located in the Project site. The nearest permitted UST is located at a Mobil Gas Station, located approximately 1.44 miles west of the Project site.

Hazardous Material Sites

As noted above, the State of California Hazardous Waste and Substances Site List (also known as the "Cortese List") is a planning document used by the state, local agencies, and developers to comply with the California Environmental Quality Act (CEQA) requirements for providing information about the location of hazardous materials sites. Government Code Section 65962.5 requires the Cal EPA to annually update the Cortese List. The DTSC is responsible for preparing a portion of the information that comprises the Cortese List. Other state and local government agencies are required to provide additional hazardous material release information that is part of the complete list.

GeoTracker is a geographic information system (GIS) that provides online access to environmental data and is the interface to the Geographic Environmental Information Management System (GEIMS), a data warehouse which tracks regulatory data about underground fuel tanks, fuel pipelines, and public drinking water supplies. Searches of the above resources and records identified no hazardous material sites within 0.5-mile of the Project site known to handle and store hazardous materials that are associated with a hazardous material related release or occurrence. The terms "release" or "occurrence" include any means by which a substance could harm the environment: by spilling, leaking, discharging, dumping, injecting, or escaping.

The *Phase I ESA* identified two facilities closest to the Project site that could potentially impact soil, soil vapor, and groundwater beneath the site. The following summarizes the information for these facilities:

"SHELL PIPELINE CO LP LOCATION NO. 805248 DRUM LOCATION" AND "SHELL OIL COMPANY" (WEST SCHULTE ROAD AND HANSEN ROAD)

These two off-site properties represent one facility. It was listed as a Small Quantity Generators (SQG) of hazardous waste in the year 2012, having disposed of ignitable, "benzene" waste. No violations were reported for this facility. The facility was also listed in the Spills, Leaks, Investigations, and Cleanup (SLIC) database as having had a reported release of total petroleum hydrocarbons ("TPH"). Details were not provided in the database listing information. However, based on information obtained from the SWRCB GeoTracker™ database, the release associated with this facility occurred over 3,500 feet to the north of the Project site. Soil and groundwater impacts associated with a crude oil release from pipelines appear to be limited in extent, and based on the distance of this release to the Project site, these listings are not considered likely to have impacted soil, soil vapor or groundwater beneath the Project site.

"TRACY YOUTH SPORTS PARK" (15178 SCHULTE ROAD)

This facility partially adjoins the Project site to the east. It is listed in the SLIC database as having had a release (substance not reported) that affected soil. In June 2006, the City of Tracy prepared an Environmental Impact Report to evaluate the potential environmental impacts from a proposed development of a youth sports park (e.g., baseball, softball, soccer fields, sports/football stadium, and a recreation area) at this location. Environmental impacts noted included increased traffic and regional air quality impacts, and the presence of two PG&E transmission pipelines and one Chevron crude oil pipeline beneath the property. The proposed sports park development was rejected by the City in December 2007. The case for this facility was reportedly open in GeoTracker™ on September 1, 2007 following receipt of the Environmental Impact Report; however, the Regional Water Quality Control Board (RWQCB) indicated it would not be activating the case and considers the case closed. July 24, 2013 a "No Further Action Required Letter" was prepared by the Central Valley RWQCB, which indicated the RWQCB had no files associated with this case.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Tracy Planning Area is subject to various federal, state, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))
- Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

In addition to area roadways, hazardous materials are routinely transported on Union Pacific Railroad (UPRR) lines that are roughly one-mile south of the Project boundary. Hazardous materials are transported on these lines. The risk of accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation Federal

Railroad Administration found the UPRR company train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident. Risk of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in California.

The Union Pacific Railroad Company implements a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.

3.8.2 REGULATORY SETTING

FEDERAL

The primary federal agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the EPA, Department of Labor Occupational Safety and Health Administration (OSHA), and the Department of Transportation (DOT). Several laws governing the transport, storage, and use of hazardous materials are governed by these agencies as well as oversight for contaminated sites cleanup. Federal laws and regulations that are applicable to hazards and hazardous materials are presented below.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the basic statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous

wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintain UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the EPA and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of June 2020, only 45.6 percent of USTs were in compliance with all TCR categories[1].

Comprehensive Environmental Response, Compensation, and Liability Act

CERCLA introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. CERCLA was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous substances releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

STATE

The primary state agencies that are responsible for overseeing regulations and policies regarding hazardous materials are the California Office of Emergency Services (OES), Cal-EPA, DTSC, California Department of Transportation (Caltrans), California Highway Patrol (CHP), State Water Quality Control Board, and the California Air Resources Board. Several laws governing the generation, transport, and disposal of hazardous materials are administered by these agencies.

[1] EPA. *Semiannual Report of UST Performance Measures Mid Fiscal Year 2020*. June 2020. Access: https://www.epa.gov/sites/production/files/2020-06/documents/ca-20-12.pdf

State laws and regulations that are applicable to hazards and hazardous materials are presented below.

California Health and Safety Code

Cal-EPA has established rules governing the use of hazardous materials and the management of hazardous wastes. Many of these regulations are embodied in the California Health and Safety Code. The code includes regulations that govern safe drinking water, substances control, land reuse and revitalization, remediation, restoration, and methamphetamine contaminated cleanups.

California Code of Regulations Title 22 and Title 26

The California Code of Regulations (CCR) Title 22 provides state regulations for hazardous materials, and CCR Title 26 provides regulation of hazardous materials management. In 1996, Cal-EPA established the "Unified Hazardous Waste and Hazardous Materials Management Regulatory Program" (Unified Program) which consolidated the six administrative components of hazardous waste and materials into one program.

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to hazards and hazardous materials. General Plan policies applicable to the Project are identified below:

POLICIES: PUBLIC FACILITIES ELEMENT

- PF-1.1-P1. The City shall provide fire and emergency response facilities and personnel necessary to meet residential and employment growth in the city.
- PF-1.2-P1. Fire hazards shall be identified and mitigated during the project review and approval process.
- PF-1.2-P6. The City shall use physical site planning as an effective means of preventing wildland fires by requiring the following:
    - Drought-resistant native plants incorporated into public works projects.
    - More than one ingress/egress road to any neighborhood in areas subject to wildland fires.
    - Roadways with grades that accommodate emergency vehicles.
    - Structures that are constructed of fire-resistant materials.

POLICIES: SAFETY ELEMENT

- SA-4.1-P1. Adequate separation shall be provided between areas where hazardous materials are present and sensitive uses such as schools, residences and public facilities.
- SA-4.1-P2. When reviewing applications for new development and redevelopment in areas historically used for commercial or industrial uses, developers shall conduct the necessary level of environmental investigations to ensure that soils, groundwater and buildings

affected by hazardous material releases from prior land uses and lead or asbestos potentially present in building materials, will not have a negative impact on the natural environment or health and safety of future property owners or users.

- SA-4.1-P3. The safe transport of hazardous materials through Tracy shall be promoted by implementing the following measures:
    - Maintain formally-designated hazardous material carrier routes to direct hazardous materials away from populated and other sensitive areas.
    - Prohibit the parking of vehicles transporting hazardous materials on City streets.
    - Require that new pipelines and other channels carrying hazardous materials avoid residential areas and other immobile populations to the extent possible.
- SA-4.1-P4. Emergency response plans shall be submitted as part of use applications for all large generators of hazardous waste.
- SA-4.1-P5. The City shall continue to encourage the reduction of solid and hazardous wastes generated within the City, in accordance with countywide plans.
- SA-4.1-P6. The City shall partner with San Joaquin County to implement the Hazardous Materials Area Plan.

Tracy Municipal Code

The City of Tracy's Municipal Code (Code) addresses a variety of hazards and related topics, including hazardous materials and waste and airport safety.

The California Fire Code is adopted as Chapter 9.06 of the Code. Code Section 5.24.130 requires notification of the City, EPA Regional Waste Management Division Director, and "state hazardous waste authorities" (i.e., DTSC) of all hazardous waste discharges to the sewer. Code Section 5.24.260 requires that waste not permitted to be discharged into the community sewer must be transported to a State-approved disposal site, and the required "Waste Haulers Report" must be completed and a copy kept at the facility and the waste hauling manifest must be made available upon demand by the City, and retained for a minimum of three years. Code Article 27 establishes an Airport Overlay zone intended to regulate land uses adjacent to the Tracy Municipal Airport by limiting activities and construction in aircraft approach areas within the City limits. Code Chapter 3.24 provides for the preparation and carrying out of plans for the protection of persons and property within the City in the event of an emergency, including from fire or pollution. All officers and employees of this City, together with volunteer and other forces enrolled to aid them during an emergency, shall constitute the Emergency Organization of the City. This chapter provides for the direction of the Emergency Organization, and coordination of the emergency functions of the City and all other public agencies, corporations, organizations, and affected private persons.

Tracy Local Hazard Mitigation Plan

On March 17, 2020, the Tracy City Council adopted the City of Tracy Local Hazard Mitigation Plan (Tracy LHMP), which guides hazard mitigation planning to better protect the people and property of the City from the effects of hazard events. The Tracy LHMP was prepared pursuant to the requirements of the Disaster Mitigation Act of 2000 so that Tracy would be eligible for the Federal Emergency Management Agency's (FEMA) Pre-Disaster Mitigation and Hazard Mitigation Grant

programs. The Tracy LHMP includes a risk assessment that identified and profiled hazards that pose a risk to the City of Tracy, assessed the City's vulnerability to these hazards, and examined the capabilities in place to mitigate them.

Certified Unified Program Agency (CUPA)

The California Environmental Protection Agency designates specific local agencies as Certified Unified Program Agencies (CUPA), typically at the county level. The San Joaquin County Department of Environmental Health is the CUPA designated for San Joaquin County. The San Joaquin County Department of Environmental Health is responsible for the implementation of statewide programs within its jurisdiction, including: Underground storage of hazardous substances (USTs), Hazardous Materials Business Plan (HMP) requirements, California Accidental Release Prevention (Cal-ARP) program, etc. Implementation of these programs involves permitting, inspecting, providing education/guidance, investigations, and enforcement.

San Joaquin County Office of Emergency Services

The San Joaquin County Office of Emergency Services administers the State's Hazardous Material Release Response Plan and Inventories and the Accidental Release Prevention (Cal-ARP) programs. Additionally, the Office of Emergency Services has a Hazardous Material Area Plan designed to protect human health and the environment through hazardous materials emergency planning, response and agency coordination and community right-to-know programs. The Hazardous Material Area Plan, among other provisions, provides guidance for businesses required to file a hazardous materials business plan. Under Chapter 6.95 of the California Health and Safety Code and the Federal Resource Conservation and Recovery Act, any business storing quantities of hazardous materials greater than 55 gallons of liquid, 500 pounds of solid or 200 cubic feet of some compressed gases must file a hazardous materials business plan annually that establishes incident prevention measures, hazardous material handing protocols and emergency response and evacuation procedures. The City of Tracy Police Department and the South County Fire Authority work with San Joaquin County to implement the Hazardous Material Area Plan.

The Office of Emergency Services also administers the Emergency Planning and Community Right-to-Know program for Tracy. The Office of Emergency Services has also prepared the Emergency Operations Plan, which is known as the basic emergency plan for San Joaquin County. The Emergency Operations Plan is intended to facilitate multiple-agency and multiple jurisdictional coordination, particularly among local, state, and federal agencies in emergency management, and establish a framework for an effective system of comprehensive emergency management.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; and/or
- 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.

IMPACT DISCUSSIONS AND MITIGATION MEASURES

Impact 3.8-1: Potential to create a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Construction of the proposed Project would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials will pose a reasonable risk of release into the environment if not properly handled, stored, and transported.

Construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in significant impacts to the health and welfare of people and/or wildlife. Additionally, an accidental release into the environment could result in the contamination of water, habitat, and countless resources. Mitigation Measure 3.9-1 contained in Section 3.9, Hydrology and Water Quality, ensures compliance with existing regulatory requirements of the Regional Water Quality Control Board, which requires the preparation a project specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to include project specific best management measures that are designed to control erosion and the loss of topsoil to the extent practicable using best management practices (BMPs) that the RWQCB has deemed effective in controlling erosion, sedimentation, and runoff during construction activities, which reduces the risk of accidental release of hazardous materials into the environment.

The proposed Project would also be required to comply with regulations on the transportation of hazardous materials codified in 49 CFR 173 and 49 CFR 177 and CCR Title 26, Division 6. These regulations, which are under the jurisdiction of Caltrans and the CHP, provide specific packaging requirements, define unacceptable hazardous materials shipments, and prescribe safe-transit practices by carriers of hazardous materials. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the State level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes, including, but not limited to CCR Titles 8 and 22, International Fire Code, and Division 20 of the California Health and Safety Code: all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area; equipment refueling and maintenance must take place only within the staging area; and construction vehicles shall be inspected daily for leaks. Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the State and/or local jurisdictions, including the San Joaquin County Department of Environmental Health and the South San Joaquin County Fire Authority (SSJCFA).

Contractors would be required to comply with Cal-EPA's Unified Program; regulated activities would be managed by San Joaquin County Department of Environmental Health, the designated CUPA for San Joaquin County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories). Additionally, in the event that hazardous materials are discovered during construction, a Soils Management Plan (SMP) will need to be submitted and approved by the San Joaquin County Department of Environmental Health, as required by Mitigation Measure 3.8-1. The SMP will establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. Such compliance would reduce the potential for accidental release of hazardous materials during construction of the proposed Project. As a result, it would lessen the risk of exposure of construction workers and the public to accidental release of hazardous materials, as well as the demand for incident emergency response.

Development of the Project would involve site grading, excavation for utilities, trenching, backfilling, and the construction of proposed facilities that could result in the exposure of construction workers and the general public to hazardous materials. Like most agricultural and farming operations in the Central Valley, agricultural practices in the area have used agricultural chemicals including pesticides and herbicides as a standard practice. Continuous spraying of crops over many years can potentially result in a residual buildup of pesticides, in farm soils. Of highest concern relative to agrichemicals are chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides (OCPs), such as such as Mecoprop (MCPP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE).

As part of the Phase I ESA (see Appendix D), a limited Phase II ESA was conducted to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. Soil samples were collected pursuant to the DTSC Interim Guidance for Sampling Agricultural Properties (Third Revision) and were analyzed for OCPs using US EPA Method 8081A and arsenic

using US EPA Method 6010B. The soil sample analytical results indicated that OCPs were not present above laboratory detection limits in shallow soils at the site and arsenic concentrations ranged from 2.3 milligrams per kilogram (mg/kg) to 4.3 mg/kg. Arsenic concentrations did not exceed the arsenic California Code of Regulations (CCR) Title 22 Total Threshold Limit Concentration of 500 mg/kg, 10 times the arsenic CCR Title 22 Soluble Threshold Limit Concentration value of 5 milligrams per liter (mg/L) (50 mg/kg), or 20 times the arsenic Federal Toxicity Characteristic Leaching Procedure threshold of 5 mg/L (100 mg/kg). Therefore, arsenic concentrations at the Site do not exceed thresholds that would classify soils as Federal or California hazardous wastes.

OPERATIONAL PHASE IMPACTS

The operational phase would occur after construction is completed and business operations commence on a day-to-day basis. The Project would include the construction and subsequent operation of two Costco warehouse and distribution buildings to support Costco's ongoing distribution and e-commerce facilities in the area. Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. The Project would not routinely transport, use, or dispose of hazardous materials, or present a reasonably foreseeable release of hazardous materials, with the exception of degreasers, lubricants, and common cleaning agents. If handled appropriately, these materials would not pose a significant risk.

Any operations that involve the use of hazardous materials would be required to have the hazardous material transported, stored, used, and disposed of in compliance with local, state, and federal regulations. The San Joaquin County Department of Environmental Health is the CUPA for San Joaquin County and is responsible for the implementation of statewide programs within the city including Hazardous Materials Business Plan (HMBP) requirements, among numerous other programs. Additionally, businesses are regulated by Cal/OSHA and are therefore required to ensure employee safety. Specific requirements include identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers. To further ensure the safety of employees, and reduce the potential for accidental release of hazardous materials into the environment, the applicant must submit a HMBP to San Joaquin County Department of Environmental Health for review and approval prior to bringing hazardous materials onsite, as required by Mitigation Measure 3.8-2.

As with construction, operation of the proposed Project is required to be consistent with federal, State, and local laws and regulations addressing hazardous materials management and environmental protection, including, but not limited to 49 CFR 173 and 177, and CCR Title 26, Division 6 for transportation of hazardous materials, and CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code for routine use of hazardous materials. These regulations and codes must be implemented, as appropriate, and are monitored by the

State and/or local jurisdictions, including Caltrans, the CHP, the San Joaquin County Department of Environmental Health.

As discussed in the existing setting, Crimson Oil operates a crude oil pipeline beneath the Project site and PG&E operates two natural gas pipelines, which both run across the northeastern portion of the Project site. While the *Phase I ESA* notes no incidental/accidental releases in the Project vicinity have been reported along the pipelines to date, the presence of natural gas pipelines and the potential for undocumented leaks to occur from the crude oil pipeline represents a REC. Undocumented leaks that could occur on-site would result in the release of hazardous materials into the environment contaminating the site and potentially exposing employees and the public to hazardous materials. The *Phase I ESA* notes that Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak) would be responsible for subsurface contamination as a result of leaks from this pipeline; therefore, the site cleanup from the subsurface contamination would be the responsibility of Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak). Mitigation Measure 3.8-3 would require the Project applicant to notify the San Joaquin County Department of Environmental Health, who would facilitate the site cleanup.

CONCLUSION

Overall, consistency with federal, State, and local laws and regulations related to the handling of hazardous materials discussed above and implementation of Mitigation Measures 3.8-1, 3.8-2, and 3.8-3, as well as Mitigation Measure 3.9-1 from Section 3.9, Hydrology and Water Quality, would ensure that these potential impacts are reduced to a ***less than significant*** level.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.9-1**.*

***Mitigation Measure 3.8-1**: In the event that hazardous materials are encountered during construction, a Soils Management Plan (SMP) shall be submitted and approved by the San Joaquin County Department of Environmental Health. The SMP shall establish management practices for handling hazardous materials, including fuels, paints, cleaners, solvents, etc., during construction. The approved SMP shall be posted and maintained onsite during construction activities and all construction personnel shall acknowledge that they have reviewed and understand the plan.*

***Mitigation Measure 3.8-2**: Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to San Joaquin County Environmental Health Department (CUPA) for review and approval. If during the construction process the applicant or its subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*

***Mitigation Measure 3.8-3**: During construction and Project operation, if subsurface contamination as a result of leaks from the crude oil pipeline is detected, the Project proponent/operator shall notify the San Joaquin County Department of Environmental Health (CUPA) to facilitate the site*

cleanup. Crimson Pipeline, L.P., or the current pipeline operator, shall be responsible for the site cleanup.

This section describes the regulatory setting, existing regional hydrology and water quality, impacts that are likely to result from Project implementation, and measures to reduce potential impacts to hydrology and water quality. This section is based in part on the following documents, reports and studies: San Joaquin County General Plan (San Joaquin County, 2016), City of Tracy General Plan (City of Tracy, 2011), City of Tracy General Plan EIR (City of Tracy, 2011), *2020 Urban Water Management Plan* (City of Tracy, 2021), Draft *Citywide Storm Drainage Master Plan Update* (City of Tracy, 2021), Costco Depot Project Planning Submittal Review for Drainage and Flood Management, (Wood Rodgers, 2021), *California Water Plan Update 2013* (DWR 2013), *Tracy Storm Drain Master Plan* (City of Tracy 2020), *California's Groundwater Bulletin 118, San Joaquin Valley Groundwater Basin, Tracy Subbasin* (DWR 2006), *California's Groundwater* (DWR 2003), *Draft Tracy Subbasin Groundwater Sustainability Plan: Chapters 1—3* (Tracy Subbasin Groundwater Sustainability Agencies [GSAs], 2020), *Draft Tracy Subbasin Groundwater Sustainability Plan: Chapter 4* (Tracy Subbasin GSAs, 2020), *Draft Tracy Subbasin Groundwater Sustainability Plan: Chapter 5* (Tracy Subbasin GSAs, 2020).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Central Valley Regional Water Quality Control Board (CVRWQCB). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

As discussed in the Initial Study (see Appendix A), there would be ***no impacts*** associated with the risk of release of pollutants due to flood hazards, tsunamis, or seiches. As such, this CEQA topic does not warrant additional analysis and will not be addressed further in this section.

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

San Joaquin County is located in the San Joaquin River watershed. The San Joaquin River is about 300 miles long. It begins in the Sierra Nevada mountain range on California's eastern border. The river runs down the western slope of the Sierra and flows roughly northwest through the Central Valley, to where it meets the Sacramento River at the Sacramento-San Joaquin Delta, a 1,000-square-mile maze of channels and islands that drains more than 40 percent of the state's lands (SJRGA 2013).

Because the Central Valley receives relatively little rainfall (12 to 17 inches a year, falling mostly October through March), snowmelt runoff from the mountains is the main source of fresh water in the San Joaquin River. Over its 300-mile length, the San Joaquin River is fed by many other streams and rivers, most notably the Stanislaus, Tuolumne and Merced rivers.

Most of the surface water in the upper San Joaquin River is stored and diverted at Millerton Lakes' Friant Dam, near Fresno. From Friant Dam, water is pumped north through the Madera Canal and then flows south through the Friant-Kern Canal to irrigation districts and other water retailers, which then deliver the water directly to the end users in the southern portion of the watershed.

In the central and northern portions of the watershed, many agricultural and municipal users receive water from irrigation districts, such as the Modesto, Merced, Oakdale, South San Joaquin and Turlock Irrigation Districts. That water is provided through diversions from rivers that are tributary to the San Joaquin, such as the Mokelumne, Stanislaus, Tuolumne and Merced rivers.

In an average year, about 1.5 million acre-feet of water is diverted from the San Joaquin River at Friant Dam, leaving little flow in the river until the Merced River joins the San Joaquin northwest of the City of Merced. Additional water also reaches the river via flows returning to the river from municipal wastewater treatment plants, as well as urban and agricultural runoff. The rest of the area's water supply needs are met by importing water from northern California (via the Central Valley Project) and by pumping water from the groundwater basin (SJRGA 2013).

Climate

The climate in San Joaquin County is characterized by long hot dry summers and cool rainy winters that include dense tule fog. According to the San Joaquin County 2035 General Plan Draft EIR, average rainfall ranges from approximately 10 inches per year in the southern portion of the county to 18 inches per year in the north. The mean annual precipitation as measured in the City of Stockton is 13.79 inches. Most of the precipitation occurs between October and April while the summer months are typically absent of any precipitation. The average temperatures range from December lows of 37.5°F to July highs of 94.3°F.

Watersheds

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife, including special-status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State of California uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1. STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.

WATERSHED LEVEL	*APPROXIMATE SQUARE MILES (ACRES)*	*DESCRIPTION*
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALIFORNIA DEPARTMENT OF WATER RESOURCES, 2012.

Hydrologic Region

San Joaquin County is located in the San Joaquin River Hydrological Region. The San Joaquin River is the principal river of the region, and all other streams of the region are tributary to it. The Mokelumne River and its tributary, the Cosumnes River, originate in the central Sierra Nevada, along with the more southerly Stanislaus and Tuolumne rivers. The Merced River flows from the south central Sierra Nevada and enters the San Joaquin near the City of Newman. The Chowchilla and Fresno rivers also originate in the Sierra, south of the Merced River, and trend westward toward the San Joaquin River. Creeks originating in the Coast Range and draining eastward into the San Joaquin River include Del Puerto Creek, Orestimba Creek, and Panoche Creek. Del Puerto Creek enters the San Joaquin near the City of Patterson, and Orestimba Creek enters north of the City of Newman. During flood years, Panoche Creek may enter the San Joaquin River or the Fresno Slough near the town of Mendota. The Kings River is a stream of the Tulare Lake Hydrologic Region, but in flood years it may contribute to the San Joaquin River, flowing northward through the James Bypass and Fresno Slough to enter near the City of Mendota. The Mud, Salt, Berrenda, and Ash sloughs also add to the San Joaquin River, and numerous lesser streams and creeks also enter the system, originating in both the Sierra Nevada and the Coast Range. The entire San Joaquin River system drains northwesterly through the Delta to Suisun Bay (DWR 2013, pg. SJR-5).

The Project site is located in the Old River principal watershed. See Figure 3.9-1. It should be noted that the Old River is a distributary channel of the San Joaquin River. It is located to the north of the city of Tracy (City) and it drains generally towards the west. The Old River has levees that separate it from low-lying portions of the City.

Regional Groundwater

The San Joaquin Valley Groundwater Basin lies within the San Joaquin River and Tulare Lake Hydrologic Regions. The San Joaquin River Hydrologic Region portion of the basin covers approximately 3.73 million acres while the Tulare Lake Hydrologic Region portion of the basin covers approximately 5.15 million acres. Groundwater is extensively used in the San Joaquin Valley Groundwater Basin by agricultural and urban entities and accounts for approximately 48% of the groundwater used in the State (DWR 2003).

The northern portion of the basin is within the San Joaquin River Hydrologic Region and consists of nine subbasins. These subbasins are the Cosumnes, Eastern San Joaquin, Tracy, Modesto, Turlock, Merced, Delta-Mendota, Chowchilla, and Madera (DWR, 2003). The City of Tracy is located in the Tracy Subbasin of the San Joaquin Valley Groundwater Basin. The Tracy Subbasin encompasses an area of about 345,000 acres in San Joaquin and Alameda counties, primarily between the eastern extent of the Coast Ranges on the south and the San Joaquin River on the east. The Subbasin is

bounded on the north and the east by the San Joaquin River, on the south by the San Joaquin-Stanislaus counties border, and on the west by the aerial extent of sedimentary deposits bounded by the Coastal Ranges. The San Joaquin, Old, and Middle rivers are the principal rivers within or bordering the Subbasin[1].

The City of Tracy and much of the surrounding area is located in the Tracy Subbasin of the San Joaquin Valley Groundwater Basin. This groundwater subbasin covers approximately 345,000 acres in San Joaquin and Alameda counties, primarily between the eastern extent of the Coast Ranges on the south and the San Joaquin River on the east. The Tracy Subbasin is bounded on the north and the east by the San Joaquin River, on the south by the San Joaquin-Stanislaus counties border, and on the west by the aerial extent of sedimentary deposits bounded by the Coastal Ranges. The San Joaquin, Old, and Middle rivers are the principal rivers within or bordering the Subbasin. Other adjacent subbasins include the Delta-Mendota Subbasin to the southeast, the Modesto Subbasin to the east, the Eastern San Joaquin Subbasin to the east and north, and the East Contra Costa Subbasin to the west.

Six Groundwater Sustainability Agencies (GSAs) have formed in the Tracy Subbasin to collaboratively develop one Groundwater Sustainability Plan (GSP) for the Subbasin, including the Banta-Carbona Irrigation District, Byron-Bethany Irrigation District, San Joaquin County, City of Lathrop, City of Tracy, and Stewart Tract. The Tracy Subbasin GSP is required to be provided to the State by January 31, 2022. A draft Groundwater Sustainability Plan was made available for public review from August 9 to September 9, 2021. The Plan was then revised to address public comments provided during the public comment period.

Each of the GSAs voted to adopt the Final GSP. The City of Tracy City Council adopted the Final GSP at a public hearing held on November 16, 2021. The Final GSP was submitted to the California Department of Water Resources (DWR) ahead of the January 31, 2022 deadline. After the GSP is reviewed, the GSAs will submit annual reports to DWR and update the GSP every five years.

Water uses in the Tracy Subbasin include agricultural, municipal, industrial, domestic, and native vegetation and aquatic species. Some water is also being used for managed habitats, mostly for migrating birds. Some water purveyors rely exclusively on either groundwater or surface water, but most rely on a combination of surface water and groundwater. There are about 2,400 “production” wells in the subbasin, of which about 450 are production wells (agricultural and municipal), and about 1,950 are domestic wells, although these estimates vary. The Department of Water Resources (DWR) classifies wells as “production” wells if the well casing is greater than or equal to 4 inches, and the total depth is greater than or equal to 22 feet. Most of the production wells in the Subbasin are domestic wells, which may be classified as de-minimis extractors who pump less than 2 AFY[2].

The Tracy Subbasin has not been designated by DWR as being in a condition of critical overdraft. In an eight-year study conducted by Stoddard & Associates (1996), the average change in the entire sub-basin storage was approximately negative 13,000 af/yr. Stoddard & Associates (1996) noted

[1] Tracy Subbasin GSAs. June 2020. Draft Tracy Subbasin Groundwater Sustainability Plan: Chapters 1 – 3.
[2] Tracy Subbasin GSAs. June 2020. Draft Tracy Subbasin Groundwater Sustainability Plan: Chapters 1 – 3.

that rainfall during the study period was well below average, thus they inferred that the Tracy Subbasin was in a hydrologically-balanced condition and not overdrafted. Additionally, the Sustainable Groundwater Management Act directs DWR to identify groundwater basins and subbasins that are in conditions of critical overdraft. Per DWR's current list of critically overdrafted basins, finalized in January 2016, the Tracy Subbasin is not designated as a critically overdrafted basin. However, the Delta-Mendota Subbasin and the Eastern San Joaquin Subbasin, which border the Tracy Subbasin to the south and to the east, respectively, have been designated as being in conditions of critical overdraft[3].

The Tracy Subbasin has two principal aquifers; an Upper unconfined to semi-confined aquifer and a Lower confined aquifer that are separated by the Corcoran Clay. The City of Tracy is located within the Lower Aquifer. The Lower aquifer is primarily comprised of the lower portions of the Tulare Formation and is below the Corcoran Clay and extends to the base of fresh water. The City of Tracy is the principal water agency that actively monitors water levels in the confined aquifer. Groundwater levels in the confined aquifer are about 25 to 75 feet above mean sea level (msl). The groundwater levels are always above the top of the Corcoran Clay by about 60 to 200 feet[4].

LOCAL SETTING

The Project site is located in the western portion of the City of Tracy's Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is located northwest of Interstate-580, approximately 4.75 miles southwest of Tracy City Hall, and directly south of the Cordes Ranch Specific Plan[5]. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

The Project site encompasses approximately 104.46 acres of undeveloped land previously used for agricultural purposes. As a result of site disturbance associated with the previous agricultural operations, there is little native vegetation or naturalized habitat located on the site, and the flat topography of the site renders the site essentially void of prominent natural visual features. There are no trees or light sources on-site. The Project site is relatively flat and ranges in elevation from approximately 148 to 187 feet above sea level. The southern portion of the Project site is topographically higher than the northern portion of the site, which is bound by the Delta Mendota Canal. The Delta-Mendota Canal is used for irrigation of land along the west side of the San Joaquin Valley carrying water southeasterly from the C.W. Jones Pumping Plant to the Mendota Pool[6]. The canal's overchute is located in the center of the southern boundary of the site. The overchute is designed to convey surface water runoff that originates to the south of the Delta-Mendota Canal over the top of the Delta-Mendota Canal where the runoff can generally follow its historical flow

[3] West Yost Associates. 2020. Water Supply Assessment for Tracy Costco Depot Project.
[4] Tracy Subbasin GSAs. June 2020. Draft Tracy Subbasin Groundwater Sustainability Plan: Chapter 5.
[5] The Cordes Ranch Specific Plan establishes land use, zoning, development standards and regulations for approximately 1,780 acres located in the northwest region of the City of Tracy. The vision for the Cordes Ranch Specific Plan is to create a commerce and business park, consisting of 55.1 acres of General Commercial uses, 152.2 acres of General Office uses, 1,476.9-acres of Business Park Industrial uses, and 96.3-acres of Park uses.
[6] San Luis & Delta-Mendota Water Authority. 2020. Access: https://sldmwa.org/about-sldmwa-facilities/about-the-delta-mendota-canal/

pattern to the northeast. In addition, a large depressed area possibly used as a drainage basin or detention pond during previous agricultural use is located within the northeast corner of site.

Based on historical aerial photographs, the entire Project site was previously used for agriculture and farming (i.e., a former orchard). According to Google Earth historical imagery, the Project site has been undeveloped since at least 1937. Historic aerial images are available in the Phase 1 ESA (Appendix D of this EIR).

Local Groundwater

The local groundwater basin and City groundwater use are described in the City's 2015 UWMP. A brief description of the groundwater basin and a discussion of historical and projected groundwater pumping are provided below.

The City currently owns and operates nine groundwater production wells: the Lincoln Well and Production Wells 1, 2, 3, 4, 5 (Lewis Manor), 6 (Park & Ride), 7 (Ball Park) and 8. It is noted that Production Well 8 operates as an aquifer storage and recovery well. The pumping capacity of the City's production wells ranges from 1,400 gallons per minute (gpm) to 2,500 gpm, with a combined total capacity of 18,300 gpm. All production wells are screened below the confining Corcoran Clay with sanitary seals that entirely seal the wells from the upper, unconfined aquifer.

Historically, the City's annual potable groundwater production accounted for up to 50 percent of the City's water supply. Prior to 2001, groundwater extraction in Tracy totaled less than 6,000 acre-feet per year (AFY). Between 2001 and 2004, to meet increased demands for water, Tracy began extracting additional groundwater, ranging from 6,878 AFY to 7,717 AFY. In 2005, groundwater extraction decreased to approximately 6,000 AFY because Tracy began receiving Stanislaus River water and rainfall was above normal. From 2006 through 2010, groundwater extraction ranged from 3,672 AFY to 498 AFY, declining as more water was used from the South San Joaquin Irrigation District (SSJID). Over the period 2012 through 2020, net groundwater production by the City ranged from 252 AFY to 1,181 AFY.

The aquifer beneath the City has an average annual operational yield of 9,000 AFY and an estimated total safe yield of 28,000 AFY[7]. Because the groundwater is of lower quality than the City's surface water resources, the City has reduced its groundwater extraction over the past 15 years. However, Tracy will continue to rely on groundwater for peaking and drought and emergency supplies. Overall, the City anticipates that total extraction during a normal year will decrease to less than 2,500 AFY through the planning horizon (2040). By reducing groundwater extraction on an average annual basis, the City will recharge the underlying aquifer, effectively increasing the availability of groundwater during a drought or emergency condition.

According to the Water Supply Assessment (WSA) prepared for the Project, water demand within the City's water service area is not expected to exceed the City's supplies at buildout under normal hydrologic conditions if the City is able to fully implement its future planned projects, which include Aquifer Storage and Recovery Program Expansion, Recycled Water Distribution Network and

[7] West Yost Associates. 2021. Water Supply Assessment for Tracy Costco Depot Project.

Exchange Program for additional Central Valley Project water supplies, and recycled water distribution for non-potable use. During a single dry year or a multiple dry year period, the City must depend more heavily on water conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. Investments in wet year water supplies will also be needed to refill storage in Semitropic and expand the City's Aquifer Storage and Recovery Program. Delays in implementing the proposed future water supply projects could result in greater water supply shortages and the need for additional water conservation to meet demands.

As discussed in the City's 2020 UWMP, the dry year shortfalls are based on water supply and demand projections with numerous uncertainties and the situation is dynamic. The City continues to work on strategies and actions to address the projected water supply shortfall. The City's strategies and actions include the implementation of demand management measures as part of its water conservation program, consideration of net neutral policies to improve water use efficiency community-wide, and implementation of the future water supply projects described above.

Drainage

The City of Tracy provides and maintains an extensive network of inlets, manholes, pipes, channels, basins and pump stations. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

According to Tracy's Citywide Storm Drainage Master Plan (CSDMP, Final Draft September 2021), the Project site is located within the Lammers Watershed. The Lammers Watershed refers to an area located generally between Mountain House Parkway to the west and Lammers Road to the east including the hills to the south of I-580 that drain into it. A portion of this area, generally south of Interstate-205 and north of Old Schulte Road, is within the City's Sphere of Influence. The California Aqueduct and Delta Mendota Canal cross this watershed and include overchutes and culvert crossings that limit discharges from the hills to the south into the flatter parts of the watershed. There are also several locations of terminal drainage via direct discharge to the Delta Mendota Canal. The hills to the south of I-580 are identified as Offsite Tributary Areas 2 and 3. The natural flow path across the Lammers Watershed from Offsite Tributary Area 2 is generally to the north, whereas the natural flow path across the Lammers Watershed from Offsite Tributary Area 3 is generally to the northeast. Therefore, the area referred to as the Lammers Watershed is not truly a watershed because it does not drain to a single point and does not have a defined outlet available to receive runoff from new development.

Prior to the City's 2012 CSDMP, developments within the Lammers Watershed entered into interim agreements with the West Side Irrigation District (WSID) to permit connections to the Upper Main Canal. Flows in the WSID Upper Main Canal ultimately enter the Eastside Channel. WSID Upper Main Canal discharges into the Eastside Channel are limited to 35 cubic feet per second (cfs) based on the 2010 Drainage Agreement. As noted in the City's 2012 CSDMP, the City's 1994 SDMP anticipated construction of a new system that would discharge to the Old River. The 2012 CSDMP called for the Lammers Watershed drainage system to be connected to the WSID Sub-Main Drain that connects to the WSID Main Drain which leads to the existing Wicklund Outfall.

Drainage features within this area include agricultural ditches and tailwater ponds, and low capacity tailwater ditches that drain to WSID tailwater conveyance facilities. WSID's Upper and Lower Main Canals also traverse across the watershed and intercept various upstream irrigation discharges and stormwater flows. The WSID Sub-Main Drain tailwater ditch extends northwesterly along the south side of Byron Road between I-205 (near Lammers Road) and the alignment of San Jose Road, and then turns north, crossing Byron Road and the Union Pacific Railroad and joins the WSID Main Drain to the north on the east side of San Jose Road.

EXISTING PROJECT SITE DRAINAGE

According to the City's 2021 CSDMP, there are two historical drainage flow paths on-site. The first, western drainage path originates just to the west of the Project and drains towards the West Side Irrigation District (WSID) Upper Main Canal. Within the Project site, this path begins in the northwest corner of the Project site traveling northeast across Old Schulte Road and the Cordes Ranch Specific Plan toward to the WSID Upper Canal. The second historic drainage flow path receives runoff from Offsite Tributary Area 3, a watershed that covers approximately 3,500 acres to the southwest of Interstate 580. Runoff from Offsite Tributary Area 3 is conveyed across Hansen Road through four culverts that are 3 feet high by 6 feet wide. The runoff flows to the northeast towards the flume (overchute) that is 7.5 feet wide. The flume conveys flows over the Delta-Mendota Canal towards the Project site. The flow rates traveling towards the flume can exceed the capacity of the culvert through the southern embankment of the Delta Mendota Canal (which regulates flow into the flume). The 3-foot 7-inch-high culvert causes water to be impounded by the southern embankment of the Delta Mendota Canal. High flow velocities discharging from the northeastern end of the Delta-Mendota Canal flume can cause localized erosion before spreading over a large portion of the Project site.

Flooding

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater. Figure 3.9-2 identifies the FEMA flood zone designations for the City of Tracy. According to FEMA, the Project site is located outside of any mapped 100-year and 500-year floodplains and is considered to be located in an area of minimal flood hazard. It is noted that the site is subject to shallow flooding resulting from periodic stormwater runoff flowing across the Delta-Mendota Canal overchute.

Dam Failure

Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with storage capacities over 50 acre-feet of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of

dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

As shown in Figure 3.9-3, the Project site is not located within a dam failure inundation area. The nearest damn inundation area is from the New Melones Lake and San Luis Reservoir in the northeast portion of Tracy, generally north of Interstate 205 and east of the Union Pacific Rail Road tracks.

Stormwater Quality

Surface water quality is affected by point source and non-point source pollutants. Point source pollutants are those emitted at a specific point, such as a pipe, while non-point source pollutants are typically generated by surface runoff from diffuse sources, such as streets, paved areas, and landscaped areas. Point source pollutants are controlled with pollutant discharge regulations or waste discharge requirements (WDRs). Non-point source pollutants are more difficult to monitor and control, although they are important contributors to surface water quality in urban areas.

Stormwater runoff pollutants vary based on land use, topography, the amount of impervious surface, and the amount and frequency of rainfall and irrigation practices. Runoff in developed areas typically contains oil, grease, and metals accumulated in streets, driveways, parking lots, and rooftops, as well as pesticides, herbicides, particulate matter, nutrients, animal waste, and other oxygen-demanding substances from landscaped areas. The highest pollutant concentrations usually occur at the beginning of the wet season during the “first flush.”

Currently, runoff from within the Project site is collected in a system of shallow agricultural and roadside ditches. Additionally, the site is located downstream from an overchute that carries runoff from a large watershed across the Delta-Mendota Canal and is referred to as Offsite Tributary Area 3. The majority of this off-site watershed is south of the California Aqueduct and it drains under Interstate 580 through a large culvert, across the California Aqueduct through an overchute, and under the railroad tracks that are south of the Safeway Distribution Center located west of the site. To the north of the railroad tracks, the runoff turns to the east towards Hansen Road. There is a weir along the south side of an access road that runs on the south side of the Safeway Distribution Center to the north of the flow path towards Hansen Road (also west of the Project site).

Typically, the most prevalent source of agricultural water pollution is soil that is washed off fields. Additionally, other pollutants like fertilizers, pesticides, and heavy metals are often attached to the soil particles and wash into the water bodies. It is noted, however, that the proposed Project site was previously used for agricultural purposes; as such, fertilizers and pesticides are not actively applied to the site.

303(d) Impaired Water Bodies

Water quality in the City is governed by the Central Valley Regional Water Quality Control Board (CVRWQCB), which sets water quality standards in their Water Quality Control Plan for the respective basins (Basin Plans). The Basin Plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses.

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the regional vicinity of the Project site that are impaired are referred to as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the City include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminates in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980s. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking

is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL AND STATE

Clean Water Act (CWA)

The Clean Water Act (CWA), initially p assed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the NPDES Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and does so through issuing NPDES permits to pollutant dischargers through regional water quality control boards. Federal regulations allow two permitting options for stormwater discharges (individual permits and general permits). The SWRCB elected to adopt a statewide general permit (Water Quality Order No. 2013-001-DWQ-DWQ).

Federal Emergency Management Agency (FEMA)

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted, as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

200-Year Flood Protection in the Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by DWR. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2016 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025. Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

The 200-year flood protection regulations do not apply to the Project site because the site is not located within a flood hazard zone identified on a flood insurance rate map issued by FEMA.

California Water Code

The Federal Clean Water Act places the primary responsibility for the control of surface water pollution and for planning the development and use of water resources with the states, although this does establish certain guidelines for the States to follow in developing their programs and allows the Environmental Protection Agency to withdraw control from states with inadequate implementation mechanisms.

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

> (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
>
> > (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
> >
> > (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
> >
> > (3) A person operating, or proposing to construct, an injection well.
>
> (b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.
>
> (c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

LOCAL

City of Tracy General Plan

The City of Tracy General Plan includes several policies relevant to hydrology and water quality. General Plan policies and implementation measures applicable to the Project are identified below:

POLICIES: PUBLIC FACILITIES

- PF-1.1-P1: Stormwater infrastructure shall be maintained in good condition.
- PF-1.1-P2: Stormwater infrastructure shall minimize local flooding by attaining capacity that conforms to the Storm Drainage Master Plan and City Design Standards.
- PF-1.1-P3: New permanent stormwater infrastructure shall be designed to serve dual purposes to the extent possible. This includes the following:

  - Drainage facilities integrated into recreation corridors with bike paths, sidewalks, and landscaping.
  - Drainage channels integrated with transportation and environmental corridors
  - Stormwater detention basins shall incorporate active and passive recreation areas where feasible. These areas shall not count towards parks dedication requirements
- PF-1.1-P4: Design of storm drainage facilities shall be consistent with State and federal requirements, including NPDES requirements
- PF-2.1-P1: To the extent feasible, new development projects shall incorporate methods of reducing storm runoff within the project to reduce the requirements for downstream storm drainage infrastructure and improve stormwater quality.
- PF-2.1-P2: New storm drainage facilities shall meet adopted City standards, including the standards and policies contained in the Storm Water Management Plan, the Storm Drainage Master Plan, and the Parkways Design Manual.
- PF-2.1-P3: New development projects shall only be approved if necessary stormwater infrastructure is planned and is in compliance with environmental regulations.
- PF-2.1-P4: If sufficient downstream stormwater infrastructure has not yet been constructed, new development projects shall be required to implement temporary on-site retention facilities in compliance with City standards
- PF-6.1-P3: To the extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.

City of Tracy Municipal Code

Chapter 9.52 (Floodplain Regulations) of the Tracy Municipal Code is intended to minimize damage resulting from flooding and promote safety. This section of the code prohibits encroachments, including fill, new construction, substantial improvements, and other new development, in floodways, and establishes construction standards in special flood hazard areas. Chapter 11.32 (Storm and Surface Water Management Enterprise and Utility) of the City's Municipal Code outlines the storm drainage fees for, improving the quality of storm and surface water, funding the operation, maintenance, improvement and replacement of the existing City storm drainage control facilities, and funding the operation, maintenance, and replacement of future such facilities. Chapter 11.34 (Stormwater Management and Discharge Control) of the City's Municipal Code addresses City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

Multi-Agency Post Construction Stormwater Standards Manual

The Cities of Lathrop, Lodi, Manteca, Patterson, and Tracy, and portions of the County of San Joaquin, are each classified as Phase II Municipal Separate Storm Sewer System (MS4) communities. On April 30, 2003, the State Water Board adopted the first general NPDES permit (CAS000004) under Order No. 2003-0005-DWQ for small MS4s, including nontraditional small MS4s (e.g., military bases), that required compliance with section 402(p) of the CWA and defined the minimum acceptable elements of stormwater management programs for small MS4s. On February 5, 2013,

the State Water Board adopted Order No. 2013-0001-DWQ, which replaced Order No. 2003-0005-DWQ and required that the Agencies develop/update post-construction standards to address stormwater quality for regulated new development and redevelopment projects.

The Phase II Permit specifies three types of projects (both public and private new development and redevelopment) that must implement post-construction stormwater standards, to varying degrees, as discussed below:

- Small Projects (Provision E.12.b(i)) – These are projects that create and/or replace at least 2,500, but less than 5,000 square feet of impervious surface; or detached single-family homes that create and/or replace a minimum of 2,500 square feet of impervious surface and are not part of a larger plan of development. Small Projects exclude linear underground/overhead utility projects (LUPs).
- Regulated Projects – These are projects that create and/or replace greater than or equal to 5,000 square feet of impervious surface and LUPs that create 5,000 square feet or more of newly constructed contiguous impervious surfaces.
- Hydromodification Management Projects – These are a subset of Regulated Projects that create and/or replace one acre or more of impervious surface. A project that does not increase the impervious surface area over the pre-project condition is not considered a Hydromodification Management Project.

The Multi-Agency Post Construction Stormwater Standards Manual requires projects to implement Low Impact Development (LID) control measures to reduce and/or eliminate the volume of stormwater runoff and pollutants leaving the project site. LID is an approach to managing stormwater runoff that mimics the natural pre-development hydrology of a development site by using design techniques that infiltrate, filter, store, treat, evaporate, and detain stormwater runoff close to the source. There are a number of opportunities in site design that can incorporate LID measures, including landscaping, open space, streetscapes, parking lots, sidewalks, and medians. LID can be used in combination with traditional storm drain systems to infiltrate the smaller, more frequent storms, while allowing the larger storms to flow to pipes and basins for flood control (possibly with lower off-site costs than traditional non-LID systems). LID techniques offer benefits to stormwater quality, especially for the smaller return interval storm events. LID help reduce the amount of runoff entering the City's system and aid in recharging ground water.

Under the Multi-Agency Post Construction Stormwater Standards Manual, applicants must submit a Project Stormwater Quality Control Plan (SWQCP) that adequately demonstrates how the proposed Project will implement stormwater treatment control measures for review by City staff as part of its development application. Applicants for Regulated and Hydromodification Management Projects must submit a comprehensive, technical discussion describing compliance with the requirements of this Manual, including proposed site design measures to be implemented, proposed source control measures to be implemented, calculation of the stormwater design volume and/or stormwater design flow and results from the Post-Construction Stormwater Runoff Calculator, proposed stormwater treatment control measures (if necessary), proposed hydromodification control measures, and proposed operations and maintenance plan.

Citywide Storm Drainage Master Plan

The City of Tracy Citywide Storm Drainage Master Plan (CSDMP) was adopted in 2013, and the Final Draft to the CSDMP was completed in September 2021. The CSDMP identifies storm drainage facilities needed to serve future land development projects under the buildout condition for the City and its SOI and storm drainage facility upgrades needed to correct existing deficiencies, as well as serving as a reference document for existing storm drainage facilities and their functional characteristics.

In the 2012 CSDMP, new master plan level storm drainage facilities were identified and sized based on the following criteria:

- Detention basins: 100-year 24-hour storm.
- Detention basin pump stations (when needed): provide the desired function and attenuation during the 100-year 24-hour storm.
- Open channels, channel parkways, and greenbelt parkways: 100-year 24-hour storm.
- Underground storm drains: 100-year 24-hour storm in new development areas and in existing development areas served by 100-year 24-hour storm capacity systems. Ten-year 24-hour storm in existing development areas served by 10-year 24-hour storm capacity systems. Ten-year storm for on-site storm drains as set forth per City standards.

Detention basin sizing represented in the 2012 CSDMP accounts for the acreage required to accommodate the storage volumes needed for flood control only, and additional land would be required to incorporate provision for joint-use recreation facilities and differential grading, if such facilities are proposed.

The CSDMP Update (2021) uses different hydrologic modeling methodology from that used in the 2012 CSDMP. The methodology takes street storage and pipe capacity into account in the determination of reported flow rates. Additionally, a re-evaluation of imperviousness, new design precipitation and soils data from updated sources contribute to changes to the design discharges. More accurate topographic data resulted in more accurate drainage area delineations while also affecting assessments of required and available capacity.

On-site storm drainage facilities serving individual future development projects or phases of future development projects are not presented in the CSDMP Update and shall be designed in consideration of the master plan storm drainage infrastructure presented in the CSDMP Update and in conformance with the City Design Standards. Detention basins that have highly restricted discharge rates must be evaluated to ensure that they are designed with adequate capacity for a 100-year storm event of any duration.

The CSDMP Update recommends that consideration be given to flood risks associated with potential runoff from off-site drainage areas. To the extent feasible, it is recommended that overland release paths be identified and preserved.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with hydrology and water quality if it will:

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would:
    - Result in substantial erosion or siltation on- or off-site;
    - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
    - 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
    - Impede or redirect flood flows;
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Less than Significant with Mitigation)

CONSTRUCTION PHASE

The Project would include the construction and subsequent operation of two warehouse buildings that would serve as an annex to the existing Costco Depot located approximately 1.5-miles to the west of the Project and as a Direct Delivery Center. The two buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) total approximately 1,745,052 sf on the 104.46-acre Project site. The smaller Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction

activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction site and staging areas.

The Project would be required to comply with Chapter 11.34 of the Tracy Municipal Code, Stormwater Management and Discharge Control, which outlines City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable. To ensure Project construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), as per Chapter 11.34 of the Tracy Municipal Code, the Project would be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards (Mitigation Measure 3.9-1) before any grading or building permit for the construction Project is issued.

Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency. Upon completion of the Project, the applicant would be required to submit a Notice of Termination to the State Regional Water Quality Control Board to indicate that construction is completed. Mandatory compliance with the SWPPP would ensure that the proposed Project would not violate any water quality standards or waste discharge requirements during construction activities. Therefore, water quality impacts associated with construction activities would be ***less than significant***.

OPERATIONAL PHASE

The long-term operations of the proposed Project (all phases) could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in increased impervious area at the site as a result of the construction and subsequent operation of the two Costco warehouse buildings totaling 1,745,052 sf on the 103-acre Development Site. Normal activities in these developed areas include the use of various automotive petroleum products (i.e. oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Within urban areas, these pollutants are generally called nonpoint source pollutants. The pollutant levels vary based on factors such as time between storm events, volume of storm event, type of uses, and density of people.

Potential impacts include considerations of both stormwater quantity and quality. Long-term water quality impacts could be significant due to development of the proposed Project; however, the Project would be designed to conform with current City of Tracy standard requirements, as discussed below.

As shown in Appendix I, Stormwater Quality Control Plan, of this EIR, the Project site includes seven drainage areas: Area 1 (12.07 acres located along the western boundary of the site), Area 2 (36.50 acres located in the center of the site), Area 3 (2.46 acres located along the northwestern boundary of the site), Area 4 (2.00 acres located along the northern boundary of the site) Area 5 (34.26 acres located in the eastern portion of the site), Area 6 (1.64 acres located along the northern boundary of the site), and Area 7 (5.68 acres located along the eastern boundary of the site). Stormwater runoff from each of the seven drainage areas would be routed to a series of stormwater treatment/detention basins and stormwater bioretention treatment planters, located throughout the Project site, mainly in the proposed landscaped areas and along West Schulte Road. Runoff from the Project will be directed into a master-planned offsite detention basin (called DET LW11). The outflow from DET LW11 will be highly restricted. The Project will meet Hydromodification Management Project requirements by discharging to DET LW11.

The overall design of the drainage infrastructure, including the proposed detention basins, will be required to comply with the Multi-Agency Post Construction Stormwater Standards Manual, which includes existing and enhanced program control measures for controlling the discharge of pollutants to the municipal storm drain system to the maximum extent practicable (MEP). Additionally, the Multi-Agency Post Construction Stormwater Standards Manual requires that the post-construction stormwater runoff flow rate not exceed the estimated pre-project flow rate for the 2-year, 24-hour design storm event. Hydromodification Management can consider runoff reduction resulting from various Low Impact Development (LID) and treatment measures. Additionally, under the Multi-Agency Post Construction Stormwater Standards Manual, applicants must submit a SWQCP that adequately demonstrates how the proposed Project will implement stormwater treatment control measures for review by City staff as part of its development application.

The term LID means a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions. The Project would be required to integrate LID measures throughout the Project site to provide stormwater quality treatment. As such, BMPs would be applied to the proposed development to limit the concentrations of constituents in any site runoff to acceptable levels. Stormwater flows from the Project site would be directed to the proposed stormwater treatment basins, treatment planters, and bioretention areas by a new stormwater conveyance system on the Project site. Stormwater runoff would not be allowed to discharge directly to the existing storm drains in West Schulte Road without first discharging to the bioretention areas. The landscaping plan includes stormwater treatment plantings in the treatment/detention basins. Additionally, erosion and sediment control measures would be implemented during construction.

According to the Multi-Agency Post Construction Stormwater Standards Manual, the Project is considered a Hydromodification Management Project as it would result in the development of one acre or more of impervious surface. Hydromodification Management Projects are required to prepare and submit a Project Stormwater Quality Control Plan that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff

rates, and reduce pollutants in post-development runoff. In particular, the Project Stormwater Quality Control Plan will need to specify BMPs the Project will use and design specifications for selected BMPs. The Project Stormwater Quality Control Plan must be submitted for review and approval by the City of Tracy, as required by Mitigation Measure 3.9-2. Implementation of Mitigation Measure 3.9-2 would require the Project to be consistent with regulatory requirements, which would ensure that the proposed Project would have a ***less than significant*** impact on operation-related water quality.

MITIGATION MEASURE(S)

Mitigation Measure 3.9-1: *Prior to any site disturbance, the Project proponent shall submit a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) to the RWQCB in accordance with the NPDES General Construction Permit requirements. The SWPPP shall be designed to control pollutant discharges utilizing Best Management Practices (BMPs) and technology to reduce erosion and sediments. BMPs may consist of a wide variety of measures taken to reduce pollutants in stormwater runoff from the Project site. Measures shall include temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover) that will be employed to control erosion from disturbed areas. Final selection of BMPs will be subject to approval by the City of Tracy and the RWQCB. The SWPPP will be kept on site during construction activity and will be made available upon request to representatives of the RWQCB.*

Mitigation Measure 3.9-2: *Prior to the issuance of grading permits, the applicant must submit a site-specific Project Stormwater Quality Control Plan to the City of Tracy for review and approval. The site-specific Project Stormwater Quality Control Plan must specify operational BMPs the Project will use and design specifications for selected operational BMPs to ensure the Project's consistency with State and local water quality regulations.*

Impact 3.9-2: The proposed Project has the potential to substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. (Less than Significant)

As previously stated, the Project site is located in the Lower Aquifer of the Tracy Subbasin and the Tracy Subbasin is not designated as a critically overdrafted basin. Much of the groundwater recharge sources within the Lower Aquifer are limited to precipitation and perennial streams. Precipitation in the region is 13.81 inches, most of which falls between November through April. However, only a small portion of this annual rainfall infiltrates the soil and groundwater basin because of the Corcoran Clay underlaying the majority of the Lower Aquifer area. While the proposed Project would reduce the amount of pervious surfaces within the Project site, the Project site is not located within a known recharge area for the Lower Aquifer due to the presence of Corcoran clay under the Project

site[8]. Therefore, development of the Project site would not substantially interfere with groundwater recharge.

The Project site will receive its water from the City of Tracy, which relies on water from the following sources:

- Untreated surface water from the Delta-Mendota Canal (Central Valley Project) that is treated at the City's John Jones Water Treatment Plant;
- Surface water from the Stanislaus River via the South County Water Supply Project delivered by the SSJID;
- Groundwater pumped from the groundwater wells located within the City; and
- Untreated surface water from the Byron Bethany Irrigation District (BBID) pre-1914 rights that is treated at the City's John Jones Water Treatment Plant.

As previously stated, the City's use of groundwater over the last few years has significantly declined, primarily due to the availability of new high-quality surface water supplies. In the future, although the City can sustainably extract up to 9,000 AFY of groundwater on a continuous basis, the City's use of groundwater under normal hydrologic conditions is anticipated to decrease even further, as additional high-quality surface water supplies become available[9]. According to the Water Supply Assessment prepared for the Project, sufficient water supplies exist to meet the Project's build-out water demand as well as all existing and reasonably foreseeable water demands. Additionally, the WSA concludes that the existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the Tracy Subbasin (West Yost Associates, 2020). As such, implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.9-3: The proposed Project would not alter the existing drainage pattern of the site or area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff. (Less than Significant)

Currently, runoff from within the Project site is collected in a system of shallow agricultural and roadside ditches. Additionally, the site is located downstream from an overchute that carries runoff from a large watershed across the Delta-Mendota Canal and is referred to as Offsite Tributary Area 3. The majority of this off-site watershed is south of the California Aqueduct and it drains under Interstate 580 through a large culvert, across the California Aqueduct through an overchute, and under the railroad tracks that are south of the Safeway Distribution Center located west of the site. To the north of the railroad tracks, the runoff turns to the east towards Hansen Road. There is a weir along the south side of an access road that runs on the south side of the Safeway Distribution Center

[8] Tracy Subbasin GSAs. June 2020. Draft Tracy Subbasin Groundwater Sustainability Plan: Chapter 4 [Figure 4-33].
[9] West Yost Associates. 2020. Water Supply Assessment for Tracy Costco Depot [Page 32].

to the north of the flow path towards Hansen Road (also west of the Project site). If the flood levels upstream of Hansen Road reach the level of the weir, some of the runoff from Offsite Tributary Area 3 will drain to the north through a drainage path within the Safeway Distribution Center. According to the Costco Depot Project Planning Submittal Review for Drainage and Flood Management, any flows that drain over the weir to the north will not impact the Project site. Four three-foot-high by six-foot-wide concrete box culverts (CBCs) under Hansen Road convey most of the runoff east, towards an overchute crossing of the Delta-Mendota Canal that drains towards the Project site. There are two other culverts located under Interstate 580 upstream from the minor pipe crossings over the California Aqueduct. These pipe overchutes (estimated to be 18-inch and 36-inch diameter pipes based on imagery) were included in the Project's stormwater evaluation and were determined to not contribute significantly to the flows towards the Project site due to insignificant conveyance towards the box culverts under Hansen Road.

As previously stated, there are two historical drainage flow paths on-site, including one running northeast across Old Schulte Road and the Cordes Ranch Specific Plan, connecting to the WSID Upper Canal and another running northeast across the Project site toward to a 7-foot, six-inch wide by 3-foot, 7-inch high flume in the southwest portion of the Annexation Area. This on-site flume directs stormwater runoff over the Delta Mendota Canal[10]

The proposed Project would alter the existing drainage site through grading and development of two Costco warehouse buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) totaling approximately 1,745,052 sf on the 104.46-acre Project site. Development of the proposed Project, when complete, would result in increased impervious surfaces and result in an incremental reduction in the amount of natural soil surfaces available for infiltration of rainfall and runoff, thereby generating additional runoff during storm events. Additional runoff could contribute to increased erosion, siltation, and pollution, and increase in flood potential, or runoff that could exceed the capacity of the City's drainage system. The Project would be conditioned to control overflow from the site in a manner that approximates how overflows would have occurred in the pre-project condition.

As previously noted, the Project site includes seven drainage areas. Stormwater runoff from each of the seven drainage areas would be routed to a series of on-site stormwater bioretention treatment planters and treatment/detention basins. As noted in the Stormwater Control Plan sheet of the Project Plan Set, the proposed Project would require a stormwater quality treatment volume of 144,625.62 cubic feet and the proposed bioretention area would provide 157,900 cubic feet. Runoff from the site will be collected and discharges into DET LW11 which will detain 100-year runoff and release it within the capacity of the planned stormwater drainage system. Therefore, development of the Project would not result in a substantial increase in the rate of amount of surface runoff in a manner which would result in flooding nor would it create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage system. However, as discussed in Mitigation Measure 3.9-2, the Project's Stormwater Control Plan will require approval by the City of

[10] Delta-Mendota Canal - STA. L-680+00 Overchute Inlet and Flume plan, October 20, 1955.

Tracy to ensure the Project's stormwater drainage system is consistent with State and local water quality regulations.

Construction would include excavation and the overall disturbance of the existing landscape, and would expose bare soil, and could temporarily alter drainage patterns with the potential to cause erosion and sedimentation. Adherence with statewide NPDES Construction General Permit and MS4 Permit construction requirements would ensure erosion or siltation does not occur onsite through implementation of erosion and sediment control BMPs during construction of the proposed Project. These requirements (see Mitigation Measure 3.9-1) would include the implementation of minimum BMPs, typical Source Control BMPs, and typical Treatment Control BMPs for erosion, sediment, non-storm water management and waste management. Adherence to the MS4 Permit and Construction General Permit conditions would ensure that potential water quality degradation associated with the construction of future development projects within the Project area would be minimized. With implementation of erosion and sediment control BMPs, as would be required by the appropriate permitting authorities, and goals, policies, and implementation measures to reduce water quality impacts, construction-related impacts related to alteration of an existing drainage pattern that could result in substantial erosion or siltation on- or off-site from future development projects occurring under the proposed Project would be less than significant.

Additionally, planned urbanization of the Project site would result in changes to land use, natural vegetation, and infiltration characteristics, and would introduce new sources of water pollutants, producing "urban runoff." Pollutants contained within urban runoff may include, but are not limited to sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals that can degrade receiving waters. Urban runoff pollutants may stem from erosion of disturbed areas, deposition of atmospheric particles derived from automobile or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, decomposing plant materials, animal excrement, and spills of toxic materials on surfaces which receive rainfall and generate runoff. New industrial development can generate urban runoff from parking areas, as well as any areas of hazardous materials storage exposed to rainfall.

In order to ensure that stormwater runoff from the Project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, or otherwise degrade water quality, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, the Project will be required to comply with Chapter 11.34 of the Tracy Municipal Code, Stormwater Management and Discharge Control, which outlines the City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

Further, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. Further, General Plan Action SAF-3.2B requires new development to employ LID approaches that conserve natural areas and reduce impervious areas. Therefore, consistency with the General Plan and implementation of these Mitigation Measures would reduce this impact to a less-than-significant level.

Overall, compliance with Federal, State, and local standards and regulations as well as implementation of Mitigation Measures 3.9-1 and 3.9-2 would ensure that that the proposed Project would not result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff and that the impact would be ***less than significant***.

Impact 3.9-4: The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant)

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins and the Tracy Subbasin Groundwater Sustainability Plan are the two guiding documents for water quality and sustainable groundwater management in the Project area.

WATER QUALITY CONTROL PLAN FOR THE SACRAMENTO RIVER AND SAN JOAQUIN RIVER BASINS

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Section 303 of the Clean Water Act requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

In order to ensure that stormwater runoff from the Project site does not adversely increase pollutant levels in adjacent surface waters and stormwater conveyance infrastructure, or otherwise degrade water quality, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a

Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. Additionally, the Project will be required to comply with Chapter 11.34 of the Tracy Municipal Code, Stormwater Management and Discharge Control, which outlines the City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

TRACY SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

As noted previously, each of the GSAs voted to adopt the Final GSP. The City of Tracy City Council adopted the Final GSP at a public hearing held on November 16. The Final GSP was submitted to DWR ahead of the January 31, 2022 deadline. After the GSP is reviewed, the GSAs will submit annual reports to DWR and update the GSP every five years.

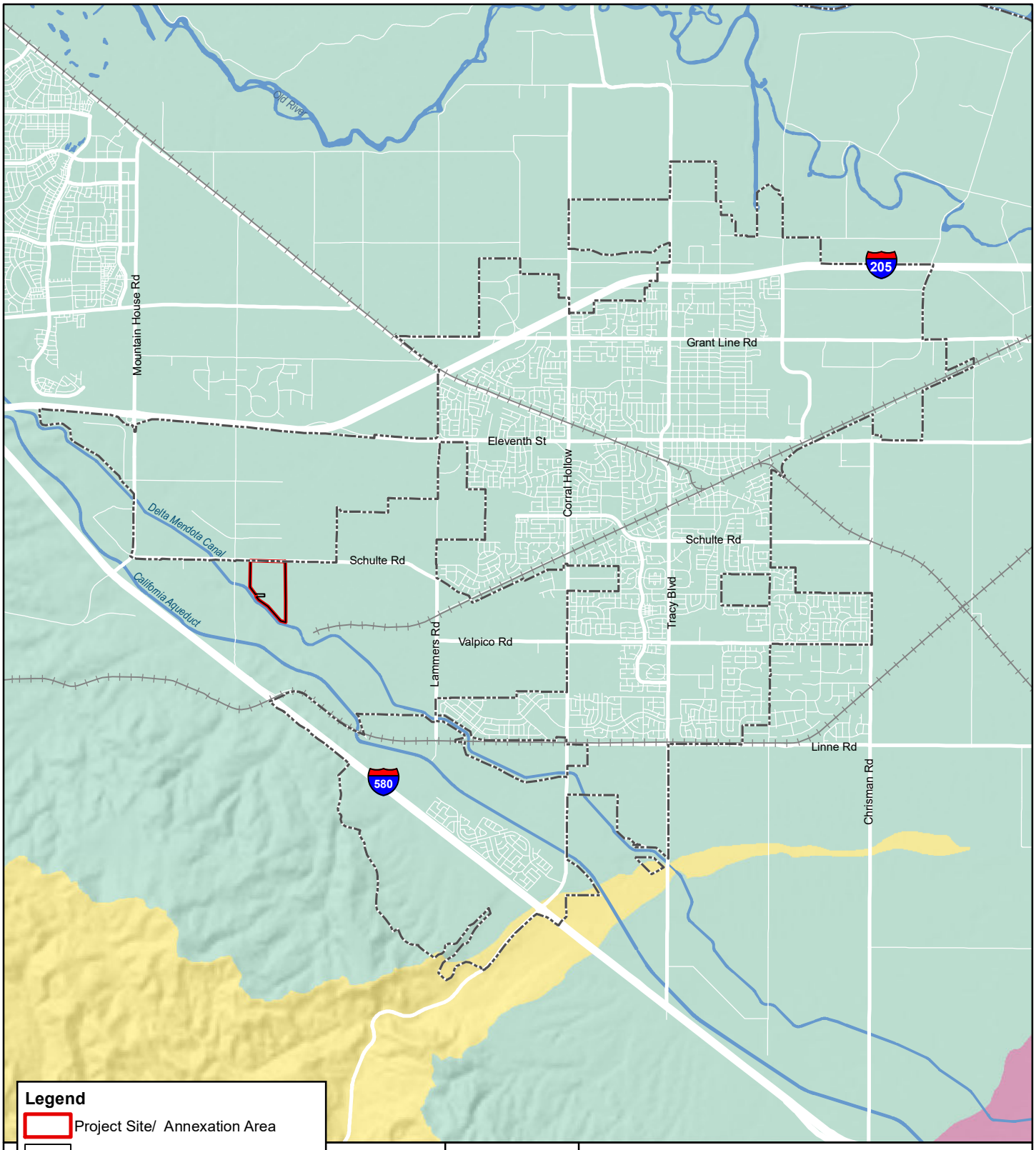
As discussed in Impact 3.9-2, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. The on-site conditions do not allow for significant groundwater recharge, and the Project site is not located within a known recharge area for the Lower Aquifer due to the presence of Corcoran clay under the Project site. As previously stated, the Project's WSA concluded that the existing near-term and long-term reliable supplies of surface water supplies and indigenous groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin.

Additionally, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. The Project will be required to comply with Chapter 11.34 of the Tracy Municipal Code, Stormwater Management and Discharge Control, which outlines the City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

CONCLUSION

Overall, implementation of the proposed Project and adherence to the requirements of Mitigation Measures 3.9-1 and 3.9-2 would have a ***less than significant*** impact related to conflicts with the Basin Plan and the Tracy Subbasin Groundwater Sustainability Plan.

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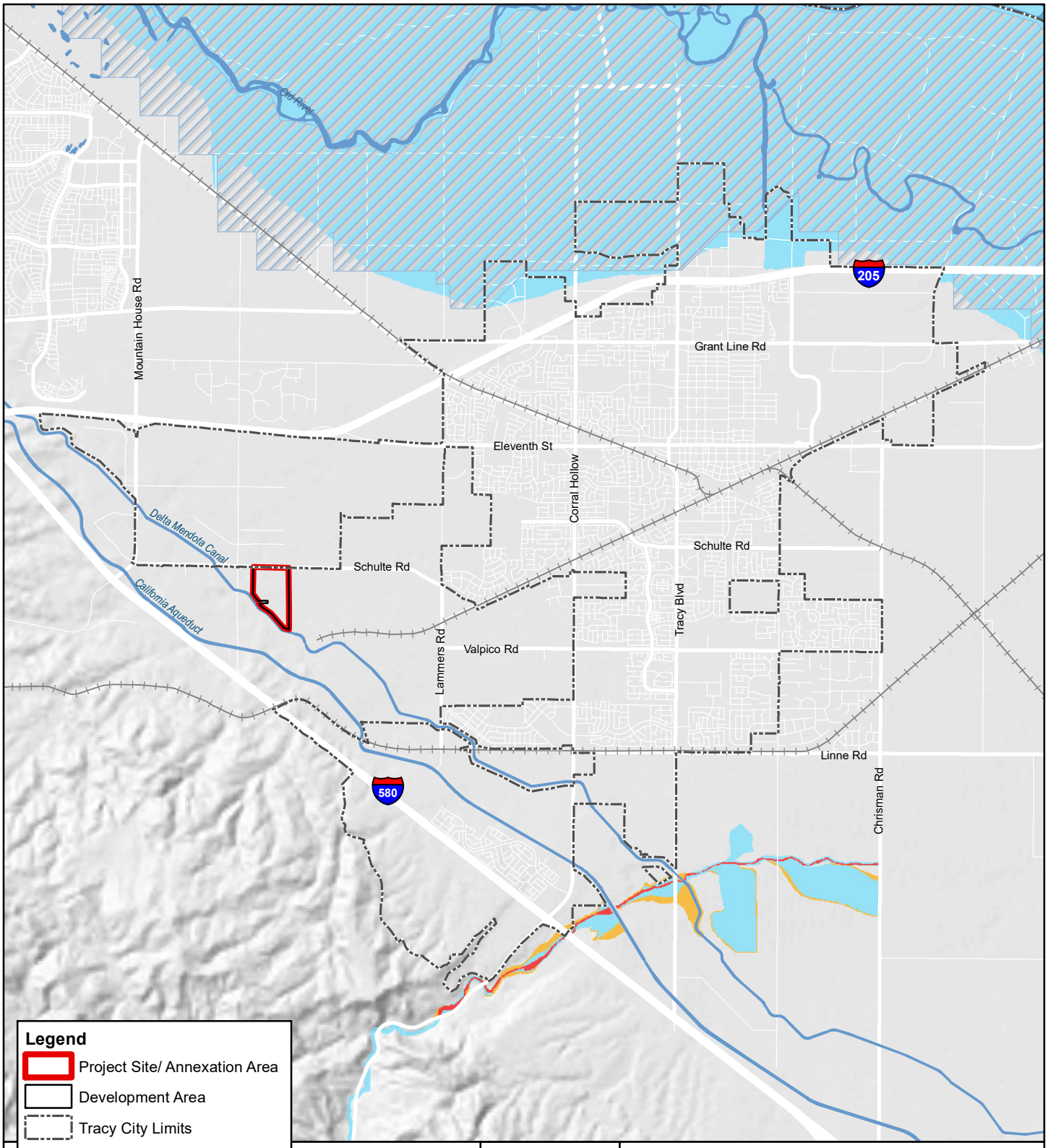
Sources: USGS Watershed Boundary Dataset, HU-10; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 3.9-1. Principal Watershed

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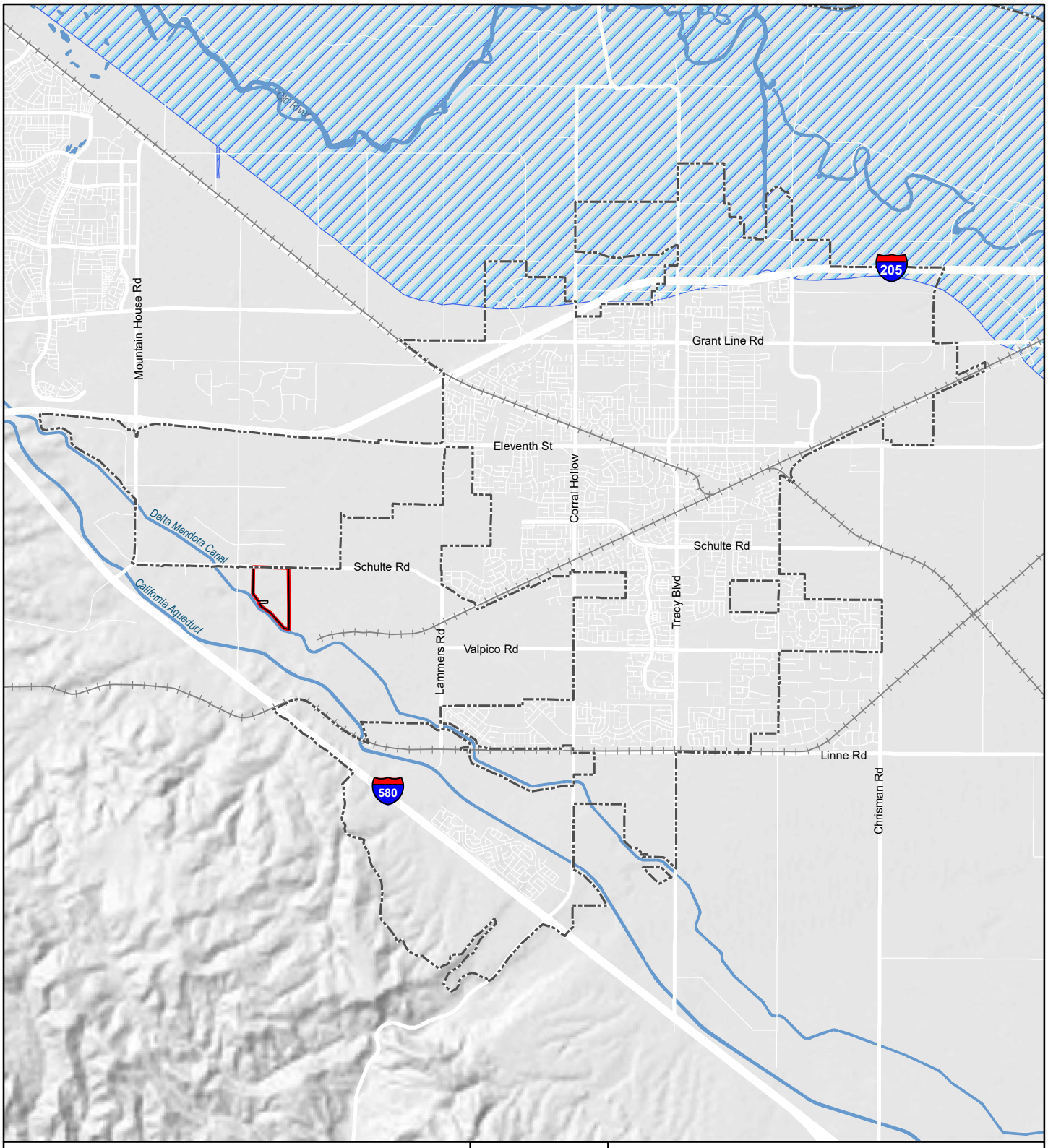
Sources: FEMA; DWR; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 3.9-2. Flood Zones

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Legend

- Project Site/Annexation Area
- Development Area
- Tracy City Limits
- New Melones and San Luis Dam Inundation Area

N

0 ½ 1

Miles

Sources: CalOES; San Joaquin County GIS; ArcGIS Online World Imagery Map Service. Map date: December 11, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 3.9-3. Dam Inundation Areas

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This section describes the existing land uses on the Project site and in the surrounding area, describes the applicable land use regulations, and evaluates the environmental effects of implementation of the proposed Project related to land use. Information in this section is based on the following reference documents: *City of Tracy General Plan 2011*, the *Tracy General Plan 2011 Draft Environmental Impact Report,* the City of Tracy Municipal Code, Title 17 - Zoning (City of Tracy, 2011), and the San Joaquin County General Plan (County of San Joaquin, 1992).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic.

As discussed in the Initial Study prepared for the proposed project, development of the project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned development. Therefore, the proposed project would have ***no impact*** related to established communities. As such, this CEQA topic will not be further discussed.

3.10.1 ENVIRONMENTAL SETTING

EXISTING PHYSICAL ENVIRONMENT

The City of Tracy is located in southern San Joaquin County, approximately 17 miles from Stockton and 25 miles from Modesto. Tracy is located inside a geographic triangle formed by Interstate 205 on the north side of the city, Interstate 5 to the east, and Interstate 580 to the southwest.

Project Site

The Project site is located in the western portion of the City of Tracy Sphere of Influence (SOI) 10-Year Planning Horizon, within the unincorporated area of San Joaquin County. The Project site is adjacent to the City of Tracy city limits to the north of the Project site. The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant agricultural land. The Project site is located within Section 35 of Township 2 South, Range 4 East Mount Diablo Base Meridian (MDBM). Figures 2.0-1 and 2.0-2 found in Chapter 2.0 illustrate the regional location and Project vicinity.

The Project site includes two distinct planning boundaries including the Annexation Area and Development Area. The Annexation Area totals 104.46 acres and includes the whole of the Project, including the proposed 103.0-acre Development Area, and 1.46 acres of land along the Delta Mendota Canal. The Development Area includes 103.0 acres that is intended for the development of up to 1,745,052 square feet (sf) of industrial uses. Figure 2.0-3 shows the aerial view of the Project

site. The Project site is relatively flat with natural gentle slope from southwest to northeast. The Project site topography ranges in elevation from approximately 148 to 187 feet above sea level[1].

GENERAL PLAN

The Project site is designated as Agriculture by the County's General Plan Land Use Map and is zoned as AG-40 Agriculture by the County. The Project site currently has a City of Tracy General Plan land use designation of Industrial (I). Figure 2.0-5 illustrates the current and proposed Tracy General Plan land use within the Project site.

PRE-ZONING

The Project site is currently within the jurisdiction of San Joaquin County. Current county zoning for the Project site is AG-40 Agriculture.

The San Joaquin County Local Agency Formation Commission (LAFCO) will require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning will include the Light Industrial (M-1) zoning designation for Project site. The pre-zoning would go into effect upon annexation into the City of Tracy. Additionally, the Project is requesting a Conditional Use Permit to allow for food processing and canning in the proposed M-1 zoning district. The proposed pre-zoning for the Project site is shown on Figure 2.0-6

SURROUNDING LAND USES

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

3.10.2 REGULATORY SETTING

STATE

Government Code

California Government Code Section 65300 et seq. establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a jurisdiction and of any land outside its boundaries that, in the jurisdiction's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing,

[1] San Joaquin County GIS; ArcGIS Online USGS Topographic Map Service. Map date: November 1, 2019.

conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the jurisdiction's vision for the area. The general plan is a long-range document that typically addresses the physical character of an area over a 20-year period. Although the general plan serves as a blueprint for future development and identifies the overall vision for the planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

The State Zoning Law (California Government Code Section 65800 et seq.) establishes that zoning ordinances, which are laws that define allowable land uses within a specific district, are required to be consistent with the general plan and any applicable specific plans. When amendments to the general plan are made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure the land uses designated in the general plan would also be allowable by the zoning ordinance (Government Code, Section 65860, subd. [c]).

LOCAL

City of Tracy General Plan

As noted above, General Plans are prepared under a mandate from the State of California, which requires each City and County to prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. State law requires General Plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety. In addition to those components required by State law, the Tracy General Plan also contains optional elements, including Community Character and Economic Development.

CITY OF TRACY GENERAL PLAN POLICIES

General Plan policies associated with specific environmental topics (aesthetics, air quality, agriculture, biological resources, cultural resources, geology/soils, hazards, hydrology/water quality, noise, public services/recreation, transportation, utilities, etc.) are discussed in the relevant chapters of this EIR.

City of Tracy Municipal Code, Title 10 – Planning and Zoning

The purpose of Title 10, Planning and Zoning, of the City's Municipal Code is to conserve and stabilize the value of property; to provide adequate open spaces for light and air and to secure safety from fire, panic, and other dangers; to prevent undesirable concentrations of population; to lessen congestion on streets; to facilitate adequate provisions for community utilities and facilities, such as transportation, water, sewage, schools, parks, and other public requirements; to provide the economic and social advantages resulting from an orderly, planned use of land resources; and to encourage conservation and the consolidation of all public resources and services.

ZONING MAP

The Zoning Map identifies zoning districts within the city at the parcel level. The Zoning Map does not designate the Project site because the Project site is not currently located within the city limit.

San Joaquin County General Plan

As noted above, state law requires General Plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety.

The San Joaquin County General Plan is comprehensive, long-range, and general. The San Joaquin County General Plan has the following purposes:

- To identify the community's land use, transportation, environmental, economic and social goals and policies as they relate to land use, conservation and development;
- To enable the County Board of Supervisors and the Planning Commission to establish long-range conservation and development policies;
- To provide a basis for judging whether specific private development proposals and public projects are in harmony with these policies; and
- To inform citizens, developers, decision makers, and other jurisdictions of the policies that will guide development and conservation within the County.

San Joaquin County Municipal Code, Title 9 – Development Title

The purpose of Title 9, Development Title, of the County's Municipal Code is to replace the Planning Title and contain information on zones, development application requirements, and standards and regulations relating to such issues as infrastructure, natural resources, safety, and signs.

San Joaquin Local Agency Formation Commission

The San Joaquin LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Annexation of the Plan Area to the City of Tracy is subject to LAFCo approval, and LAFCo will review the proposed annexation for consistency with LAFCo's Annexation Policies and Procedures. An annexation can only be approved if the applicable Municipal Services Review (MSR) and Plan for Services demonstrate that adequate services can be provided to the annexed area. An MSR, produced as part of a LAFCo's regular review of municipal services, consists of a written statement of its determinations regarding infrastructure, growth and population projections, financing, cost avoidance, rate restructuring, shared facilities, government structure options, management efficiency, and local accountability and governance. An annexation proposal must include a Plan for Services consistent with the applicable MSR and must demonstrate that the City is capable of providing the required services. The City must pre-zone the lands to be annexed and subsequent changes to the General Plan land use designation and zoning are prohibited for two years. The latest Tracy MSR was completed in July 2019.

San Joaquin LAFCo has adopted Policies and Procedures for Annexation and Detachment to and from all agencies within their jurisdiction. LAFCo has also adopted Procedures for the California Environmental Quality Act in accordance with the California Code of Regulations (Chapter 3, Title 14 Section 15022), which requires that each public agency adopt objectives, criteria, and specific procedures for administering its responsibilities under CEQA. Below is a brief discussion of San Joaquin LAFCo Policies and Procedures.

LAFCO CHANGE OF ORGANIZATION POLICIES AND PROCEDURES (INCLUDING ANNEXATIONS AND REORGANIZATIONS) (AS AMENDED 12/14/12)

General Standards for Annexation and Detachment

These standards govern San Joaquin LAFCo determinations regarding annexations and detachments to and from all agencies. The annexations or detachments must be consistent with the general policies set forth in these Policies and Procedures.

1. Spheres and Municipal Service Reviews

   The annexation or detachment must be consistent with the internal planning horizon of the sphere of influence. The land subject to annexation shall normally lie within the first planning increment (5 to 10 year) boundary. The annexation must also consider the applicable Municipal Service Review. An annexation shall be approved only if the Municipal Services Review and the Sphere of Influence Plan demonstrates that adequate services can be provided with the timeframe needed by the inhabitants of the annexed area. If detachment occurs, the sphere will be modified. LAFCo generally will not allow spheres of influence to be amended concurrently with annexation proposals.

   Proposed annexations of land that lie outside of the first planning horizon (5 to 10 year) are presumed to be inconsistent with the Sphere Plan. In such a case the agency must first request LAFCo to consider a sphere amendment pursuant to the above policies. If the amendment is approved, the agency may then proceed with the annexation proposal. A change of organization or reorganization will not be approved solely because an area falls within the SOI of any agency.

   As an exception to the presumed inconsistency mentioned above, Master Plan and Specific Plan developments may span several planning horizons of the sphere of influence. Annexation of the entire Project area may be desirable in order to comprehensively plan and finance infrastructure and provide for amenity-based improvements. In these cases, no amendment of the planning horizon is necessary provided Project phasing is recognized in the Sphere of Influence Plan.

2. Plan for Services

   Every proposal must include a Plan for Services that addresses the items identified in Section 56653 of the Government Code. The Plan for Services must be consistent with the Municipal

Service Review of the Agency. Proponents must demonstrate that the city or special district is capable of meeting the need for services.

3. Contiguity

   Territory proposed to be annexed to a city must be contiguous to the annexing city or district unless specifically allowed by statute. Territory is not contiguous if the only connection is a strip of land more than 300 feet long and less than 200 wide, that width to be exclusive of highways. The boundaries of a proposed annexation or reorganization must not create or result in areas that are difficult to serve.

4. Development within Jurisdiction

   Development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction or within the sphere of influence should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non-open space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency. (Section 56377)

5. Progressive Urban Pattern

   Annexations to agencies providing urban services shall be progressive steps toward filling in the territory designated by the affected agency's adopted sphere of influence. Proposed growth shall be from inner toward outer areas.

6. Piecemeal Annexation Prohibited

   LAFCo requires annexations and detachments to be consistent with the schedule for annexation that is contained in the agency's Sphere of Influence Plan. LAFCo will modify small piece-meal or irregular annexations, to include additional territory in order to promote orderly annexation and logical boundaries, while maintaining a viable proposal. In such cases, detailed development plans may not be required for those additional areas but compliance with CEQA is required.

7. Annexations to Eliminate Islands

   Proposals to annex islands or to otherwise correct illogical distortion of boundaries will normally be approved unless they would violate another provision of these standards. In order to avoid the creation of an island or to encourage the elimination an existing island, detailed development plans may not be required for the remnant areas.

8. Annexations that Create Islands

   An annexation will not be approved if it will result in the creation of an island of unincorporated territory or otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the

application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

9. Substantially Surrounded

   For the purpose of applying the provisions of the Cortese-Knox-Hertzberg Act regarding island annexation without protest hearings (Section 56375.5), the subject territory of an annexation proposal shall be deemed "substantially surrounded" if it is within the sphere of influence of the affected city and two-thirds of its boundary is surrounded by the affected city.

10. Definite and Certain Boundaries

    All boundaries shall be definite and certain and conform to lines of assessment or ownership. The Commission's approval of boundary change proposals containing split parcels will typically be subject to a condition requiring the recordation of a parcel map, lot line adjustment or other instrument to avoid creating remnants of legal lots.

11. Service Requirements

    An annexation shall not be approved merely to facilitate the delivery of one or a few services to the determent of the delivery of a larger number of services or service more basic to public health and welfare.

12. Adverse Impact of Annexation on the Other Agencies

    LAFCo will consider any significant adverse effects upon other service recipients or other agencies serving the area and may condition any approval to mitigate such impacts. Significant adverse effects shall include the effect of proposals that negatively impact special districts' budgets or services or require the continuation of services without the provision of adequate funding. LAFCo will not approve detachments from special districts or annexations that fail to provide adequate mitigation of the adverse impact on the district. LAFCo may determine an appropriate temporary mitigation, if any, and impose that temporary mitigation to the extent it is within its powers. If the needed mitigation is not within LAFCo's authority and approval would, in the opinion of the Commission, seriously impair the District's operation, the Commission may choose to deny the application.

13. District's Proposal to Provide new, different, or Divestiture of a Particular Function or Class of Services

    In addition to the plan for services specified in Section 2 of these Policies and Procedures any application for a new, different, or divestiture of a service shall also include the requirements outlined in Section 56824.12 of the Government Code. Applications for such request will be considered a change of organization and shall follow the requirements of such an application as outlined in the Cortese-Knox-Hertzberg Act and within these policies and procedures. The factors enumerated in Sections 56668 and 56824.14 of the

Government Code shall be considered by the Commission at the time of consideration of the application for such functions.

14. Disadvantaged Unincorporated Communities

Disadvantaged Unincorporated Communities (DUCs) are those territories shown in Exhibit A or as may be shown in a city municipal service review and sphere of influence plan.

The Commission shall not approve an annexation to a city or any territory greater than 10 acres where there exists a disadvantaged unincorporated community (DUC) that is contiguous to the area of proposed annexation, unless a concurrent application to annex all or a portion of the DUC to the subject city has been filed. An application to annex a DUC shall not be required if either of the following applies:

1. A prior application for annexation of the territory has been made in the preceding five years.

2. The Commission finds, based upon written evidence, that a majority of the registered voters within the DUC are opposed to annexation.

Written evidence can be a scientific survey conducted by an academic institution or professional polling company.

15. Protest Procedures

The Commission delegates the conducting authority functions and responsibilities to the LAFCo Executive Officer pursuant to Government Code Section 57000.

City Annexations

1. Annexation of Streets

Annexations shall reflect the logical allocation of streets and rights of way as follows:

- Territory should be included within the annexation to assure that the city reasonably assumes the burden of providing adequate roads to the property to be annexed. LAFCo will require cities to annex streets where adjacent lands that are in the city will generate additional traffic or where the annexation will isolate sections of county road. Cities shall include all contiguous public roads that can be included without fragmenting governmental responsibility by alternating city and county road jurisdiction over short section of the same roadway.

- When a street is a boundary line between two cities the centerline of the street may be used as the boundary or may follow a boundary reached by agreement of the affected cities.

2. Pre-zoning Required

   The Cortese-Knox-Hertzberg Act requires the city to pre-zone territory to be annexed, and prohibits subsequent changes to the General Plan and /or pre-zoning designations for a period of two years after completion of the annexation, unless the city council makes a finding at a public hearing consistent with the provisions of Governments Code Section 56375(e). In instances where LAFCo amends a proposal to include additional territory, the Commission's approval of the annexation will be conditioned upon the pre-zoning of the new territory.

San Joaquin County Multi-Species Habitat Conservation and Open Space Plan

The San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) provides comprehensive measures for compensation and avoidance of impacts on various biological resources, including agricultural land. One of the primary goals of the SJMSCP is to preserve productive agriculture where that goal is compatible with protecting and preserving lands with biological resources and habitat. The SJMSCP is administered by the San Joaquin Council of Governments (SJCOG). The Project applicant will pay fees to SJCOG on a per-acre basis for designated agricultural lands and habitat that are converted to urban use. SJCOG will then use these funds to purchase conservation easements on agricultural and habitat lands in the region. The purchase of conservation easements allows the landowners to retain ownership of the land and continue agricultural operations, essentially preserving such lands in perpetuity. The Project site is designated as Category C/Pay Zone B. This zone consists of "Agricultural Habitat Open Spaces", as described in Chapter 2.2 of the SJMSCP.

The City of Tracy is a permit holder and is responsible for local implementation responsibilities including collection of fees, maintenance of implementing ordinances/resolutions and coordinating with the Joint Powers Authority (JPA) for annual reporting requirements.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on land use and planning if it will:

- 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.

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The proposed Project would not conflict with an applicable land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect. (Less than Significant)

Land use plans, policies, and regulations that were adopted to avoid or mitigate and environmental effect include the San Joaquin County General Plan, San Joaquin County Municipal Code, Tracy General Plan, Tracy Municipal Code, San Joaquin LAFCo Policies and Procedures Document, and SJMSCP. Consistency with each of these plans, policies, and regulations are discussed below.

SAN JOAQUIN COUNTY GENERAL PLAN AND SAN JOAQUIN COUNTY MUNICIPAL CODE

As noted previously, the Project site is currently within San Joaquin County, and within the City of Tracy's SOI. The San Joaquin County General Plan and San Joaquin County Municipal Code are the current governing documents for the Project site.

The Project site is currently within the City of Tracy's SOI 10-Year Planning Horizon. The proposed Project would result in the annexation of the Annexation Area into the City of Tracy. The EIR analyzes the potential annexation of the parcels into the City of Tracy. Annexation of the Project site is consistent with the growth plans for the City of Tracy. The Annexation Area would include the entire 104.46-acre Project site. Upon annexation of the Project site, the San Joaquin County General Plan and San Joaquin County Municipal Code would not apply to the proposed Project.

TRACY GENERAL PLAN

Since general plans often contain numerous policies emphasizing differing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the proposed Project appears to be inconsistent or arguably inconsistent with some individual policies. (*Sequoyah Hills Homeowners Association v. City of Oakland* (1993) 23 Cal.App.4th 704, 719.) The proposed Project is consistent with the key land use issues and development concepts of the Tracy General Plan which provide for logical growth of the City.

The Project site is located adjacent to the city limits, is located within the City's SOI, and will provide for employment-generating uses that will promote employment and economic development. The proposed Project is consistent with the General Plan land use policies that encourage an orderly pattern of development that is contiguous with the city limits, require growth to contribute to a diversified economic base, and balance between employment and housing opportunities.

The Project site currently has a City General Plan land use designation of Industrial. The proposed County General Plan land use changes are shown in Section 2.0, Figure 2.0-5 and proposed City General Plan land use changes are shown in Section 2.0, Figure 2.0-6. The proposed Project is substantially consistent with the Tracy General Plan land use requirements and would have a ***less than significant*** impact relative to the Tracy General Plan. It is noted that consistency with Tracy

General Plan policies and programs related to environmental topics other than land use (aesthetics, agricultural resources, biological resources, cultural resources, geology/soils, hazards, hydrology/water quality, noise, public services, transportation, and utilities) are discussed in the relevant sections of this EIR.

TRACY ZONING CODE

The Tracy Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of San Joaquin County. The San Joaquin County LAFCo will require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning will include the M-1 zoning designation for Project site. The pre-zoning would go into effect upon annexation into the City of Tracy. The proposed pre-zoning for the Project site is shown on Figure 2.0-6.

This proposed zone change would ensure that zoning would be consistent with the General Plan land use designation within the Project site. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Tracy Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to the proposed activities on the Project site. The City reviews all plans (improvement plans, building plans, site plans, etc.) that are submitted for final approval to ensure that they are consistent with the City's zoning ordinance. Approval of the prezoning by the City would ensure that the proposed Project would be consistent with the Zoning Code and will have a ***less than significant*** impact relative to this topic.

SAN JOAQUIN LAFCO

The Project site is currently in an unincorporated portion of San Joaquin County adjacent to the City of Tracy's city limits, within the Tracy SOI (as defined in the Tracy General Plan). The proposed Project requires annexation of 104.46 acres of the Project site into the city limits.

LAFCo is serving as a responsible agency for this EIR pursuant to their *LAFCo Procedures for the California Environmental Quality Act (Adopted June 20, 2007).* When LAFCo is a Responsible Agency under CEQA, in order to approve the annexation, the Commission will certify that it has reviewed the Lead Agency's environmental documents and, if required, adopt findings for approval and statements of overriding considerations in accordance with Sections 15091 and 15903 of the CEQA Guidelines. The City of Tracy will consult LAFCo throughout the entitlement process. The consultation process included sending LAFCo a copy of the Notice of Preparation during the 30-day public review period. LAFCo will also be sent a copy of the Draft EIR during the 45-day public review period and the Final EIR for their use in the annexation process. If the Executive Officer determines that the Draft and Final EIR are adequate for their use, they will prepare, or cause to be prepared, "draft" Findings and Statements, findings for approval, and statements of overriding considerations for LAFCo Commission consideration. If the LAFCo Commission approves the annexation, the

Executive Officer will file a Notice of Determination within five working days after deciding to approve the annexation.

The San Joaquin LAFCo will review the proposed annexation for consistency with the *LAFCo Change of Organization Policies and Procedures (Including Annexations and Reorganizations)*. These policies and procedures govern San Joaquin LAFCo determinations regarding annexations to all agencies. The following policies will be reviewed as part of the annexation process by the San Joaquin LAFCo.

General Standards for Annexation and Detachment

1. Spheres and Municipal Service Reviews:

   The City's SOI map identifies the Project site as within the SOI and within the 10-year a frame for potential development; therefore, a sphere amendment prior to proceeding with the annexation would not be required.

2. Plan for Services:

   The Draft EIR assesses service capacity and demands for these services. There are no service deficiencies noted by the City of Tracy or contained within this EIR that are anticipated to occur after installation of infrastructure. The Annexation Area is within the Tracy SOI as defined by LAFCo and the City and was assumed for industrial development in the City's 2019 Municipal Service Review.

3. Contiguity:

   The Annexation Area is contiguous to the Tracy city limits along the northern boundary of the Project site.

4. Development within Jurisdiction:

   The Annexation Area is within the SOI and lands within the Project site are designated for development under the General Plan. However, agricultural resources are located adjacent to the Annexation Area. There are no Williamson Act contracts on or adjacent to the Project site. However, the Department of Conservation Farmland Mapping and Monitoring Program (FMMP) delineates important farmland adjacent to the Project site and the Project site as prime farmland. The Annexation Area is not designated by the City of Tracy for agricultural uses. However, the San Joaquin County General Plan designated the Project site for agricultural uses. The proposed Project would result in the development of existing open space lands for non-open space uses. The San Joaquin LAFCo does not impose agricultural mitigation requirements for the conversion of agricultural land to urban uses related to annexations or other applications.

   Impacts related to the development of existing open space lands were analyzed in the Tracy General Plan EIR. The General Plan EIR determined that impacts would be significant and

unavoidable. According to the General Plan EIR, although City and County policies would support continued agricultural uses and would require urban development to fund agricultural conservation easements and other programs, no additional feasible mitigation is available.

5. Progressive Urban Pattern:

   The Annexation Area is within the SOI and is designated for urban development under the General Plan. The proposed Project would develop the Annexation Area (adjacent to the Tracy city limits) and would continue the pattern of urbanization.

6. Piecemeal Annexation Prohibited:

   Annexation of the Project site is contiguous with the city limits.

7. Annexations to Eliminate Islands:

   The proposed annexation includes lands contiguous with the current city limits and parcels within the SOI. Parcels proposed for annexation do not involve the elimination of islands.

8. Annexations that Create Islands:

   The proposed annexation includes lands contiguous with the current city limits and parcels within the SOI. Parcels proposed for annexation would not involve the creation of an island of unincorporated territory.

9. Substantially Surrounded:

   As previously stated, the proposed annexation does not involve island annexation. Therefore, this policy is not relevant to the proposed annexation.

10. Definite and Certain Boundaries:

    The proposed annexation boundaries are definite and certain and conform to lines of ownership.

11. Service Requirements:

    The proposed annexation is not merely to facilitate the delivery of one or a few services to the determent of the delivery of a larger number of services or service more basic to public health and welfare. As stated further in the Section 3.12 (Public Services and Recreation) and Section 3.14 (Utilities), the City has adequate service capacity to serve the proposed Project without reducing the adequacy of services elsewhere. Therefore, the proposed annexation is consistent with this policy.

12. Adverse Impact of Annexation on the Other Agencies:

    This EIR includes an assessment of the impacts of the proposed Project and proposed annexation on service agencies. The proposed industrial development and the proposed annexation would not result in any significant, adverse impacts to any of the service agencies such that it would seriously impair operation.

13. District's Proposal to Provide new, different, or Divestiture of a Particular Function or Class of Services:

    This policy relates to proposals for new, different, or divestiture of services, which is not relevant to the proposed annexation.

14. Disadvantaged Unincorporated Communities: The Project area is not within or contiguous to an area designated as a DUC. This policy is not relevant to the proposed annexation.

City Annexations

1. Annexation of Streets:

   The proposed Annexation Area would be annexed into the City, including all proposed streets and roadways.

2. Pre-zoning Required:

   The proposed Project includes the adoption of pre-zoning for the Annexation Area, which will serve to regulate the uses of land and structures within the Project site. The City's pre-zoning will include the M-1 zoning designation for Project site. The proposed Project will be subject to the development standards as described in the Municipal Code. The Municipal Code is proposed to ensure consistency between land use and zoning designations. The proposed annexation is consistent with this policy.

The policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an update to the Tracy *Municipal Service Review* (2019) in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts, with the exception of impacts to agricultural lands. Section 3.2, Agricultural Resources, addresses impacts related to conversion of agricultural land. As such, implementation of the proposed Project will have a ***less than significant*** impact relative to this topic.

SAN JOAQUIN COUNTY MULTI-SPECIES HABITAT CONSERVATION AND OPEN SPACE PLAN

The City's participation in the SJMSCP allows projects within Tracy's jurisdiction to seek coverage under the SJMSCP for impacts to endangered, threatened, and species of special concern. The SJMSCP provides a process to offset impacts to biological resources, conserve open space, maintain the agricultural economy, and allow development within the County. It was also created to obtain the necessary permits from the U.S. Fish and Wildlife Service and the California Department of Fish and Game for the next 50 years in exchange for participating projects paying mitigation fees. Fees are based on the amount and quality of land converted from agricultural or open space uses to urban uses. These fees are used to preserve and create habitats to be managed in perpetuity through the establishment of habitat preserves. Ninety-seven species are covered under the SJMSCP, with the intent to provide comprehensive mitigation pursuant to local, state, and federal regulations for impacts on these species from permitted activities under the Plan. Participation in the SJMSCP confers authorization for activities that result (or may result in) incidental take of covered state-listed species, federally listed species, and other covered.

As described in Section 3.4, Biological Resources, prior to issuance of grading permits, the Project applicant will be required to coordinate with SJCOG and will be responsible for the appropriate coverage, permits, compensatory mitigation or fees, and Project-specific avoidance, minimization, and mitigation measures as defined within the SJMSCP. The proposed Project does not conflict with the implementation of the SJMSCP and has appropriate measures to ensure compliance with payment of mitigation fees. Implementation of the proposed Project would have a ***less than significant*** impact relative to compliance with the SJMSCP.

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This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. However, one impact remains significant and unavoidable.

There were no Notice of Preparation comments received regarding this topic. As discussed in the Initial Study (see Appendix A), the proposed Project is not 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. The closest airport is the Tracy Municipal Airport, located approximately three and a half miles southeast of the Project site. As such, there is ***no impact*** related to these CEQA topics, and these topics are not relevant to the proposed Project and will not be addressed further in this EIR beyond the discussion and analysis in the Initial Study.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.

3.11 NOISE

Noise Unwanted sound.

SEL Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes a +5 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DBA)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less

acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dBA change cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Existing and Surrounding Land Uses

The Project site is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (Figures 2.0-1 and 2.0-2). The Project site is within the Tracy Sphere of Influence (SOI) 10-Year Planning Horizon and is immediately adjacent to the Tracy city limits to the north of the site. The site contains undeveloped land previously used for agricultural purposes.

The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant agricultural land.

In the vicinity of the Project site, surrounding land uses include mostly vacant and agricultural lands, as well as some existing rural residential and industrial uses. Rural residential uses are located directly west of the Project site. Under the proposed Project, these rural residential land uses will remain outside the boundaries of the City of Tracy, within the boundaries of San Joaquin County.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project vicinity, three continuous (24-hour) noise level measurements were conducted near receptors adjacent to the Project site from November 7th to November 8th, 2019. A short-term noise level measurement was conducted at one location on the northwestern Project boundary on November 7th, 2019. The noise measurement locations are shown on Figure 3.11-1. The noise level measurement survey results are provided in Table 3.11-2. Appendix B of Appendix E shows the complete results of the continuous noise monitoring at sites LT-1, LT-2, LT-3, and ST-1.

TABLE 3.11-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

SITE	LOCATION	L_{DN}	AVERAGE MEASURED HOURLY NOISE LEVELS, dB					
			DAYTIME (7AM-10PM)			NIGHTTIME (10PM-7AM)		
			L_{EQ}	L_{50}	L_{MAX}	L_{EQ}	L_{50}	L_{MAX}
CONTINUOUS (24-HOUR) NOISE LEVEL MEASUREMENTS								
LT-1	Western Project Boundary	63	56	52	74	57	54	72
LT-2	Southwestern Project Boundary	56	48	44	61	49	48	60
LT-3	Southeastern Project Boundary	55	47	42	61	49	47	56
SHORT-TERM NOISE LEVEL MEASUREMENTS								
ST-1	Northwestern Project Boundary	N/A	72	58	88	N/A	N/A	N/A

SOURCE: SAXELBY ACOUSTICS, 2019.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 812, 820, and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

EXISTING ROADWAY NOISE LEVELS

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. While the newer FHWA traffic noise model (TNM 3.0) is required for use on federally funded highway projects, the FHWA RD-77-108 model is still widely used in the industry and recognized as an accurate screening tool, typically resulting in slight over-predictions in traffic noise levels at typical receptor setback distances.

Traffic volumes for existing conditions were obtained from the traffic data prepared for the proposed Project (Kimley Horn, 2021). Vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Table 3.11-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix C of Appendix E.

TABLE 3.11-3: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

ROADWAY	*SEGMENT*	*EXTERIOR TRAFFIC NOISE LEVEL, DB L_{DN}*
Mountain House Pkwy.	North of I-205	65.0
Mountain House Pkwy.	South of I-205	67.2
Hansen Rd.	South of Old Schulte Rd.	47.4
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	51.6
Old Schulte Rd.	West of S. Lammers Rd.	57.1
S. Lammers Rd.	North of Old Schulte Rd.	66.3
S. Lammers Rd.	South of Old Schulte Rd.	66.4
S. Lammers Rd.	South of Western Pacific Wy.	64.2
S. Lammers Rd.	South of Valpico Rd.	55.9

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS, 2021.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

LOCAL

The Project site is located within an unincorporated area of San Joaquin County and requires annexation into the City of Tracy. The City of Tracy addresses noise in the Noise Element of the General Plan and in the Tracy Municipal Code.

City of Tracy General Plan

The Noise Element establishes standards to provide compatible noise environments for new development or redevelopment projects and to control excessive noise exposure of existing developments. Goals, policies, actions, and standards provided in the Noise Element provide the basis for decision-making on determining land use compatibility with noise sources associated with the proposed Project, as well as mitigation requirements. The following objectives and policies are specfically relavaent to the prposed project:

Objective N-1.2 Control sources of excessive noise.

Policies

P2. Mitigation measures shall be required for new development projects that exceed the following criteria:

- Cause the Ldn at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the Ldn at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance Limits.

P4. All construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours or 7:00 a.m. to 7:00 p.m. In addition, the following construction noise control measures shall be included as requirements at construction sites to minimize construction noise impacts:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

Figure 9-3 of the Noise Element shows a summary of different land uses in the City and their associated acceptable and unacceptable noise levels. These guidelines state that environments with noise levels ranging up to 60 dBA Ldn are considered "normally acceptable" for residential land uses ; environments with ambient noise levels greater than 60 dBA and up to 75 dBA Ldn are considered "conditionally acceptable" for residential uses.

City of Tracy Municipal Code

Title 4, Chapter 12, Article 9 of the Tracy Municipal Code also contains guidance with the intent to control noise and vibration to promote and maintain the health, safety, and welfare of its residents. Section 4.12.720 of the Municipal Code generally prohibits certain activities that have the potential to result in loud, excessive, or unreasonable noise levels. According to the general sound level limits for residential districts, no person shall cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced to exceed 55 dBA for any one-hour average period. Specific activities enumerated in the municipal code that could potentially pertain to the proposed project include minor maintenance to or improvement of real property. This limitation prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays. The noise

ordinance also specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam or electric hoist, parking lot cleaning equipment, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m on weekends and federal holidays.

San Joaquin County General Plan

Table PHS-2 of the San Joaquin County 2035 General Plan establishes an acceptable exterior noise level standard of 65 dBA L_{dn} and an interior noise level standard of 45 dBA L_{dn} for residential uses exposed to transportation noise sources.

For non-transportation noise sources, the General Plan establishes the standards for sensitive uses. See Table 3.11-4.

TABLE 3.11-4: SAN JOAQUIN COUNTY GENERAL PLAN NON-TRANSPORTATION NOISE STANDARDS[1,2]

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREA[3] DAYTIME (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[3] NIGHTTIME (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: THESE STANDARDS APPLY TO NEW OR EXISTING RESIDENTIAL AREAS AFFECTED BY NEW OR EXISTING NON-TRANSPORTATION SOURCES.

[1] WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

[2] REFER TO MOUNTAIN HOUSE MASTER PLAN, TABLE 11.2, EXTERIOR NOISE STANDARDS FOR NOISE-SENSITIVE USES AFFECTED BY NON- TRANSPORTATION NOISE SOURCES, PAGE 11.12, FOR MOUNTAIN HOUSE NOISE STANDARDS.

[3] EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

SOURCE: SAN JOAQUIN COUNTY GENERAL PLAN, TABLE PHS-1.

San Joaquin County Development Regulations

The San Joaquin County Development Regulations, Section 9-1025.9(b), establish land use noise level standards for new non-transportation or "stationary" noise sources, as outlined below that would be applicable to the proposed Project.

9-1025.9(B) – STATIONARY NOISE SOURCES.

Proposed projects that will create new stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 9-1025.9(b), Part II (Table 3.11-5).

TABLE 3.11-5: STATIONARY NOISE SOURCES

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: [1]WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

[2]EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

(ORD. 3675; ORD. 4036 § 2(PART), 1999)

SOURCE: SAN JOAQUIN COUNTY DEVELOPMENT REGULATIONS.

VIBRATION STANDARDS

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Tracy does not have specific policies pertaining to vibration levels. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.11-6 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 3.11-6: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

P.P.V.		*HUMAN REACTION*	*EFFECT ON BUILDINGS*
MM/SEC.	*IN./SEC.*		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings

P.P.V.		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- Generation of a 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; and/or
- Generation of excessive groundborne vibration or groundborne noise levels.

Determination of a Significant Increase in Noise Levels

TEMPORARY CONSTRUCTION NOISE IMPACTS

With temporary noise impacts (construction), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Per the City of Tracy General Plan noise Policy P4, "All construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours or 7:00 a.m. to 7:00 p.m. Per the City of Tracy noise ordinance, construction activities operating between 10 p.m. and 7 a.m. that create a noise disturbance at the property boundary of a residence are prohibited. The more restrictive General Plan hours of 7:00 a.m. to 7:00 p.m. hours will be used in this analysis.

For short-term noise associated with project construction, Saxelby Acoustics recommends use of the Caltrans increase criteria of 12 dBA (Caltrans Traffic Noise Protocol, 2020) to determine whether the construction noise constitutes a significant increase under CEQA. This threshold is applied by comparing the predicted maximum construction noise levels to the existing maximum measured ambient noise levels at the nearest sensitive receptors. If the increase is less than 12 dBA the impact is considered less than significant.

OPERATIONAL IMPACTS

The noise standards applicable to the proposed Project include the relevant portions of the City of Tracy and County of San Joaquin General Plan and Municipal Code described in the Regulatory Setting section above (Section 3.11.2), and the following standards. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses.

The potential increase in traffic noise from the proposed Project is a factor in determining significance. Per noise Policy P2, the following test of significance would be applied to operational traffic noise increases:

- Cause the Ldn at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the Ldn at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance Limits.

It should be noted that 60 dBA Ldn is the City's "normally acceptable" noise standard.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: The proposed Project has the potential to generate 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. (Significant and Unavoidable)

Traffic Noise Environment at Off-Site Receptors With and Without the Project

Implementation of the proposed Project would result in an increase in daily traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Tables 3.11-7 and 3.11-8 show the predicted traffic noise level increases on the local roadway network for Background, Background Plus Project, Cumulative No Project, and Cumulative Plus Project conditions. Appendix C of Appendix E provides the complete inputs and results of the FHWA traffic noise modeling. The Cumulative traffic conditions are dictated by the traffic analysis completed for the Project (Kimley Horn, 2022).

TABLE 3.11-7: BACKGROUND AND BACKGROUND PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS				
			BACK.	BACK. + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
Mountain House Pkwy.	North of I-205	165	65.0	65.1	0.1	+ 3.0 dB	No
Mountain House Pkwy.	South of I-205	120	67.2	68.3	1.1	+ 3.0 dB	No
Hansen Rd.	South of Old Schulte Rd.	225	47.4	47.4	0.0	+ 5.0 dB	No
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	840	51.6	55.2	3.6	+ 5.0 dB	No
Old Schulte Rd.	West of S. Lammers Rd.	600	57.1	57.5	0.4	+ 5.0 dB	No
S. Lammers Rd.	North of Old Schulte Rd.	85	66.3	66.4	0.1	+ 3.0 dB	No
S. Lammers Rd.	South of Old Schulte Rd.	100	66.4	66.6	0.2	+ 3.0 dB	No
S. Lammers Rd.	South of Western Pacific Wy.	110	64.2	64.5	0.3	+ 3.0 dB	No
S. Lammers Rd.	South of Valpico Rd.	115	55.9	56.0	0.1	+ 5.0 dB	No

NOTE: PER NOISE POLICY P2, MITIGATION MEASURES SHALL BE REQUIRED FOR NEW DEVELOPMENT PROJECTS THAT EXCEED THE FOLLOWING CRITERIA:

- *CAUSE THE LDN AT NOISE-SENSITIVE USES TO INCREASE BY 3 DB OR MORE AND EXCEED THE "NORMALLY ACCEPTABLE" LEVEL.*
- *CAUSE THE LDN AT NOISE-SENSITIVE USES TO INCREASE 5 DB OR MORE AND REMAIN "NORMALLY ACCEPTABLE."*
- *CAUSE NEW NOISE LEVELS TO EXCEED THE CITY OF TRACY NOISE ORDINANCE LIMITS.*

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2021.

TABLE 3.11-8: CUMULATIVE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS				
			CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
Mountain House Pkwy.	North of I-205	165	67.3	67.4	0.1	+ 3.0 dB	No
Mountain House Pkwy.	South of I-205	120	71.4	71.5	0.2	+ 3.0 dB	No
Hansen Rd.	South of Old Schulte Rd.	225	56.5	56.7	0.2	+ 5.0 dB	No
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	840	55.2	56.4	1.1	+ 5.0 dB	No
Old Schulte Rd.	West of S. Lammers Rd.	600	57.4	57.7	0.3	+ 5.0 dB	No
S. Lammers Rd.	North of Old Schulte Rd.	85	71.1	71.2	0.0	+ 3.0 dB	No
S. Lammers Rd.	South of Old Schulte Rd.	100	70.3	70.4	0.1	+ 3.0 dB	No
S. Lammers Rd.	South of Western Pacific Wy.	110	69.7	69.7	0.1	+ 3.0 dB	No
S. Lammers Rd.	South of Valpico Rd.	115	69.1	69.1	0.0	+ 3.0 dB	No

NOTE: PER NOISE POLICY P2, MITIGATION MEASURES SHALL BE REQUIRED FOR NEW DEVELOPMENT PROJECTS THAT EXCEED THE FOLLOWING CRITERIA:

- *CAUSE THE LDN AT NOISE-SENSITIVE USES TO INCREASE BY 3 DB OR MORE AND EXCEED THE "NORMALLY ACCEPTABLE" LEVEL.*
- *CAUSE THE LDN AT NOISE-SENSITIVE USES TO INCREASE 5 DB OR MORE AND REMAIN "NORMALLY ACCEPTABLE."*
- *CAUSE NEW NOISE LEVELS TO EXCEED THE CITY OF TRACY NOISE ORDINANCE LIMITS.*

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS. 2021.

Project-Generated Non-Transportation Noise Environment at Off-Site Receptors

The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the proposed loading docks. In order to evaluate these noise sources at

the nearest sensitive receptors, Saxelby Acoustics used the SoundPLAN noise prediction model to generate noise level predictions according to the assumptions outlined below.

The SoundPLAN noise prediction model was used to plot noise contours and to calculate noise levels at the sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors).

It should be noted that sound power is a measure of the total acoustic energy emitted by a noise source and is irrespective of distance from the source. Sound power is input into the SoundPLAN model as a representation of the total acoustic energy emitted by a specific noise source. Sound power levels in this report are A-weighted decibel levels, noted as "dBA, PWL" per industry standards. The model then corrects for the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) which affect sound propagation from the noise source to the receiver location.

LOADING DOCK NOISE GENERATION

To determine typical noise levels associated with the proposed loading docks, noise level measurement data from a United Natural Foods, Inc. (UNFI) warehouse was used. The UNFI facility is an approximately 400,000 s.f. facility located in Rocklin, California and includes a large cold storage facility for distribution of groceries. The noise level measurements were conducted at a distance of 200 feet from the center of the loading dock and circulation area. Activities during the peak hour of loading dock activities included truck arrival/departures, truck idling, truck backing, air brake release, and operation of truck-mounted refrigeration units.

The results of the UNFI noise measurements indicate that a busy hour generated an average noise level of 61 dBA L_{eq} at a distance of 200 feet from the center of the loading dock truck maneuvering lanes. This analysis assumes that the proposed loading docks would operate at this level of activity in a busy hour during either daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.). The data from the UNFI facility was scaled up to represent the larger proposed project. It should be noted that the collected noise measurement data occurred during the week of Thanksgiving which is one of the busiest times of year for the business and included refrigeration trucks.

PARKING LOT CIRCULATION

Based upon the Project traffic study, the peak hour trips for the proposed Project would be 276 autos and 125 tractor-trailers. Based upon noise measurements conducted of vehicle movements in parking lots, the sound exposure level (SEL) for a single passenger vehicle is 71 dBA at a distance of 50 feet while the SEL of a tractor-trailer is 85 dBA at the same distance.

Saxelby Acoustics used the SoundPLAN noise model to calculate noise levels at the nearest sensitive receptors. Input data included the loading dock and parking lot noise generation, as discussed

above. Figure 3.11-2 shows the results of this analysis for the site layout in terms of the nighttime (10:00 p.m. to 7:00 a.m.) peak hour average (L_{eq}). Daytime (7:00 a.m. to 10:00 p.m.) noise levels are expected to be similar to the nighttime scenario. Figure 3.11-3 shows the results of this analysis in terms of the peak hour maximum noise levels (L_{max}). Due to the nature of loading dock operation and parking lot circulation, the maximum noise levels are the same for both daytime and nighttime.

Construction Noise Environment

During the construction of the proposed Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-9, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3.11-9: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	*MAXIMUM LEVEL, DB AT 50 FEET*
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Conclusions

INCREASED TRAFFIC NOISE LEVELS AT EXISTING RECEPTORS

The City of Tracy guidelines specify criteria to determine the significance of traffic noise impacts. Where existing traffic noise levels are less than 60 dB L_{dn}, at the outdoor activity areas of noise-sensitive uses, a +5.0 dB L_{dn} increase in roadway noise levels will be considered significant. As noted previously, mitigation measures shall be required for new development projects that exceed the following criteria:

- Cause the L_{dn} at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the L_{dn} at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance Limits.

According to Table 3.11-7 and Table 3.11-8, the maximum increase is traffic noise at the nearest sensitive receptor is predicted to be 3.6 dBA. At this location (Old Schulte Road from Hansen Road

to Bud Lyons Way, the existing ambient noise level is predicted to be approximately 51.6 dBA L_{dn}. The predicted noise level at this location as a result of the Project would be 55.2 dBA L_{dn}. As such, this increase in noise as a result of the Project is below the +5.0 dB L_{dn} threshold. All other project increases are expected to be less than 1.1 dBA.

Therefore, impacts resulting at existing receptors from increased traffic noise would be considered ***less-than-significant***.

OPERATIONAL NOISE LEVELS AT EXISTING RECEPTORS

Operational noise levels at the existing residential receptors to the west of the site resulting from the proposed Project are quantified and shown in Figures 3.11-2 and 3.11-3. Figure 3.11-2 shows the average (L_{eq}) Project noise contours and Figure 3.11-3 shows the maximum (L_{max}) Project noise contours.

Based upon Figure 3.11-2, the proposed Project would generate peak hour noise levels of up to 54 dBA L_{eq} at the outdoor activity areas of adjacent residential uses. The adjacent residential uses would remain outside of the City of Tracy limits, so noise generated by the proposed Project at these locations would be subject to the San Joaquin County noise criteria. The predicted noise levels of up to 54 dBA L_{eq} would exceed the San Joaquin County non-transportation noise limits of 50 dBA L_{eq} during daytime (7:00 a.m. to 10:00 p.m.) hours and 45 dBA L_{eq} during nighttime (10:00 p.m. to 7:00 a.m.) hours.

Based upon Figure 3.11-3, the proposed Project is predicted to generate maximum noise levels of approximately 68 dBA L_{max} at the residential uses to the west of the Project site. This would comply with the San Joaquin County maximum noise level limits of 70 dBA L_{max} during daytime hours but would exceed the County's 65 dBA L_{max} standard during nighttime hours.

In order to reduce project-related noise levels, Saxelby Acoustics used the Sound PLAN noise model to evaluate the use of noise barriers for reducing project-related noise levels at the adjacent residential uses. Figure 3.11-4 shows the exterior noise levels in terms of the peak hour average (L_{eq}) noise level, with a 20-foot-tall acoustically absorbent screen wall located along the western boundary of the Project site. The resulting noise levels of up to 50 dBA L_{eq} would comply with the County's 50 dBA L_{eq} daytime standard but would still exceed the County's 45 dBA L_{eq} nighttime noise standard. As such, a sound wall would not result in noise levels at or below the County's nighttime noise standard. Therefore, the County's exterior noise standards would still be exceeded and this would be a ***significant and unavoidable*** impact.

CONSTRUCTION NOISE

During the construction phases of the proposed Project, noise from construction activities would add to the noise environment in the immediate Project vicinity. Based upon the Table 3.11-9 data, the proposed Project is predicted to generate construction noise levels of up to 90 dBA Lmax at a distance of 50 feet. The closest sensitive receptor to the Project site is approximately 1,300 feet from the center of the Project construction area. At this distance, construction noise would

attenuate to approximately 62 dBA Lmax. Existing ambient noise levels as measured at Site LT-2 were measured to average 61 dBA Lmax in the vicinity of the nearest noise sensitive receptors. This increase of 1 dBA would be less than the 12 dBA test of significance for temporary construction noise impacts.

Compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in Mitigation Measure 3.11-1), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, with implementation of Mitigation Measure 3.11-1, temporary construction noise impacts would be ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:*

- *All construction equipment powered by internal combustion engines shall be muffled with manufacturer's mufflers and maintained to not exceed 84 dBA at 50 feet.*
- *Quiet construction equipment, particularly air compressors, shall be selected whenever possible. Air compressors should not exceed 78 dBA at 50 feet.*
- *All stationary noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling, defined as idling for more than 10 seconds while waiting or not using a vehicle, of internal combustion engines shall be prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*
- *Construction shall be limited to 7:00 a.m. to 7:00 p.m. per General Plan Policy P4.*

These requirements shall be noted on the Project improvement plans.

Mitigation Measure 3.11-2: *To reduce potential operational noise impacts during Project operation, a minimum 6-foot tall sound wall and/or landscaped berm shall be constructed along the western Project boundary. Noise barrier walls shall be constructed of concrete masonry units, earthen berms, or any combination of these materials. Should the adjacent west residential use be vacated, demolished, and rezoned to industrial before the proposed Project is completed, a sound wall shall not be required. These requirements shall be included in the improvements plans prior to their approval by the City's Public Works Department.*

Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

The primary vibration-generating activities would be grading, utilities placement, and parking lot construction. Table 3.11-10 shows the typical vibration levels produced by construction equipment.

TABLE 3.11-10: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	P.P.V. AT 25 FEET (INCHES/SECOND)	P.P.V. AT 50 FEET (INCHES/SECOND)	P.P.V. AT 100 FEET (INCHES/SECOND)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.

With the exception of vibratory compactors, the Table 3.11-10 data indicate that construction vibration levels anticipated for the proposed Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Structures that could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 60 feet, or further, from the Project site. Therefore, this is a ***less-than-significant*** impact and no mitigation is required.

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Tracy Costco Depot

City of Tracy, California

Figure 3.11-1

Noise Measurement Sites

Legend

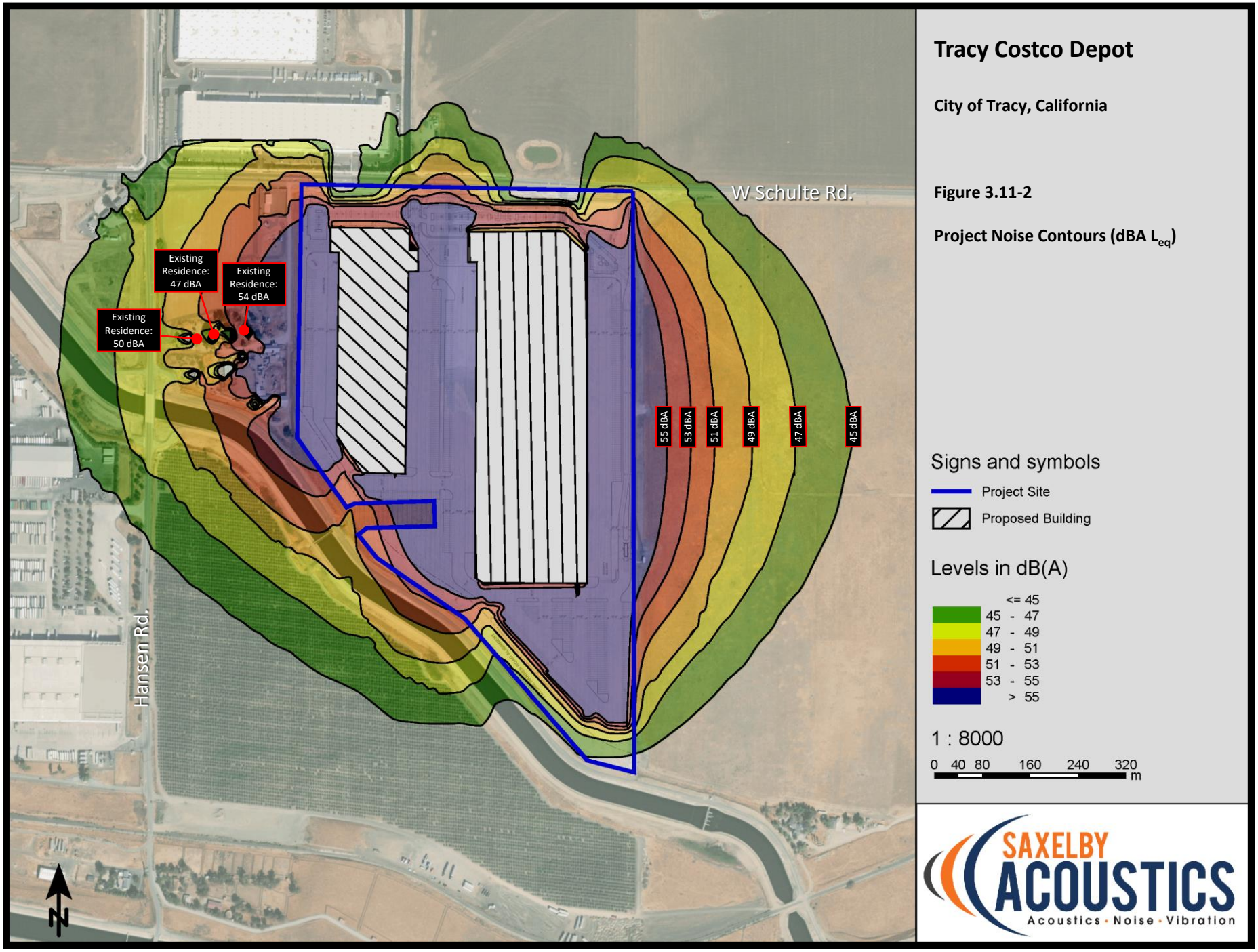
- Project Site
- Noise Measurement Site - Long Term
- Noise Measurement Site - Short Term

0 m 100 m 200 m 300 m

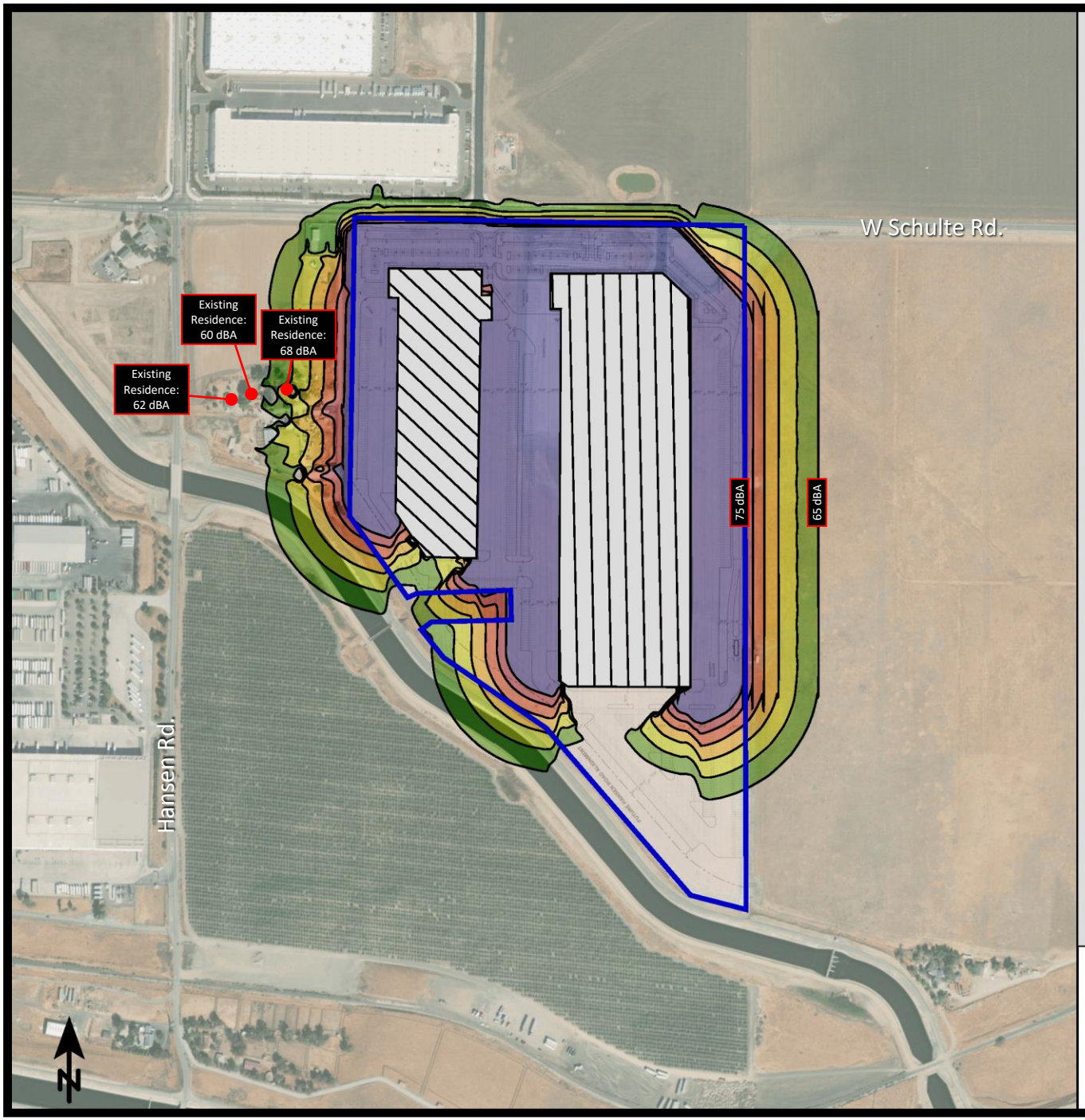
Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 07/14/2021

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W Schulte Rd.
Hansen Rd.
Existing Residence: 47 dBA
Existing Residence: 54 dBA
Existing Residence: 50 dBA
55 dBA
53 dBA
51 dBA
49 dBA
47 dBA
45 dBA
N
Tracy Costco Depot
City of Tracy, California
Figure 3.11-2
Project Noise Contours (dBA L_{eq})
Signs and symbols
Project Site
Proposed Building
Levels in dB(A)
<= 45
45 - 47
47 - 49
49 - 51
51 - 53
53 - 55
> 55
1 : 8000
0 40 80 160 240 320
m
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Tracy Costco Depot

City of Tracy, California

Figure 3.11-3

Project Noise Contours (dBA L_{max})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

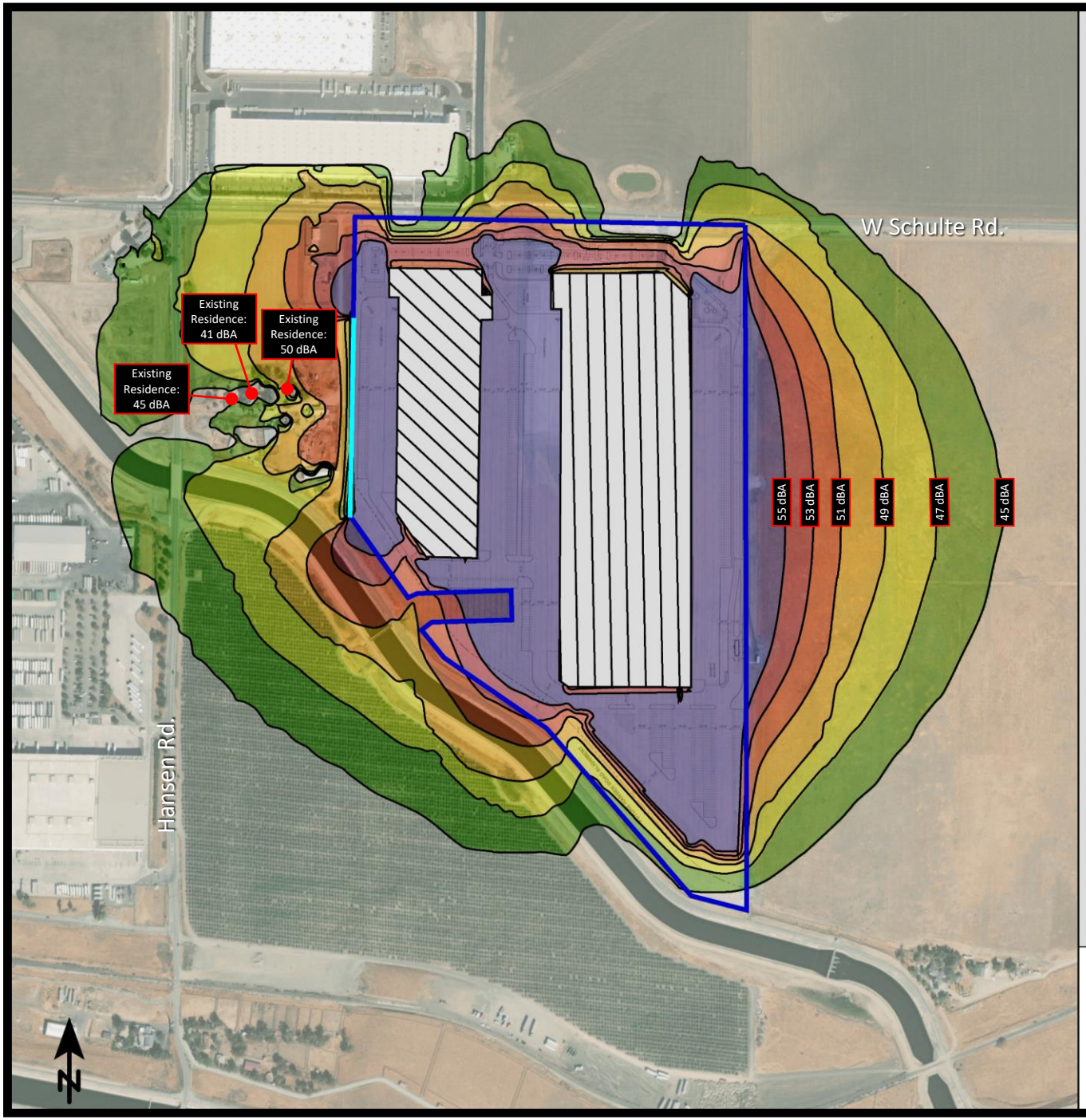
- <= 65
- 65 - 67
- 67 - 69
- 69 - 71
- 71 - 73
- 73 - 75
- > 75

1 : 8000

0 40 80 160 240 320 m

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Tracy Costco Depot

City of Tracy, California

Figure 3.11-4

Project Noise Contours with 20-Foot Wall (dBA L_{eq})

Signs and symbols

- Project Site
- 20-Foot Wall
- Proposed Building

Levels in dB(A)

- <= 45
- 45 - 47
- 47 - 49
- 49 - 51
- 51 - 53
- 53 - 55
- > 55

1 : 8000

0 40 80 160 240 320 m

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This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, schools, and other public facilities for the proposed Project. The information in this section is primarily derived from the: *City of Tracy General Plan* (City of Tracy, 2011), *City of Tracy General Plan EIR* (City of Tracy, 2011), *2019 Tracy Police Department Annual Report* (City of Tracy, 2020), *California Department of Finance (DOF) Report E-1 Population Estimates for Cities, Counties, and the State* (DOF, May 2020), *South County Fire Authority – Fire Department Standards of Cover Study* (CityGate Associates, May 2017), *Citywide Public Safety Master Plan* (City of Tracy, March 2013), *Citywide Public Facilities Master Plan* (City of Tracy, January 2013), and *Tracy Municipal Services Review* (City of Tracy, July 2019).

No comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Full comments received regarding other comments are included in Appendix A.

As discussed in the Initial Study (see Appendix A), impacts associated with the provision of new or physically altered park and recreation facilities, or the need for new or physically altered park and recreation facilities would be ***less than significant***. As such, these CEQA topics are not relevant to the Project and will not be addressed further.

3.12.1 ENVIRONMENTAL SETTING

CITY OF TRACY SERVICES

The City of Tracy receives funds for the provision of public services through development fees, property taxes, and connection and usage fees. As land is developed within the City and annexed into the City of Tracy, these fees are imposed and collected. The City of Tracy reviews these fee structures on an annual basis to ensure that they provide adequate financing to cover the provision of city services. The City's Community Development, Public Works, and Finance Departments are responsible for continual oversight to ensure that the fee structures are adequate. The City reviews the referenced fees and user charges on an annual basis to determine the correct level of adjustment required to reverse any deficits and assure funding for needed infrastructure going forward. The City intends to include discussion of these fees and charges as part of the annual budget hearings.

City of Tracy Police Department

The Tracy Police Department (TPD) provides police protection services to the City's residents and businesses, currently serving a population of approximately 95,931. The TPD would provide police services to the Project, upon annexation of the Project Site to the City. The TPD operates out of its headquarters at 1000 Civic Center Drive; there are no satellite offices. Currently the TPD has 96 full-time sworn officers, 59 full-time non-sworn personnel, five part-time reserve officers, and seven part-time professional employees.

The TPD classifies calls for service as priority 1, priority 2, or priority 3. Priority 1 calls are calls where a critical "in-progress" threat is posed to life or property. Priority 2 calls are calls for serious crime against persons and property without imminent threat. Priority 3 calls are for service where

no emergency or serious problem is involved. The average response times by priority call for 2017, 2018, and 2019 are shown in Table 3.12-1. While the TPD has reduced response times for all priority call categories.

TABLE 3.12-1: TRACY POLICE DEPARTMENT CALL RESPONSE TIMES (2017-2019)

CALL PRIORITY	*2017*	*2018*	*2019*
Priority 1 Call	7:32	6:52	6:36
Priority 2 Call	17:44	16:59	15:01
Priority 3 Call	33:13	34:06	29:37

SOURCE: TPD 2019 ANNUAL REPORT.

TPD reports its monthly crime statistics to the Federal Bureau of Investigations (FBI) through the Uniform Crime Reporting Program (UCR). For reporting purposes, criminal offenses are divided into two major groups: Part I offenses and Part II offenses. Part I offenses are known as Index crimes and are considered quite serious, tend to be reported more reliably than others, and the reports are taken directly by the police. Part II offenses are less serious in nature and are tracked, however; only arrest information for these crimes is reported to the Federal Bureau of Investigations.

In Part I, the UCR indexes reported incidents of index crimes which are broken into two categories: violent and property crimes. Aggravated assault, forcible rape, murder, and robbery are classified as violent while arson, burglary, larceny-theft, and motor vehicle theft are classified as property crimes. Table 3.12-2 shows the Part I crime statistics for the City of Tracy between 2017 and 2019; it is noted that 2019 is the most recent data available.

TABLE 3.12-2: TRACY POLICE DEPARTMENT CRIME STATISTICS (2017-2019)

CATEGORY/CRIME	*2017*	*2018*	*2019*
Total Violent Crimes	*193*	*199*	*166*
Homicide	3	4	5
Rape	27	31	35
Robbery	77	61	62
Assault	86	103	64
Total Property Crimes	*2,179*	*2,331*	*1,843*
Burglary	201	261	156
Motor Vehicle Theft	362	298	276
Larceny	1,616	1,772	1,411
Arson	11	17	14

SOURCE: FBI CRIME STATISTICS (TABLE 8); HTTPS://UCR.FBI.GOV/.

ORGANIZATION

The TPD is organized into three bureaus: Bureau of Field Operations, Bureau of Support Services, and Bureau of Investigations. The following provides a description of the responsibilities of each Bureau.

Bureau of Field Operations

The Bureau of Field Operations (BFO) is the largest of the three bureaus of the TPD and contains two divisions: the Patrol Division and the Community Services Division. Commanders in the BFO also oversee several ancillary responsibilities, including SWAT, the Crisis Negotiation Team, K9 program, and the Explorer program. Whether in the Patrol or Community Services divisions, BFO personnel provide front-line services by responding to calls for service or participating in programs that work directly with members of the community. When not answering calls for service, officers are responsible for engaging in self-initiated, proactive citizen interactions.

Patrol Division

The Patrol Division is considered the backbone of the police department and it is staffed by uniformed officers. Organized into six patrol teams each supervised by a sergeant, the division provides 24/7 service and is typically managed by one Captain and four Lieutenants. The primary role of the patrol officer is to respond to calls for service and engage the community during available time. They are assisted in those responsibilities by Community Service Officers, who are trained to handle calls and investigations that do not require immediate suspect contact.

Community Services Division

The Community Services Division is comprised of the Traffic Safety Unit, the Community Preservation Unit, and Volunteers in Police Services. In addition to these units, the Community Services Division is responsible for the coordination of the Police Department's community outreach efforts. The Community Preservation Unit includes two Neighborhood Resources Officers, two Crime Prevention Officers, and the Volunteers in Police Service.

This division not only enforces laws for the safety of the community, but also deals with several quality-of-life issues by working with the school districts, faith-based organizations, and other local service providers. For example, the Community Services Division runs the Drug Abuse Resistance Education (D.A.R.E.) program in coordination with the Tracy Unified School District and community.

Bureau of Investigations

The Bureau of Investigations (BOI) has a variety of units that specialize in complex investigations, typically initiated by patrol officers or through crime tips forwarded to the Police Department. Due to time constraints, these types of investigations are not reasonable for the employees of the BFO to complete due to their responsibilities to respond to in progress calls for service. Examples of the types of crime investigated by the BOI include homicide, robberies, gang related crimes, financial crimes, property crimes, narcotics, vice, and human trafficking.

Two units, each with individual missions, staff the BOI: General Investigations Unit and Special Investigations Unit. Additionally, one detective was assigned in 2019 to a regional task force focusing on auto theft. These specially trained employees frequently partner with investigations from the Federal Bureau of Investigations, Alcohol Tobacco and Firearms, Federal Drug Enforcement Agency, Department of Homeland Security, and other federal, state and county law enforcement agencies. The BOI also works closely with the San Joaquin District Attorney's Office to obtain and secure criminal complaints and convictions.

Bureau of Support Services

The Bureau of Support Services (BSS) is comprised of the following units: 9-1-1 Communications Unit, Records, Animal Services, Facilities Management, and Fiscal Management.

9-1-1 Communications Unit

The 9-1-1 Communications Unit is staffed with a total of 16 Public Safety Dispatchers, four of which are Lead Dispatchers. The unit is managed by a supervisor who reports to the Bureau of Support Services Manager. The unit is staffed 24 hours a day and 365 days a year. The Public Safety Dispatchers provide the citizens of Tracy with both emergency and non-emergency police services.

Records Unit

The Records Unit is staffed with seven full-time Police Records Assistants. The unit is supervised by the Records Unit Supervisor who oversees the day-to-day operations. The Records Unit is responsible for all aspects of report processing and document control within the Police Department. Records Assistants manage criminal records, connect community members with the appropriate unit or personnel to handle a specific issue, and provide support to police officers.

Animal Services Unit

The Animal Services Unit is comprised of nine employees consisting of a supervisor, three current Animal Services Officers (1 vacant), two Shelter Assistants, and two Administrative Assistants. The Animal Service Officers respond to all animal related calls, including stray animals, vicious animals, dog bites, and nuisance complaints. The Animal Services Officers also enforce any related Penal Code and Tracy Municipal Codes. The Shelter Assistants provide care to all the animals being housed in the facility. These tasks include, but are not limited to cleaning kennels, grooming/bathing animals, providing medicine, and enrichment to all animals.

South San Joaquin County Fire Authority

The South San Joaquin County Fire Authority (SSJCFA) currently serves the City of Tracy and provides fire protection and emergency medical services within City limits, as well as those areas within its other member's jurisdiction. The City of Tracy and the Tracy Rural County Fire Protection District (Rural Fire District) formed the SSJCFA by entering into a joint exercise of powers agreement, effective July 1, 2018. The SSJCFA is responsible for fire protection services within the entire City limits area, except for a vacant area covered primarily by grassland, located south of the California Aqueduct, west of Interstate 580 adjacent to the Tracy Hills development which is served by CAL FIRE. The SSJCFA also provides Advanced Life Support Emergency Medical Services within the City, in coordination with the San Joaquin Emergency Medical Services (EMS) Agency.

The SSJCFA is a full-service, all-hazard fire agency providing planning, education, fire suppression, emergency medical, hazardous material, technical rescue, and other related fire protection services, with a staff of 97 personnel operating from seven strategically located fire stations and separate headquarters and support facilities. The SSJCFA responds to over 6,800 calls for service annually. Additionally, 24 hour-a-day staffing is provided with seven paramedic engine companies, and one paramedic ladder truck company. Five fire stations are within the incorporated area of the

City of Tracy, and two are in the surrounding rural Tracy area. The Fire Authority maintains a repurposed unstaffed fire station that serves as support for operations and apparatus storage. Fire Stations 92 and 96 relocated in 2014 due to findings of a Standards of Cover study conducted in 2007. The repositioning of these facilities achieves more efficient fire protection coverage to the jurisdictional area of both the City and Rural Fire District.

SSJCFA Station 94/California Department of Forestry and Fire Protection Station 26 is located approximately 850 feet west of the Project site, at the southwest corner of Hansen Road and Old Schulte Road, and would be the primary responder to any fires or other emergency calls within the Project Area. The next closest fire stations are SSJCFA Station 91, located at 1701 W. 11th Street, 2.92 miles from northeast corner of the Project site (and 4.48 miles by roadway), and SCFA Station 97, located at 595 W. Central Avenue, 3.3 miles from the northeast corner of the Project site (and 4.80 miles by roadway).

RESPONSE TO CALLS FOR SERVICE

The SSJCFA maintains a goal for the initial company of firefighters to arrive on scene for City fire and EMS incidents within six minutes, thirty seconds 90% of the time; this goal applies to the City and annexed areas undetached from the Rural Fire District. The 6:30 minute goal includes 30 seconds for the call to be received at the primary Public Safety Answering Point (PSAP), and information obtained, then measured one minute for dispatch processing, one minute for fire station staff turnout, and four minutes for travel time.

In the rural areas served by the Rural Fire District, the response goal is to arrive on scene within 10 minutes 90% of the time. The 10:00 minute goal includes 30 seconds for the call to be received at the primary PSAP and information obtained, then measured one minute for dispatch processing, one minute for fire station staff turnout, and 7:30 minutes for travel time.

During FY 2017/18, the SSJCFA was dispatched to 8,768 incidents resulting in 12,667-unit responses. Of these calls, 6.34 percent were to fire incidents, 70.31 percent were to EMS incidents, and the remaining calls were to other incident types. In the City and annexed areas undetached from the Rural Fire District, the SSJCFA met the response goal 71% of the time for EMS incidents, 68% of the time for structure fire incidents, and 77% of the time of all other incident types (not EMS or structure fire incidents). Additionally, in the rural areas, the SSJCFA met the response goal 77% of the time for EMS incidents, 83% of the time for structure fire incidents, and 77% of the time for all other incident types (not EMS or structure fire incidents).

Overall, the SSJCFA achieved a 7:24 travel time 90% of the time for its entire service area in FY 2017/18. In the City and annexed areas not detached, 90th percentile travel times were 5:34 for EMS, 5:37 for structure fires, and 6:26 for all other incident types. In the Rural Fire District 90th percentile travel times were 9:05 for EMS, 7:42 for structure fires, and 9:59 for all other incident types. The City travel times of 5:52 for all call types exceed the 4:00 goal. Additionally, the Rural Fire District travel times of 8:55 for all call types also exceed the 7:30 goal.

The *SCFA – Fire Department Standards of Cover Study* concluded that the only way to appreciably lower the travel times is to add more fire stations as revenues permit. Stations 94 and 97 are planned for relocation, which will improve travel times. In addition, the SSJCFA is planning for two additional stations, Stations 95 and 99, which will reduce the service areas and associated travel times of existing stations.

ISO RATING

The Insurance Services Office (ISO) Public Protection Classification Program currently rates the City Fire Department as a Class 2, and the Rural Fire District as a Class 03/3Y. ISO ratings are provided on a scale of 1 to 10, with 1 being the highest possible protection rating and 10 being the lowest. The ISO rating measures individual fire protection agencies against a Fire Suppression Rating Schedule, which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm response and initial attack, and adequacy of local water supply for fire suppression purposes. The ISO ratings are used to establish fire insurance premiums.

FUNDING

The SSJCFA is funded through revenue received from the City of Tracy, and the Tracy Rural Fire Protection District. City General Fund allocations are derived from property taxes, sales tax revenue, and user fees. Tracy Rural revenue allocations are received from property taxes and a special assessment. Additionally, Title 13 of the City of Tracy Municipal Code establishes development impact fees requiring that new development provide a fair share contribution toward the provision of services, in combination with the fee structure set forth in the Citywide Public Safety Master Plan (CPSMP).

OTHER AGENCY SERVICES

School Facilities and Services

The Project is located within the Lammersville Elementary School District boundary, which is located in San Joaquin County, northwest of Tracy. Development of the Project is expected to employ up to 400 full time employees and is assumed that some portion of these employees would become Tracy or Mountain House residents and have school-aged children attending either the Tracy Unified School District or Lammersville Unified School District schools depending on where employees choose to live.

LAMMERSVILLE JOINT UNIFIED SCHOOL DISTRICT

Lammersville Joint Unified School District (LUSD) is located in the rural, western part of unincorporated San Joaquin County, California. Lammersville Elementary was founded in 1876 as a one-school school district when small communities developed during the construction of the Central Pacific Railroad. Formerly feeding into Tracy Unified School District for high school aged students, Lammersville established its own unified school district in June, 2010, to house high school students in 2014.

LUSD experienced its biggest growth in 2005 when the Mountain House community was established. The area surrounding LUSD continues to experience tremendous growth as the regions served by the district provide affordable housing alternatives to living in the Bay Area. Lammersville Unified School District has future plans for a total of eleven K-8 schools and one comprehensive high school, with anticipated enrollment of up to 10,000 students. Table 3.12-3 contains the LUSD school facility inventory, including the student enrollment for the 2019-2020 school year.

TABLE 3.12-3: LUSD SCHOOL INVENTORY

SCHOOL	*GRADES SERVED*	*ADDRESS*	*ENROLLMENT 2019-2020 SCHOOL YEAR*
ELEMENTARY SCHOOLS			
Altamont Elementary School	K-8	52 W St Francis Ave., Mountain House	764
Bethany Elementary School	K-8	70 Escuela Dr., Mountain House	853
Hansen Elementary School	K-8	400 South Durant Terrace, Mountain House	802
Lammersville Elementary School	K-8	6555 W. Von Sosten Rd., Tracy	191
Sebastian Questa Elementary School	K-8	85 N Montebello St., Mountain House	892
Wicklund Elementary School	K-8	00 East Legacy Dr., Mountain House	857
		Elementary School Enrollment	*4,359*
HIGH SCHOOL			
Mountain House High School	9-12	1090 South Central Pkwy., Mountain House	1,556
		High School Enrollment	*1,556*
		Total Enrollment	**5,915**

SOURCE: LUSD 2019 –2020 SCHOOL ACCOUNTABILITY REPORT CARDS, 2021.

As shown in Table 3.12-3, the schools in LUSD had a total enrollment of approximately 5,915 students, of which 4,359 were enrolled in elementary and middle school (grades K – 8) and 1,556 were enrolled in high school (grades 9 – 12) during the 2018 to 2019 school year. In addition to the schools listed above, it should be noted that LUSD recently finished development of Julius Cordes Elementary School in August 2020, which is operating for its first year during the 2020 to 2021 school year[1]. The Julius Cordes Elementary School is anticipated to serve between approximately 675 to 897 K-8 students in a traditional calendar year; however, the school can support an ultimate enrollment of 900 students[2].

TRACY UNIFIED SCHOOL DISTRICT

Tracy Unified School District (TUSD) serves over 17,000 students through three comprehensive high schools, two alternative education high schools, one community school, two middle schools,

[1] LUSD. "Julius Cordes Virtual Ribbon Cutting Ceremony and Campus Tour". August 7, 2020. Access: https://youtu.be/an19-6Pt32k

[2] LUSD. Julius Cordes Elementary School Education Specifications Educational Program [pg. 8]. August 2018.

four K-8 schools, and nine K-5 elementary schools. Table 3.12-4 contains the TUSD school facility inventory, including the student enrollment for the 2019-2020 school year.

TABLE 3.12-4: TUSD SCHOOL INVENTORY

SCHOOL	*GRADES SERVED*	*ADDRESS*	*ENROLLMENT 2019-2020 SCHOOL YEAR*
ELEMENTARY AND MIDDLE SCHOOLS			
Art Freiler School	K-8	2421 West Lowell Ave., Tracy	778
Central Elementary School	K-5	200 W. Eaton Ave., Tracy	436
Earle E. Williams Middle School	6-8	1600 Tennis Ln., Tracy	1,031
George Kelly Elementary School	K-8	535 Mabel Josephine Dr., Tracy	986
Gladys Poet-Christian School	K-8	1701 South Central Ave., Tracy	530
Louis A. Bohn Elementary School	K-5	350 East Mt. Diablo Ave., Tracy	386
Louis J. Villalovoz Elementary School	K-5	1550 Cypress Dr., Tracy	426
McKinley Elementary School	K-5	800 West Carlton Ave., Tracy	424
Melville S. Jacobson Elementary School	K-5	1750 West Kavanagh Ave., Tracy	601
Monte Vista Middle School	6-8	751 West Lowell Ave., Tracy	914
North School	K-8	2875 Holly Dr., Tracy	762
South/West Park Elementary School	K-5	500 West Mount Diablo Dr., Tracy	890
Wanda Hirsch Elementary School	K-5	1280 Dove Dr., Tracy	499
		Elementary and Middle School Enrollment	*8,663*
HIGH SCHOOLS			
Duncan-Russell Continuation High School	11-12	164 West Grant Line Rd., Tracy	15
John C. Kimball High School	9-12	3200 Jaguar Run, Tracy	1,516
George/Evelyn Stein Continuation High School	9-12	650 West 10th St., Tracy	107
Merrill F. West High School	7-12	1775 West Lowell Ave., Tracy	2,204
Tracy High School	9-12	315 East 11th St., Tracy	1,957
Willow Community Day School	7-12	164 West Grant Line Rd., Tracy	30
		High School Enrollment	*5,829*
		Total Enrollment	**14,492**

SOURCES: TUSD 2019 – 2020 SCHOOL ACCOUNTABILITY REPORT CARDS, 2021.
CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-20

As shown in Table 3.12-3, the schools in the TUSD had a total enrollment of approximately 14,492 students, of which 8,663 were enrolled in elementary and middle school (grades K – 8) and 5,829 were enrolled in high school (grades 9 – 12) during the 2019 to 2020 school year.

Library Services

The Tracy Branch Library, a branch library of the Stockton - San Joaquin County Library system, is the closest library in relation to the Project site, located at 20 E Eaton Avenue approximately 4.5 miles northeast of the Project site. The library offers a circulating collection of books, magazines, CDs, and DVDs in both English and Spanish.

3.12.2 REGULATORY SETTING

STATE

Police Protection

There are no federal or state regulations related to police protection services applicable to the proposed Project.

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State of California passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

Chapter 9.06 (Fire Protection and Prevention) of the City of Tracy Municipal Code adopts the California Fire Code. The California Fire Code establishes the minimum requirements consistent with nationally recognized good practices to safeguard the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety and assistance to fire fighters and emergency responders during emergency operations. The provisions of this code apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such building structures throughout the State of California.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NATIONAL FIRE PREVENTION ASSOCIATION (NFPA) 1710

The NFPA 1710 Standards are applicable to urban areas and where staffing is comprised of career Firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one (1) minute or less for at least 90 percent of the alarms
- Turnout time of one (1) minute or less for EMS calls (80 seconds for fire and special operations response)
- Fire response travel time of four (4) minutes or less for the arrival of the first arriving engine company at a fire incident and eight (8) minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident
- Eight (8) minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department

NFPA 1: FIRE CODE

The NFPA 1 Fire Code, formerly known as the International Fire Code, addresses minimum requirements for building construction, operation, and maintenance, fire department access, and hazardous materials necessary to establish a reasonable level of fire safety and property protection in new and existing buildings. NFPA 1 provides fire code officials with a comprehensive package of criteria to ensure public safety on a routine basis.

INTERNATIONAL FIRE CODE (IFC)

The International Fire Code (IFC) provides fire prevention and safety standards for existing buildings. It covers:

- Preventing fires and eliminating fire hazards
- Fire alarm systems
- Emergency planning
- Fire department access
- Water supplies
- Sprinkler systems
- Maintenance of fire protection equipment

Although it is called the "International Fire Code," these standards are only adopted in the U.S., where they were established. The International Fire Code is not a federally mandated set of codes that apply universally across the U.S. nor is it a law that the federal government requires local governments to adopt. The IFC may be adopted voluntarily and individually by local, territorial, and state jurisdictions. However, the IFC is written using legal language such that it can be adopted "as is" and be a legally binding law.

The International Fire Code states that its purpose "is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises, and to provide safety to firefighters and emergency responders during emergency operations."

The International Fire Code covers:

- The hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices.
- Conditions hazardous to life, property or public welfare in the occupancy of structures or premises.
- Fire hazards in the structure or on the premises from occupancy or operation.
- Matters related to the construction, extension, repair, alteration or removal of fire suppression or alarm systems.
- Conditions affecting the safety of firefighters and emergency responders during emergency operations.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Title 5 Education Code, governs all aspects of education within the State.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The "Leroy F. Greene School Facilities Act of 1998," also known as Senate Bill No. 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district's authority to levy school impact fees. This comprehensive legislation, together with the $9.2 billion education bond act approved by the voters in November 1998 known as "Proposition 1A", reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- **Level I** fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- **Level II** fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district's bonding

capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district's teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

- **Level III** fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

Both the LUSD and TUSD currently charges Level I fees.

LOCAL

City of Tracy Municipal Code

Title 13 of the City of Tracy Municipal Code, referred to as the Impact Fee Ordinance, establishes fees which are imposed upon development projects for the purpose of mitigating the impact that the development projects have upon the City's ability to provide specified public facilities.

City of Tracy General Plan

POLICIES: SAFETY ELEMENT

- SA-3.1-P1. All development in areas of potential wildland fire hazards shall include the following:
    - Clearance around structures.
    - Fire-resistant ground cover.
    - Fire-resistant roofing materials.
- SA-3.1-P2. Development in areas with steep terrain shall be restricted as necessary in order to ensure fire safety.
- SA-3.1-P3. New developments shall satisfy fire flow and hydrant requirements, street widths and design requirements as established by the City.
- SA-3.1-P4. The City shall incorporate drought-resistant and fire resistant plants in public works projects in areas subject to wildland fires.
- SA-3.1-P5. The South County Fire Authority shall train regularly for urban and wildland firefighting conditions.

POLICIES: PUBLIC FACILITIES ELEMENT

- PF-1.1-P-1. The City shall provide fire and emergency response facilities and personnel necessary to meet residential and employment growth in the City.

- PF-1.1-P-2. The City shall ensure that new development pays a fair and equitable amount to offset the costs for fire and emergency facilities by collecting a Public Buildings impact fee, or by requiring developers to build new facilities.
- PF-1.2-P-2. The City shall build and require roadways that are adequate in terms of width, radius, and grade to facilitate access by City firefighting apparatus, while also maintaining and improving Tracy's neighborhood character and hometown feel
- PF-1.2-P-3. The City shall plan fire station locations to maintain or enhance current response levels
- PF-1.2-P-4. Fire sub-stations shall be constructed in new development areas in order to meet the City's response time requirements.
- PF-1.2-P-5. New developments shall satisfy fire flow and hydrant requirements and other design requirements as established by the City
- PF-1.2-P-6. The City shall use physical site planning as an effective means of preventing wildland fires by requiring the following
    - Drought-resistant native plants incorporated into public works projects.
    - More than one ingress/egress road to any neighborhood in areas subject to wildland fires.
    - Roadways with grades that accommodate emergency vehicles.
    - Structures that are constructed of fire-resistant materials
- PF-2.1-P-1. Maintain adequate police staffing, performance levels and facilities to serve Tracy's existing population as well as any future growth.
- PF-2.1-P-2. The City shall ensure that new development pays a fair and equitable amount to offset the capital costs for police service and expansion by collecting a public facilities impact fee
- PF-2.1-P-4. The City shall continue to provide mutual aid with the County Sheriff's Department when a situation exceeds the capabilities of either department.
- PF-2.2-P-1. Law enforcement hazards shall be identified and mitigated during the project review and approval process.
- PF-2.2-P-3. Police sub-stations shall be constructed in new development areas in order to meet the City's response time requirements.
- PF-3.1-P-1. The City shall coordinate with the school districts serving the City of Tracy to ensure the provision of educational facilities sufficient for the existing and anticipated kindergarten through twelfth grade population, and shall work to ensure that school facilities that serve new development are available concurrent with the need, to the extent allowed by State law
- PF-3.3-P-1. The City, in cooperation with school districts, shall reserve land for purchase by the districts for the construction of new schools or the collection of school impact fees in accordance with State law.

Citywide Public Safety Master Plan

The City has prepared a Citywide Public Safety Master Plan (CPSMP) to portray a clear statement of community objectives for public safety, establish a vision of the future, and include strategies to achieve that vision. The study area for this CPSMP is the City's 42 square mile Sphere of Influence

area. As set forth in the CPSMP, Tracy is anticipated to have approximately 54,500 new residents and approximately 147,200 new workers. The CPSMP is intended to be used as a guidance document for the identification of public safety facilities needed to serve future land development projects under the build-out condition for the City's Sphere of Influence.

Specifically, with respect to fire protection facilities, to accommodate existing and future planned needs, the CPSMP identifies a total of four new fire stations throughout the service area as well as upgrades to the existing downtown fire administration building to house additional facilities. These facilities are planned to be constructed in phases, over time, as the need arises and as development impact fees are collected.

With respect to law enforcement facilities, to accommodate existing and future planned needs, the CPSMP identifies a new 40,990 square-foot Police Department service center (site to be determined), upgrades to the existing police firing range site to house a joint fire and police training facility, and renovation of the existing Police Department at the Civic Center to operate as a Public Safety Center. Locations for both the new Police Department service center and the telecommunications tower have yet to be determined, although it is anticipated that the telecommunications tower may be located west of Lammers Road and possibly within the Cordes Ranch Specific Plan Area or the Tracy Hills area. These facilities are planned to be constructed in phases, over time, as the need arises and as development impact fees are collected.

Citywide Public Facilities Master Plan

The City has prepared a Citywide Public Facilities Master Plan (CPFMP) on January 15, 2013 to guide the provision of public facilities needed to serve the existing population and future planned growth in the Tracy community. The CPFMP portrays a clear statement of community objectives for public facilities, establish a vision of the future, and include strategies to achieve that vision. The CPFMP includes an evaluation of current conditions; space standards and functional flow; staff and space need projections; alternative facility plans; and comparative cost estimations. As set forth in the CPFMP, Tracy is anticipated to have approximately 54,500 new residents and approximately 147,200 new workers. Specifically, the CPFMP provides for the development of approximately 126,400 square feet of new public facilities building space, including a new Community Recreation Building, to accommodate the City's planned growth. These facilities are planned to be constructed in phases, over time, as the need arises and as development impact fees are collected.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on public services if it would result in:

Substantial adverse physical impacts associated with the provisions of new or physically altered government facilities, and/or the need for new or physically altered governmental 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 following public services:

- Police Protection
- Fire Protection
- Schools
- Other public facilities

It is important to note that, in addressing public service demand issues under CEQA, the appropriate focus is on the environmental effects of whatever steps might be necessary to achieve or maintain adequate service. For example, if proposed new development would create an increased demand for law enforcement or fire protection services, an EIR should inquire as to whether new or expanded physical facilities may be required in order to provide such service. The "impacts" addressed under CEQA are the physical effects of providing service, not any possible failure to provide adequate service under applicable standards. (See *City of Hayward v. Board of Trustees of the Cal. State University* (2015) 242 Cal.App.4th 833, 843 ["[t]he need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate"]).

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The proposed Project has the potential to require the construction of police department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The Project would include the annexation of the 104.46-acre Project Site into the City of Tracy for the construction and subsequent operation of two warehouse buildings that would serve as an annex to the existing Costco Depot located approximately 1.5-miles to the west of the Project and as a Direct Delivery Center. The two buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) total approximately 1,745,052 sf on the Project site. The smaller Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. DDC warehouses distribute ordered goods to the MDOs for delivery (by appointment) to the members. The Project also would include the required circulation, parking, and utility improvements. Development of the Project could create up to approximately 150 – 250 full-time jobs at full Project buildout, which does not exceed the employment growth estimates for the site under the City's Industrial land use designation. The Project site is located in the City of Tracy SOI and has a

City land use designation of Industrial; therefore, the employment growth associated with the proposed Project was considered as part of the City's General Plan and associated EIR process.

Upon annexation, the Project would be served by the Tracy Police Department. The City's General Plan includes policies and implementation measures that would allow for the Tracy Police Department to continue providing adequate staffing levels. Below is a list of relevant policies:

- Maintain adequate police staffing, performance levels and facilities to serve Tracy's existing population as well as any future growth (Policy PF-2.1-P-1);
- The City shall ensure that new development pays a fair and equitable amount to offset the capital costs for police service and expansion by collecting a public facilities impact fee (Policy PF-2.1-P-2); and
- The City shall continue to provide mutual aid with the County Sheriff's Department when a situation exceeds the capabilities of either department (Policy PF-2.1-P-3).

To accommodate existing and future planned needs, the CPSMP identifies the need for a new 40,990 square-foot Police Department service center (site to be determined), upgrades to the existing police firing range site to house a joint fire and police training facility, and renovation of the existing Police Department at the Civic Center to operate as a Public Safety Center. Locations for both the new Police Department service center and the telecommunications tower have yet to be determined, although it is anticipated that the telecommunications tower may be located west of Lammers Road and possibly within the Cordes Ranch Specific Plan Area or the Tracy Hills area. It is important to note that the projected growth in the CPSMP assumed buildout of the SOI, consistent with the City's General Plan. The City's General Plan designates the Project site as Industrial and assumed the future annexation and development of the Project site at full buildout. As such, the projected growth identified by the CPSMP includes the Project site and has accounted for the need for new and modified police facilities to support the development.

According to the CPSMP, these facilities are planned to be constructed/upgraded in phases, over time, as the need arises and as development impact fees are collected. Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with police services, including the new and modified police facilities outlined in the CPSMP. Therefore, the proposed annexation and development would not require the development of a new facility or modifications of an existing facility at this time. As such, impacts would be ***less than significant***.

Impact 3.12-2: The proposed Project has the potential to require the construction of fire department facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The existing SCFA Station 94/California Department of Forestry and Fire Protection Station 26 located approximately 850 feet to the west of the Project site would primarily serve the Project.

Development of the Project could create up to approximately 150 – 250 jobs at full Project buildout, which does not exceed the employment growth estimates for the site under the City's Industrial land use designation. The Project site is located in the City of Tracy SOI and has a City land use designation of Industrial; therefore, the employment growth associated with the proposed Project was considered as part of the City's General Plan and associated EIR process.

Recognizing the potential need for increases in fire protection and emergency medical services, the Tracy General Plan includes policies and implementation measures that would allow for the Department to continue providing adequate facilities and staffing levels. Below is a list of relevant policies:

- The City shall provide fire and emergency response facilities and personnel necessary to meet residential and employment growth in the City (PF-1.1-P-1).
- The City shall ensure that new development pays a fair and equitable amount to offset the costs for fire and emergency facilities by collecting a Public Buildings impact fee, or by requiring developers to build new facilities (PF-1.1-P-2).
- The City shall build and require roadways that are adequate in terms of width, radius, and grade to facilitate access by City firefighting apparatus, while also maintaining and improving Tracy's neighborhood character and hometown feel (PF-1.2-P-2).
- The City shall plan fire station locations to maintain or enhance current response levels (PF-1.2-P-3).
- Fire sub-stations shall be constructed in new development areas in order to meet the City's response time requirements (PF-1.2-P-4).

The Tracy General Plan policies would be implemented through the review of all new projects within the City, prior to development, and through the collection of development impact fees for the funding of future facilities and equipment. The CPSMP identifies the future development of an approximately 7,400-square foot future fire station to be built in the area of Lammers Road, south of 11th Street, as determined by the SSJCFA. According to the CPSMP, the future fire station would be built over time, as the need arises and as development impact fees are collected to fund the facility. Although the Project itself would not require the construction of new fire department facilities, the Project would be required to pay development impact fees, which would provide its proportionate fair share toward the construction of fire stations and/or equipment for existing fire stations to serve this and other development in the vicinity.

Impact fees from new development are collected based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant prior to Project approval, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with fire protection services.

In order to provide adequate fire protection and suppression services to the Project site, the Tracy Fire Department must have access to adequate onsite hydrants with adequate fire-flow pressure available to meet the needs of fire suppression units. The final site plans and development specifications developed for the proposed Project would indicate the location and design specifications of the fire hydrants that would be required within the Project site. Therefore, the impact of the proposed Project on the need for additional fire services facilities is ***less than significant***.

Impact 3.12-3: The proposed Project has the potential to require the construction of school facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The Project is located within the Lammersville Elementary School District boundary, which is located in San Joaquin County, northwest of Tracy. Development of the Project is expected to employ up to 150 – 250 full-time employees, and it is assumed that some portion of these employees would become Tracy or Mountain House residents and have school-aged children attending either the Tracy Unified School District or Lammersville Unified School District schools depending on where employees choose to live. However, the Project itself would not require the construction of a new school facility and does not propose the construction of a new school facility which may cause substantial adverse physical environmental impacts.

LUSD and TUSD collect impact fees from new developments under the provisions of SB 50. According to the LUSD 2020 School Facilities Fee Justification Report, LUSD plans to use the collected impact fees to fund the construction of a new K-8 Elementary School facility and expand the capacity of Mountain House High School. Additionally, the TUSD plans to utilize collected impact fees to construct a new elementary school and middle school, as well as expand the existing high school facilities[3]. Under Section 65996 of the California Government Code, the payment of fees under SB 50 is deemed to fully mitigate the impacts of new development on school facilities. Therefore, the impact of the proposed Project on the need for additional school facilities is ***less than significant***.

Impact 3.12-4: The proposed Project has the potential to have effects on other public facilities. (Less than Significant)

The proposed Project will bring employees and could bring residents to the area which may require the use of other public services such as libraries, etc. To accommodate existing and future planned needs, the CPFMP identifies that Tracy will need approximately 126,400 square feet of new public facilities building space, with 55,800 square feet of that space serving new

[3] TUSD. 2018. Residential Development Fee Justification Study.

development. It is important to note that the projected growth in the CPFMP assumed buildout of the SOI, consistent with the City's General Plan. The City's General Plan designates the Project site as Industrial and assumed the future annexation and development of the Project site at full buildout. As such, the projected growth identified by the CPFMP includes the Project site and has accounted for the need for new and modified public facilities to support the development.

According to the CPFMP, these facilities are planned to be constructed/upgraded in phases, over time, as the need arises and as development impact fees are collected. These impact fees are based upon projected impacts from each development, including impacts on other public services. The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with services provided. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would fund capital and labor costs associated with these other public services. Based on the above, the proposed Project would not require the need for new facilities associated with other public services. Additionally, the Project does not propose new facilities for other public services which may cause substantial adverse physical environmental impacts. The proposed Project would not result in the need for new facilities for other public services, thus it will have a ***less-than-significant*** impact relative to this topic.

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This section analyzes the potential impacts of the proposed Project on the transportation system. This section identifies the potential transportation impacts of future buildout of the Project and recommends mitigation measures to lessen their significance. Information in this section is derived primarily from the following (as well as other information described in this section):

- *Costco Direct Delivery Center Traffic Analysis* (Kimley Horn, 2022);
- *City of Tracy General Plan* (2005);
- *Tracy General Plan Environmental Impact Report* (2011);
- State of California, Governor's Office of Planning and Research (OPR), *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR, December 2018);
- *Trip Generation Manual, 10th Edition* (ITE, 2017); and
- *Trip Generation Handbook, 3rd Edition* (ITE, 2017).

There were no comments received during the public review period or scoping meeting for the Notice of Preparation regarding this topic. Full comments received are included in Appendix A.

Senate Bill (SB) 743, whose requirements became effective statewide on July 1, 2020, specified that "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

Therefore, unlike previous Draft EIRs published in Tracy, this Draft EIR uses vehicle miles traveled (VMT) as the primary significance criteria and level of service (LOS) to aid the City of Tracy and Caltrans in the understanding of potential increases in vehicle delay at key signalized intersections (Policy TR-4: Effective Transportation Assessment) and determine improvements to the local and regional transportation system. It is noted that the purpose of this discussion is to examine whether the Project meets General Plan policies related to LOS. Pages 17 through 48 of Appendix F present the results of the Existing and Cumulative operational conditions LOS analysis and any related deficiencies and required improvements to address any LOS deficiencies.

In December 2018, the California Office of Planning and Research (OPR) published final technical guidance for implementing SB 743. On December 28, 2018, the Resources Agency adopted CEQA Guidelines Section 15064.3. Under that guideline, VMT was chosen as the primary metric used to identify transportation impacts under CEQA. Hence, this chapter includes an extensive review of the Project's VMT. This section also addresses many other important transportation-related areas of concern, including pedestrian/bicycle facilities, transit facilities and services, emergency vehicle response, hazardous conditions, and temporary construction-related conditions.

3.13.1 ENVIRONMENTAL SETTING

PROJECT LOCATION

The Project site is located at 16000 West Schulte Road in unincorporated San Joaquin County, California. The Project site is within the Tracy Sphere of Influence (SOI) 10-Year Planning Horizon and is immediately adjacent to the Tracy city limits to the north of the site.

The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant land owned by the City.

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

ROADWAY SYSTEM

Regional access to the site is provided via Interstate 205 (I-205) and Interstate 580 (I-580) via the Mountain House Parkway/International Parkway and the International Parkway/Patterson Pass Road interchanges, respectively. Access to and from the I-205 Mountain House Parkway/International Parkway interchange is provided via International Parkway and West Schulte Road. Access to and from the I-580 International Parkway/Patterson Pass Road interchange is provided via International Parkway to West Schulte Road.

PEDESTRIAN AND BICYCLE FACILITIES

This section describes the existing pedestrian and bicycle facilities in the vicinity of the Project site.

Pedestrian Facilities

Due to the rural and partially undeveloped conditions of the study area, limited pedestrian facilities are currently provided. Sidewalks are located on the north side of West Schulte Road near the northwest corner of the site. Sidewalks are not currently located on the south side of West Schulte Road. West of the Delta Mendota Canal where existing industrial development can be found, sidewalks are located on both sides of West Schulte Road. Along Hansen Road located west of the site, sidewalks can be found north of West Schulte Road along both sides of the roadway. Hansen Road south of West Schulte Road does not have sidewalks.

Bicycle Facilities

Bicycle facilities in Tracy include the following general types:

- **Class I: Shared Use Path** - Referred to as shared-use paths or trails, these are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.
- **Class II: Bicycle Lane** - Bicycle lanes provide a restricted right-of-way and are designated for the use of bicycles for one-way travel with a striped lane on a street or highway. Bicycle lanes are generally a minimum of five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.

- **Class III: Bicycle Route** - These facilities are found along streets that do not provide sufficient width for dedicated bicycle lanes. The street is designated as a bicycle route through the use of signage and optional pavement markings where bicyclists travel on the shoulder or share a lane with motor vehicles. Class III bike routes are utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes.
- **Class IV: Separated Bikeway** - Commonly known as cycle tracks, these are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths.

Bicycle facilities in the study area are similar to the pedestrian facilities in the study area. Street frontages that contain recent development have complete sidewalks and bicycle lanes, while areas undeveloped generally lack pedestrian facilities and dedicated bicycle facilities. Bicycle lanes are located along West Schulte Road. West of the Delta Mendota Canal where existing industrial development can be found, bicycle lanes are located on both sides of West Schulte Road. Along Hansen Road located west of the site, bicycle lanes can be found north of West Schulte Road along both sides of the roadway. Hansen Road south of West Schulte Road has bicycle routes.

TRANSIT SERVICE

The City of Tracy operates fixed-route bus and paratransit services with the TRACER bus system. Additionally, San Joaquin Regional Transit District (SJRTD) operates several routes that pick-up passengers in Tracy. Further, Altamont Commuter Express (ACE) operates commuter trains from San Jose to Stockton, stopping in Lathrop/Manteca, Tracy, Livermore, Pleasanton, Fremont, and Santa Clara before reaching San Jose. The services are described below. The fixed routes all operate in central Tracy, and do not extend into the study area.

TRACER Bus Services

As the study area is primarily agricultural in character in its present form, no service currently exists to the site. The closest TRACER fixed route to the study area is Route D. The nearest Route D stop to the Project site is located near Kimball High, approximately two miles northeast of the Project site. All routes operate Monday through Friday from 7:00 a.m. to 7:00 p.m., and Saturday from 9:00 a.m. to 5:00 p.m. TRACER does not offer service on Sundays.

The one-way cash fare for the TRACER fixed route service is $1.25 for adults, discounted to $1.00 for students and $0.50 for seniors and the disabled. Additionally, day passes offering unlimited trips in a single day are available for $3.00 for adults ($2.50 for students, $1.25 for seniors and the disabled) as are 10-ride tickets and weekly passes for $12.50 ($10.00 for students, $5.00 for seniors and the disabled).

The commuter routes run both clockwise and counterclockwise throughout the City of Tracy, serving a variety of residential neighborhoods as well as the Tracy Transit Station and the Downtown Civic Center. To the east of the study area, the Commuter route travels along Schulte Road, heading

northwest through the residential areas south of 11th Street. The route then travels along 11th Street, north along Lammers Road, and makes a loop in the residential neighborhood to the east of Lammers. The closest TRACER commuter route to the study area is Route G. The nearest Route G stop to the Project site is located near Kimball High, approximately two miles northeast of the Project site.

The TRACER Paratransit service area incorporates most of the City of Tracy and is generally bounded by Lammers Road to the west, Larch Road and Arbor Avenue to the north, and Chrisman Road to the east. Service is available during the fixed route TRACER service. One-way rides are $1.50 for seniors, disabled individuals, and those on Medicare, and the cash fare increases to $1.75 for the general public living in unincorporated areas and guests and companions of paratransit users. The Paratransit Subsidized Taxi Service is available to TRACER Paratransit users during non-operating hours.

San Joaquin Regional Transit District (SJRTD)

SJRTD provides intercity fixed route service between Tracy and Stockton. As of January 1, 2012, a one-way fare on an RTD costs $1.50 ($0.75 discounted for seniors or Medicate card-holders). One-day passes are available for $4.00 ($2.00 discounted), and 31-day passes are available for $65.00 ($40.00 for students, $30.00 discounted). Additionally, the RTD-BART Commuter service costs $7.00 each way with monthly fares ranging from $132.00 to $144.00 depending on destination and origin. SJRTD operates the following routes in Tracy:

- **Route 90** — runs from Stockton's Downtown Transit Center along 1-5 to Tracy, where it runs east-west along Grant Line Road, ending at the Wal-Mart just west of I-205. Route 90 operates on weekdays from 9:20 AM to 4:12 PM and weekends from10:27 AM to 5:11 PM. The nearest stop is located downtown at the Tracy Transit Station, approximately 4.5 miles east of the Project site.
- **Route 150 (RTD-BART Commuter)** — runs from Stockton's Downtown Transit Center to the Dublin BART. The route operates from 4:00 AM to 7:20 PM on weekdays. The nearest stop is located at the Tracy Transit Station, approximately 4.5 miles east of the Project site.

Altamont Commuter Express

The ACE in Tracy is located on the northeast corner of the intersection of West Linne Road and Tracy Boulevard, approximately 4.3 miles southeast of the Project site. In service Monday through Friday, ACE offers three trains in the AM peak period operating from 4:20 a.m. to 8:50 a.m. and three

trains during the PM peak period, operating from 3:35 pm. to 7:45 p.m. ACE does not run on the weekends.

Monthly, weekly, 20-trip, and one-way passes are available and vary in price based on distance traveled. Adult fares range from $6.25 for a one-way trip ($161.25 monthly pass) from Tracy to Tri-Valley to $11.75 for a one-way trip ($299.75 monthly pass) from Tracy to San Jose.

3.13.2 REGULATORY SETTING

Existing transportation polices, laws, and regulations that would apply to the Project are summarized below. This information provides a context for the impact discussion related to the Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

STATE

Senate Bill 743

SB 743 added section 21099 to the Public Resources Code, which states that automobile delay, as described by LOS or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment. The law directed OPR to amend the CEQA Guidelines to establish new metrics for determining the significance of transportation impacts of projects. The California Natural Resources Agency certified and adopted the amended CEQA Guidelines in December 2018. In the amended CEQA Guidelines, OPR selected VMT as the preferred transportation impact metric and applied its discretion to recommend use of VMT statewide, beginning in July 2020. The amended CEQA Guidelines state that "generally, VMT is the most appropriate measure of transportation impacts."

California Department of Transportation

Caltrans is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS within the study area would need to be approved by Caltrans.

LOCAL

City of Tracy Citywide Roadway & Transportation Master Plan

The City's Citywide Roadway & Transportation Master Plan document serves as an update to the 2012 City of Tracy Transportation Master Plan (TMP). The TMP builds upon the goals and objectives as defined in the Circulation Element of the City's General Plan (February 2011) and the Sustainable Action Plan (SAP) (February 2011). The SAP included feasible measures to achieve sustainability in multiple sectors and reduce GHG emissions. These measures include policies to increase transit usage and opportunities, improve traffic flow in the city, support the development of new bicycle and pedestrian facilities, and other land use policies. The General Plan is based upon a future Horizon Year of 2025 conditions. The TMP looks to a Horizon Year of 2042, to provide the maximum possible infrastructure planning and to be consistent with the planned San Joaquin Council of Governments (SJCOG) Travel Demand Model update to Year 2042. The TMP provides a complete review of the City's transportation system and serves as a comprehensive planning document that can be utilized to identify and implement required improvements to the existing roadway system. In addition, the TMP can serve as the baseline for incorporating expansion or accommodating future development consistent with the General Plan.

According to the Plan, if a significant transportation impact is identified, feasible mitigation measures to avoid or reduce the impact must be identified. CEQA requires that mitigation measures are included in the project's environmental assessment. OPR provides a list of potential measures to reduce VMT but gives the lead agency (the City of Tracy in this case) full discretion in the selection of mitigation measures.

The type and size of the project will determine the most appropriate mitigation strategies for VMT impacts. For large projects such as general plans or specific plans, VMT mitigations should concentrate on the project's density and land use mix, site design, regional policies, and availability of transit, bicycle, and pedestrian facilities. For smaller projects such as an individual development project, VMT mitigations will typically require the preparation of a transportation demand management (TDM) program. A TDM program is a combination of strategies to reduce VMT. The program is created by an applicant for their land use project based on a list of strategies agreed to with the City of Tracy.

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to transportation and circulation. General Plan policies applicable to the Project are identified below:

POLICIES: CIRCULATION

- CIR-1.1-P1. The City should develop context-based street designs that allow for variations based on the expected function and location of the facility, and the surrounding land use context. These context-sensitive designs should have the following aims:
    - Create aesthetically attractive streetscapes.
    - Enhance multi-modal transportation by increasing mobility and improving safety for autos, trucks, transit, pedestrians, and bicyclists.
- CIR-1.1-P2. The City shall preserve rights-of way needed for future roadway and freeway interchange improvements through dedication or acquisition as adjacent properties develop or redevelop.
- CIR-1.1-P3. The City shall continue to apply traffic mitigation fee programs to fund transportation infrastructure, based on a fair share of facility use.
- CIR-1.1-P4. The City should continue to pursue regional, county, and State funding to fund roadway projects. These potential funding sources may include Measure K sales tax revenues, a regional or countywide transportation impact fee, and other existing and future revenue sources.
- CIR-1.1-P5. The City shall continue to participate in regional transportation funding decisions, including Measure K reauthorization, regional or countywide transportation fees, and prioritization of State funded projects.
- CIR-1.1-P6. The Roadway Master Plan update shall identify necessary improvements to various intersections on I-205 and I-580 based on land use designations and with particular attention to Terminal Access Routes in accordance with Surface Transportation Assistance Act of 1982 (STAA).

- CIR-1.2-P1. The City shall ensure that the street system results in a high level of connectivity, especially between residences and common local destinations, such as schools, Village Centers, retail areas, and parks. The standard for roadway (vehicular) connectivity is defined as appropriate spacing of arterials and collectors and local roads as detailed in Section of [the Circulation] Element "Roadway Classifications and Standards".
- CIR-1.2-P2. The City shall implement a connected street pattern with multiple route options of vehicles, bikes, and pedestrians.
- CIR-1.2-P3. New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.
- CIR-1.2-P5. New development shall be designed with a grid or modified grid pattern to facilitate traffic flows and to provide multiple connections to arterial streets.
- CIR-1.3-P7. Traffic studies for new developments within the City may be prepared if necessary and appropriate to determine the impacts of the project's traffic on the transportation system.
- CIR-1.3-P8. Access control and minimization of median openings shall be a key consideration in the design of expressways, boulevards, arterials, and major collectors.
- CIR-1.3-P9. The City shall encourage the use of right-turn-in/right-turn-out only turning movements where local and collector streets intersect arterial streets with medians. The purpose is to increase the safety of the roadway and to avoid traffic signals that are spaced too close together.
- CIR-1.6-P2. New development shall implement traffic calming measures where necessary so long as connectivity is not diminished.
- CIR-3.1-P6. New development shall include pedestrian and bicycle facilities internal to the development and that connect to city-wide facilities, such as parks, school, and recreational corridors, as well as adjacent development and other services.
- CIR-3.1-P7. New development sites for commercial, employment, educational, recreational, and park-and-ride land uses shall provide bicycle parking and/or storage facilities.
- CIR-4.1-P5. The City shall require development to provide for transit and transit-related increased modal opportunities, such as adequate street widths and curb radii, bus turnouts, bus shelters, park-and-ride lots and multi-modal transit center through the development and environmental review processes, if appropriate.

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on transportation and circulation if it would:

- Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b);
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); and/or

- Result in inadequate emergency access.

VMT Significance Criteria

The proposed Project's VMT-related impacts were evaluated using the Draft City of Tracy VMT Policy and Calculator/Tool. The City plans to adopt the VMT Policy in November 2022. For the surrounding industrial land use area, the City's Draft threshold is 9.4 VMT per employee. This threshold is based on existing VMT for countywide employment, reduced by 15% per SB 743 guidelines and the CEQA guidelines. The City of Tracy has developed this Tool for use in SB 743 land use project analysis. The purpose of the tool is to calculate VMT for a land use project and determine whether there is a significant transportation impact based on VMT and the effect of various mitigation options. Broadly, the VMT Analysis Tool provides the following information:

- VMT Threshold Analysis
- Greenhouse Gas (GHG) Estimation
- Transportation Demand Management (TDM) Evaluation

Other Impacts

Evaluation of potential transportation impacts related to conflict with existing and planned policies, transportation hazards, and emergency access are based on a review of Project changes to the transportation network and a qualitative assessment of whether those changes would conflict with applicable standards or result in detrimental conditions based on the thresholds of significance.

To date, VMT mitigation has relied heavily on TDMs. These measures generally represent two basic approaches: infrastructure and policy. The California Air Pollution Control Officers Association (CAPCOA) guide for Quantifying Greenhouse Gas Mitigation Measures (2010), is one of the primary industry resources for estimating the effects of TDM strategies as mitigation in California. Although this resource is invaluable, the data on which it is based is relatively old, limited in terms of sample size, and based on experiences in highly urbanized areas. As such, many of the mitigation options provided have questionable efficacy in suburban and rural contexts. TDMs are also challenging from the standpoint of mitigation monitoring and are often unpopular with project applicants because they may need to be managed and paid for in perpetuity. These limitations have led jurisdictions, including the City of Tracy, to increasingly consider programmatic approaches to VMT mitigation. Programmatic approaches that rely on collectively funding larger multimodal projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The City of Tracy is developing a programmatic approach to funding VMT mitigation i.e., VMT Mitigation Banking program. The VMT Mitigation Banking Fee forms part of the City of Tracy SB 743 Policy, which has not been adopted at the time of compilation of this document. The mitigation of

VMT impacts is, however, consistent with SB 743 requirements and CEQA guidelines. Under a VMT Mitigation Banking framework, multiple VMT reducing projects are grouped together and their associated VMT reductions are monetized in the form of credits. These credits are then purchased for the purposes of mitigating VMT in excess of determined impact thresholds. The underlying projects may be either regionally or locally beneficial to the area in which the project is located. The City plans to adopt the VMT Policy, including the VMT Mitigation Banking Fee, in November 2022.

ANALYSIS METHODS

This section provides an overview of the proposed Project components and addresses the proposed Project trip generation, trip distribution, and trip assignment characteristics, all of which were used for the detailed evaluation of Project impacts. The amount of traffic associated with the Project was estimated using a two-step process.

1. Trip Generation – The amount of vehicle traffic entering/exiting the Project site was estimated.
2. Trip Distribution – The direction trips would use to approach and depart the area was projected.

Project Description

The Project would include the construction and operation of two warehouse buildings that would serve as an annex to the existing Costco Depot located approximately 1.5-miles to the west of the Project and as a Direct Delivery Center. The two buildings (approximately 543,326 sf for Building 1 and 1,201,726 sf for Building 2) total approximately 1,745,052 sf on the 103-acre Development Area. The smaller Building 1 is anticipated to serve as the annex by providing additional storage for high-turnover merchandise processed through the nearby Costco Depot, a pallet repair facility, and a return to vendor (RTV) facility for large items returned to a Costco warehouse. The larger Building 2 is anticipated to serve as a Direct Delivery Center (DDC), an ecommerce distribution center primarily for large and bulky items ordered online by Costco members for direct delivery through Market Delivery Operations (MDO) located in various smaller cities in the Northern California region. The Project would include required circulation, parking, and utility improvements.

CIRCULATION IMPROVEMENTS

The design of the site locates the office and ancillary/accessory administrative uses at the far northern portion of each of the two buildings, along West Schulte Road, with the warehousing and truck dock doors located at the center and southern portion of the buildings. Entries to the office and administrative uses are located at the northern end of each building and adjacent to the employee parking areas.

The employee parking lot located on the north side of the site and adjacent to West Schulte includes a 30-foot landscape buffer area consistent with the Cordes Ranch Specific Plan. Landscape buffers would be provided on all sides of the Project site to provide screening of the buildings and dock doors with various shade trees and drought tolerant shrubs and other vegetation.

Vehicle ingress/egress to/from the Project site will occur from three points along West Schulte Road. The main entry and exit point for employee vehicles would be located at the center of the site, at the existing signalized Bud Lyons Way intersection. The Bud Lyons Way driveway would also serve as a secondary exit with security gates for warehouse trucks, and no truck entry would be permitted. The main Bud Lyon Way driveway access would provide a deceleration lane for eastbound traffic and would have full turning movements to enter and exit the site. The deceleration lane at the Bud Lyons Way intersection will allow for the safe entry of employee vehicles to the site and access the parking adjacent to and in front of each building. A second employee entry would be located east of the Bud Lyons Way intersection and would be right-in and right-out only.

The third access driveway located at the Project site's northeast boundary includes a new signalized intersection and a deceleration lane for trucks traveling eastbound on West Schulte Road. This driveway would be the entrance for all truck traffic. A shared accessway to the adjacent parcel to the east is also provided with a left-hand turn pocket to provide access to the parcel. The deceleration lane at the eastern intersection will allow for the safe entry of warehouse trucks to access the loading docks and trailer parking surrounding the buildings. The new intersection provides the only truck access to the site, and also allows for a secondary exit for the warehouse trucks. This truck entrance/exit provides two inbound lanes, each of approximately 2,300-feet, for trucks entering and one lane for trucks exiting the facility and includes a security building and security gates. Approximately 61 trucks could queue within the inbound lanes without spilling back to the new signalized intersection or the shared intersection for the parcel to the east.

It is noted that the 1.46 acres of land along the Delta Mendota Canal (which is within the Project site but outside the Development Area) would be maintained as an access point for Canal-related maintenance and overflow and may be improved with large rocks and landscaping.

Trip Generation

Trip generation for the proposed Project was calculated using the e-Commerce trip generation rates provided by the *Tracy Costco Depot Transportation Impact Analysis Report* (Kittelson and Associates, August 28, 2017). These rates were then split into passenger car and truck trips based on Institute of Transportation Engineers' (ITE) guidance for high-cube and warehousing facilities. These rates were compared against the City trip rates and ITE trip rates. The e-commerce rates from Costco are higher than the City and ITE trip rates. The trip generation estimates are provided in Table 3.13-1. As shown, the proposed Project is anticipated to generate 401 AM peak hour (377 IN / 24 OUT) and 87 PM peak hour (19 IN / 68 OUT) gross trips.

TABLE 3.13-1: PROJECT TRIP GENERATION ESTIMATES

LAND USE	*SIZE*	*AM PEAK HOUR*			*PM PEAK HOUR*		
		TOTAL	*IN*	*OUT*	*TOTAL*	*IN*	*OUT*
TRIP GENERATION RATE PER 1,000 SQUARE FEET							
Costco E-Commerce Warehouse[1]	KSF	0.23	94%	6%	0.05	21%	79%
	TRIP GENERATION ESTIMATES						
Building 1	**543.326**	**125**	**118**	**7**	**27**	**6**	**21**
Passenger Cars		*86*	*81*	*5*	*21*	*5*	*16*
Trucks		*39*	*37*	*2*	*6*	*1*	*5*
Building 2	**1,201.727**	**276**	**259**	**17**	**60**	**13**	**47**
Passenger Cars		*190*	*179*	*11*	*47*	*10*	*37*
Trucks		*86*	*80*	*6*	*13*	*3*	*10*
Total New Project-Generated Trips		***401***	***377***	***24***	***87***	***19***	***68***
Passenger Cars		*276*	*260*	*16*	*68*	*15*	*53*
Trucks		*125*	*117*	*8*	*19*	*4*	*15*

SOURCE: KIMLEY HORN, 2021.

Trip Distribution

PROJECT CONDITIONS

Project trips were distributed on the area road network based on existing and planned truck routes, current travel patterns for trucks and employees, and input from the applicant. The following provides the passenger car distribution for Project Conditions:

- 23% to/from the east along I-580
- 3% to/from the west along I-580
- 2% to/from the west along I-205
- 15% to/from the north along Mountain House Parkway
- 26% to/from the east along I-205
- 6% to/from the north along Lammers Road
- 23% to/from the east along Valpico Road
- 2% to/from the south along Lammers Road

The following provides the assumed truck distribution that was provided by Kittelson and Associates:

- 37% to/from the east along I-580
- 19% to/from the west along I-580
- 11% to/from the west along I-205
- 33% to/from the east along I-205

Refer to Figure 3.13-1 and Figure 3.13-2 for the Project Background Conditions passenger car trip distribution and assignment, respectively. Refer to Figure 3.13-3 and Figure 3.13-4 for the Project Background Conditions truck trip distribution and assignment, respectively.

METHODOLOGY

This section describes the analysis methods used to determine impacts associated with transportation and circulation as defined by CEQA that would result from implementation of the Project.

VMT CEQA Guidelines

As discussed previously, VMT is now the primary metric for analyzing traffic impacts. This analysis relies on guidance provided in the OPR Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018) to assess the Project's VMT impact. Specifically, this analysis considers the following:

- Does the Project meet one or more of the "screening thresholds" identified in the Technical Advisory, such that a detailed analysis is not necessary?
- If so, what information or data is available to support the conclusion that the Project meets the screening threshold and should be considered to have a less-than-significant transportation impact?

Per OPR guidance, if the Project does not meet one or more of the "screening thresholds," this analysis would proceed to a detailed analysis of the Project's VMT impact. This includes quantifying the Project's VMT generation and determining whether this VMT generation would meet the City recommended thresholds of significance.

As noted previously, the proposed Project's VMT-related impacts were evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.4 VMT per employee. As noted previously, the City plans to adopt the VMT Policy, including the VMT Calculator, in November 2022.

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Significant and Unavoidable)

The proposed Project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.4 VMT per employee. The City's VMT Calculator estimates that the Project would generate 24.8 VMT per employee, and the Project exceeds the threshold by 164 percent. It should be noted that truck trips are exempted from VMT analysis per SB 743.

Per the City's VMT threshold and CEQA guidance per SB 743, this impact would be significant. For projects that would cause a VMT impact, VMT reduction strategies (such as introducing TDM, or additional multimodal infrastructure) can be implemented to reasonably mitigate the VMT impact. The reductions strategies and effectiveness are estimated from research literature and case studies.

However, because the Project exceeds the City threshold by 164 percent, a reduction below the City's VMT threshold is not feasible using solely TDM strategies. Based on empirical data, the California Air Pollution Control Officers Association (CAPCOA) indicates that up to 15 percent of VMT reduction can reasonably be achieved through TDM strategies. Because the City is developing the VMT Mitigation Banking program, assuming the City adopts the program, the applicant will have the option to also pay a fee to "purchase" VMT reductions (i.e., pay to off-set the Project VMT impact) to further reduce the impact beyond the reductions attributable to Project-appropriate TDM measures. For the purpose of this analysis, a maximum of 15 percent banking is assumed, i.e., the project will reduce its VMT impact by 15% using the VMT Mitigation Banking program.

The TDM Program for the proposed Project recommends TDM measures that would individually reduce the Project's VMT and trips with the goal of obtaining a feasible maximum of 15 percent VMT reduction. Table 3.13-2 lists the TDM measures that could partially mitigate the Project's VMT impact. And the table includes a column for those two TDM measures that have been deemed feasible by the applicant. It is noted that not all of the TDM measures listed in the table have been deemed feasible for the proposed Project.

TABLE 3.13-2: TDM MEASURES

TDM MEASURE	*DESCRIPTION*	*MAX. VMT REDUCTION*	*MEASURES DETERMINED TO BE FEASIBLE BY THE APPLICANT*	*VMT REDUCTION APPLIED*
PARKING STRATEGIES				
Reduce Parking Supply	Reduce the number of available parking spots provided to employees.	1%		0%
Unbundle Parking	Remove free parking at the site, and charge employees for parking. The higher the cost of parking, the higher the reduction.	1%		0%
Parking Cash-out	Provide employees a choice of forgoing current parking for a cash payment to be determined by the employer. The higher the cash payment and eligible employees, the higher the reduction.	2%		0%
PARKING STRATEGIES				
Transit Stops	Coordinate with local transit agency to provide bus stop near the site. Real time transportation information displays support on-the-go decision making to support sustainable trip making.	1%		0%
Implement Neighbor-hood Shuttle	Implement project-operated or project-sponsored neighborhood shuttle serving residents, employees, and visitors of the project site.	2%		0%
Transit Subsidies	Involves the subsidization of transit fare for residents and employees of the project site. This strategy assumes transit service is already present in the project area.	2%		0%
	Pays for employees to use local transit. This could either be a discounted ticket or a full-reimbursed transit ticket.			
COMMUNICATION & INFORMATION STRATEGIES				
Travel Behavior	Involves the development of a travel behavior change program that targets individuals' attitudes, goals, and	1%		0%

TDM Measure	*Description*	*Max. VMT Reduction*	*Measures Determined to be Feasible by the Applicant*	*VMT Reduction Applied*
Change Program	travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Provide a website that allows employees to research other modes of transportation for commuting. Employee-focused travel behavior change programs target individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits.			
Promotions & Marketing	Involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices with passive educational and promotional materials. Marketing and public information campaign to promote awareness of TDM program with an on-site coordinator to monitor program.	1%		0%
Commuting Strategies				
Employer Sponsored Vanpool or Shuttle	Implementation of employer-sponsored employee vanpool or shuttle providing new opportunities for access to connect employees to the project site.	2%		0%
Emergency Ride Home (ERH) Program	Provides an occasional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available.	1%	X	1%
Tele-commuting Alternative work schedule	Four-Ten work schedule results in 20% weekly VMT reduction, 10% trip reduction equals 15% VMT reduction.	7%		0%
On-site Childcare	Provides on-site childcare to remove the need to drive a child to daycare at a separate location.	1%		0%
Shared Mobility Strategies				
Ride Share Program	Increases vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. Need a point person form the business on-site.	2%		0%
Employee/ Employer Car Share	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on -site.	1%		0%
Designated Parking Spaces for Car Share Vehicles	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a	1%	X	1%

TDM Measure	*Description*	*Max. VMT Reduction*	*Measures Determined to be Feasible by the Applicant*	*VMT Reduction Applied*
	project-specific fleet that supports the residents and employees on -site.			
Bicycle Infrastructure Strategies				
Bike Share Program	Participate in a bike share program/On site bike share program.	1%		0%
Implement/ Improve On-street Bicycle Facility	Implements or provides funding for improvements to corridors and crossings for bike networks identified within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel.	1%		0%
Include Bike Parking Per City Code	Implements short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations.	1%		0%
Include Secure Bike Parking and Showers	Implements additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel.	1%		0%
Bicycle Repair Station/ Services	On-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.	1%		0%
Neighborhood Enhancement Strategies				
Traffic Calming Improve-ments	Implement traffic calming improvements on streets and intersections throughout and around the project site.	1%		0%
Pedestrian Network Improve-ments	Implement pedestrian network improvements throughout and around the project site that encourages people to walk.	2%		0%
Miscellaneous Strategies				
Virtual Care Strategies for Hospitals	Implement options for virtual care for health services for hospitals.	2%		0%
On-Site Affordable Housing	Provide a percentage of on-site affordable housing for employees that is less than 100%.	1%		0%
Job Creation Land Use (e.g. Office)	Provide offices or other job creation land use. Applies to housing projects.	3%		0%
			TOTAL VMT REDUCTION APPLIED	**2%**

Source: Kimley Horn, 2022.

This TDM program aims to achieve a feasible maximum of 2 percent VMT reduction, with the opportunity for 13 percent VMT reduction coming from the VMT Banking Fee Program as discussed below. In the case that the VMT Banking Fee Program is not in place, the TDM program will need to achieve the full 15 percent.

The City of Tracy's Draft VMT Mitigation Banking Fee Program is a programmatic approach to respond to the need for feasible VMT mitigation programs. Programmatic approaches that rely on collectively funding larger projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The Draft VMT Mitigation Banking Fee Program calculate the cost per VMT reduction as $633.11. Therefore, to achieve a 13 percent reduction needed after implementation of the TDM program, the Project would be responsible to pay $510,286.66. Since there are 250 employees, each employee's VMT needs to be reduced by 3.224 VMT at a cost of $633.11 per VMT the calculation is as follows:

VMT Banking Fee = 250 employees x 3.224 VMT per employee x $633.11 per VMT.

Mitigation Measure 3.13-1, which requires travel demand management (TDM) strategies, would be required. Implementation of Mitigation Measure 3.13-1 is feasible because it is within the applicant's purview to implement and the TDM measures have been found effective in previous academic studies. However, the precise effectiveness of specific TDM strategies can be difficult to accurately measure due to a number of external factors such as employee responses to strategies and changes to technology.

As part of Mitigation Measure 3:13-1, the proposed Project would be required to monitor and evaluate the effectiveness of the Project's TDM Plan and provide the results to the City of Tracy. Based on the results of the evaluation, modifications to the TDM Plan may be required by the City in order to improve effectiveness toward achieving the home-based work VMT per worker target.

Based on the above, even with the implementation of Mitigation Measure 3.13-1, the impact would remain ***significant and unavoidable*** when compared to the City of Tracy's VMT threshold of significance.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-1: *The Project applicant shall implement feasible Transportation Demand Management (TDM) strategies, which would decrease the VMT generated by the Project by 15 percent. Specific potential TDM strategies include, but are not limited to, the following:*

- *Emergency Ride Home (ERH) Program*
- *Designated Parking Spaces for Car Share Vehicles*

The TDM Plan shall be submitted to the City for review prior to approval of improvement plans, and the effectiveness of the TDM Plan shall be evaluated, monitored, and revised, if determined necessary by the City. The TDM Plan shall include the TDM strategies that will be implemented during the lifetime of the proposed Project and shall outline the anticipated effectiveness of the strategies. The

anticipated effectiveness of the TDM Plan may be monitored through annual surveys to determine employee travel mode split and travel distance for home-based work trips, and/or the implementation of technology to determine the amount of traffic generated by and home-based work miles traveled by employees, which shall be determined in coordination with the City. The frequency and duration of the anticipated effectiveness would depend on the ultimate strategy determined in coordination with the City. Additionally, the Project applicant shall pay any VMT banking fee in effect at the time of building permit issuance to secure VMT credits of a total of 15 percent for the subject building, taking into account the stated percent efficacy for the TDM measures above.

Impact 3.13-2: Project implementation would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities (Less than Significant)

Implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

As described in the Environmental Setting, there is currently no existing pedestrian, bicycle, or transit service/facility within the undeveloped Project area. The City of Tracy General Plan describes an interconnected, hierarchical system of sidewalks, on-street bike lanes, and off-street trails for pedestrians and bicyclists that provides access to this area of the City of Tracy. The Project's transportation and circulation system is designed to accommodate access to and from West Schulte Road and pedestrian/bicycle facilities connecting each of the buildings to these roadways, as well as future emergency access vehicles which may be required from the planned future Hansen Road alignment along the southern boundary of the Project site.

Additionally, as noted previously, the City's TMP builds upon the goals and objectives as defined in the Circulation Element of the City's General Plan (February 2011) and the Sustainable Action Plan (SAP) (February 2011). The TMP provides a complete review of the City's transportation system and serves as a comprehensive planning document that can be utilized to identify and implement required improvements to the existing roadway system. In addition, the TMP can serve as the baseline for incorporating expansion or accommodating future development consistent with the recent General Plan update. The proposed Project does not conflict with the City's TMP. The traffic analysis for the Project was completed consistent with the goals and policies of the TMP, including the required TDM Program.

Overall, this impact would be ***less than significant***.

Impact 3.13-3: Project implementation would not 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 with Mitigation)

CONSTRUCTION

Construction of the proposed project would require regular deliveries of equipment and materials to the Project site as well as daily trips by construction workers. Project construction activities, including the extension of utility infrastructure, may result in some temporary lane closures in the area. Furthermore, standard construction traffic control measures would be implemented consistent with applicable Caltrans and City policies, such as Mitigation Measure 3.13-2, which would require the preparation and implementation of a construction traffic control plan that would reduce the potential for construction vehicle conflicts with other roadway users. With implementation of mitigation, this impact would be ***less than significant***.

OPERATION

Implementation of the proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards for the City of Tracy. The Project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design.

As noted previously, vehicle ingress/egress to/from the Project site will occur from three points along West Schulte Road. The main entry and exit point for employee vehicles would be located at the center of the site, at the existing signalized Bud Lyons Way intersection. The Bud Lyons Way driveway would also serve as a secondary exit with security gates for warehouse trucks, and no truck entry would be permitted. The main Bud Lyon Way driveway access would provide a deceleration lane for eastbound traffic and would have full turning movements to enter and exit the site. The deceleration lane at the Bud Lyons intersection will allow for the safe entry of employee vehicles to the site and access the parking adjacent to and in front of each building.

The second access driveway located at the Project site's northeast boundary includes a new signalized intersection and a deceleration lane for trucks traveling eastbound on West Schulte Road. This driveway would be the entrance for all truck traffic. A shared accessway to the adjacent parcel to the east is also provided with a left-hand turn pocket to provide access to the parcel. The deceleration lane at the eastern intersection will allow for the safe entry of warehouse trucks to access the loading docks and trailer parking surrounding the buildings. The new intersection provides the only truck access to the site, and also allows for a secondary exit for the warehouse trucks. This truck entrance/exit provides two inbound lanes, each of approximately 1,600-feet, for trucks entering and one lane for trucks exiting the facility and includes a security building and security gates. Approximately 42 trucks could queue within the inbound lanes without spilling back to the new signalized intersection or the shared intersection for the parcel to the east.

The Project does not propose any new roadways or transportation facilities that would be inconsistent with applicable design standards for the City of Tracy. The Project proposes an increased land use density, which would result in increased travel activity, including vehicle (cars and trucks), bicycle, pedestrian, and potentially transit trips. In order to provide access to and from the Project site, the accesses along West Schulte Road will be designed to serve automobiles, bicyclists, pedestrians, and Surface Transportation Assistance Act (STAA) vehicles. The Project design would also be subject to the City's Engineering Design & Construction Standards, which includes a section for Street Design Standards. These Project-generated trips would be served by existing and planned facilities that are constructed to applicable design standards to serve these travel modes. Therefore, the proposed Project would not result in a change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned roadways and transportation facilities. This impact would be ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-2: *Prior to the start of construction, the Project applicant shall prepare and submit a Construction Traffic Control Plan. The Plan shall include the following items. The approved Plan shall be implemented during construction of the Project.*

- *Project staging plan to maximize on-site storage of materials and equipment.*
- *Permitted construction hours.*
- *Location of construction staging.*
- *Provisions for street sweeping to remove construction-related debris on public streets.*
- *A set of comprehensive traffic control measures including scheduling of major truck trips and deliveries to avoid peak-hours; lane closure proceedings; signs, cones, and other warning devices for drivers; and designation of construction haul routes.*
- *Survey of the pavement condition on roadways to be used as part of the haul route(s) or any alternate route(s) that are proposed to be utilized by hauling operation for the Project prior to the commencement of any work on-site. The survey shall include a video tape of the roadways. The Project applicant shall complete any remedial work prior to initiation of use and provide a bond assuring completion of the remediation work triggered by the individual development proposal, the amount which shall be deemed sufficient by the Public Works Department. If the work is completed before the use of the proposed buildings, a bond shall not be required.*

Impact 3.13-4: Project implementation would not result in inadequate emergency access (Less than Significant)

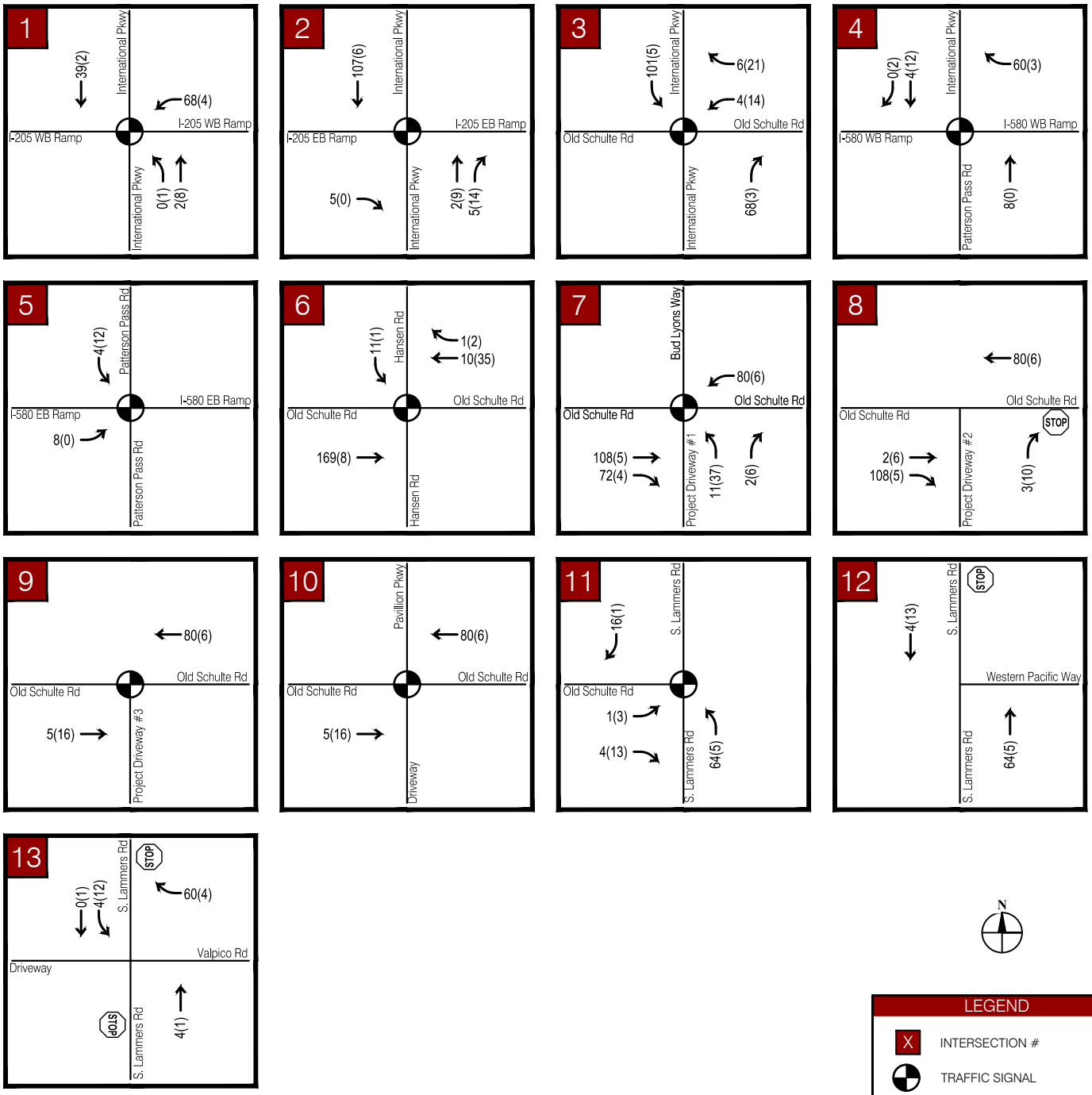
Implementation of the proposed Project would not create roadway and transportation facilities that impede access for emergency response vehicles. The proposed site accessways, improvements to the West Schulte Road and Bud Lyons Way intersection, and internal transportation network is designed to maintain levels of accessibility for police and fire response times, which ensures vehicles have the necessary access when responding to an emergency.

Several emergency (police and fire) services are located within the Project study area. The internal circulation is designed to meet City code for emergency vehicle access and would maintain high levels of emergency vehicle accessibility and mobility, which ensures vehicles have the necessary access when responding to an emergency. Emergency vehicles arriving from West Schulte Road will have unimpeded access to the Project site. Therefore, this impact would be ***less than significant***.



Figure 3.13-1
Passenger Car Project Trip Distribution
Background Plus Project Conditions

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Kimley»Horn

December 2021

Figure 3.13-2

Passenger Car Background Project Assignment

Background Plus Project Conditions

Tracy Costco Direct Delivery Center

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Figure 3.13-3
Truck Project Trip Distribution
Background Plus Project Conditions

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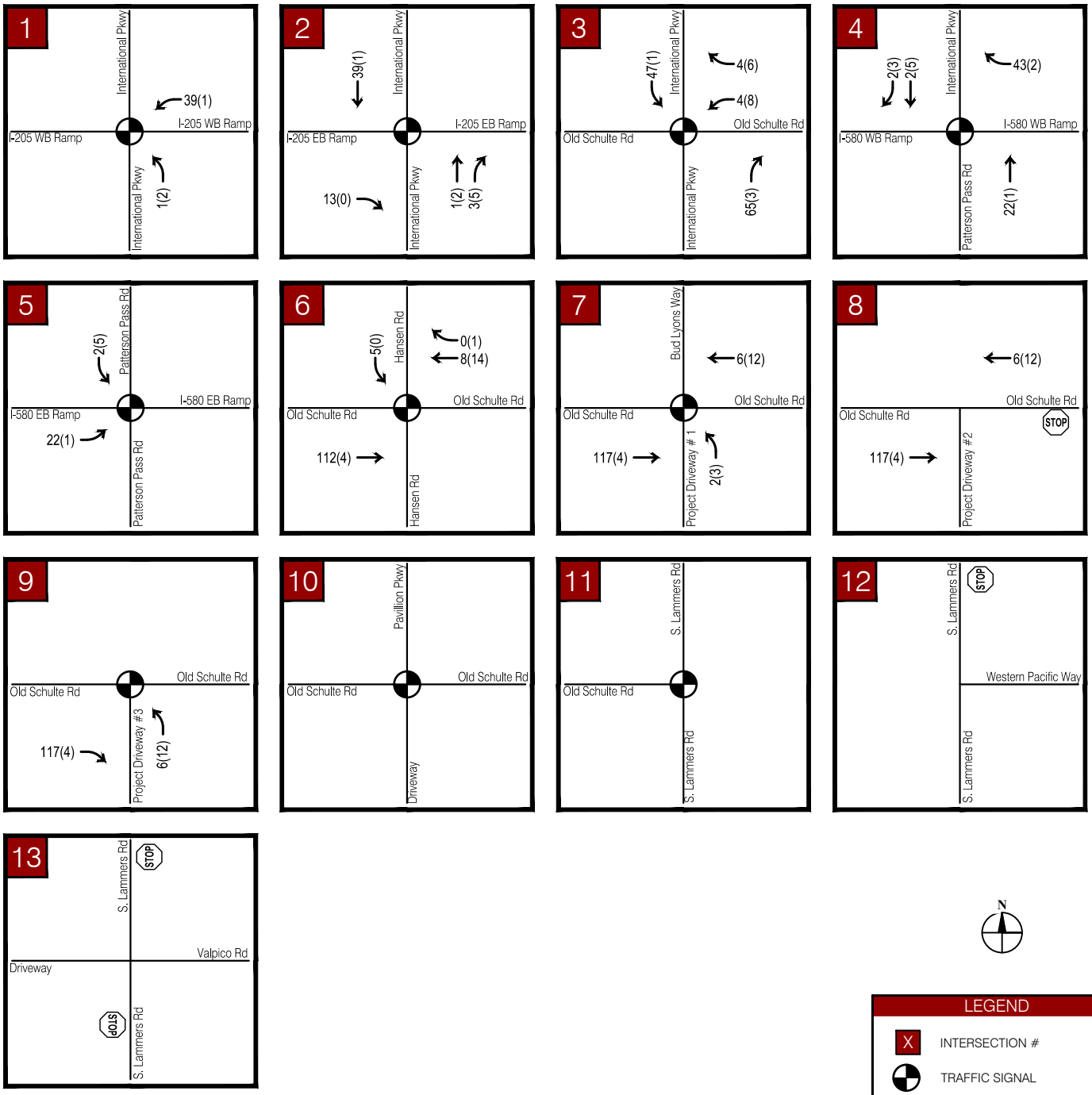


Figure 3.13-4

Truck Background Project Assignment

Background Plus Project Conditions

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December 2021

Tracy Costco Direct Delivery Center

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This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from Project implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. This section is based in part on the following documents, reports and studies: *California's Groundwater,* CalRecycle *Solid Waste Information System,* CalRecycle *Jurisdiction Diversion/Disposal Rate Summary*, *Urban Water Management Plan* (2020), Citywide *Water System Master Plan* (2012), Citywide *Storm Drainage Master Plan* (2021) *Wastewater Master Plan* (2012), *Citywide Public Facilities Master Plan* (2012), *Tracy Costco Project Water Supply Assessment* (West Yost, 2020), and Tracy Costco Depot (Project) Annexation EIR Support (Carollo Engineers, Inc., 2021).

No comments on the Notice of Preparation (NOP) were received regarding this environmental topic.

3.14.1 WASTEWATER SERVICES

ENVIRONMENTAL SETTING

The City of Tracy's wastewater collection system consists of gravity sewer lines, pump stations and the Wastewater Treatment Plant (WWTP). The City has a municipal wastewater system handling both domestic and industrial wastewater. Wastewater flows toward the northern part of the city where it is treated at the WWTP and then discharged into the Old River in the southern Sacramento-San Joaquin Delta. The City of Tracy (City) is projecting residential and non-residential growth within its sphere of influence (SOI) that will require expansion of existing wastewater conveyance and treatment infrastructure. At the time of commencement of the Wastewater Master Plan, the City's population of approximately 81,000 people generated an average dry weather flow (ADWF) of 9.5 million gallons per day (mgd). This flow is treated at the City's WWTP, which has an ADWF design capacity of 10.8 mgd. Future ADWF within the City's SOI is estimated at 21.1 mgd with the addition of currently proposed development projects.

Wastewater Conveyance

The existing wastewater collection system consists of three major interceptor systems. The Eastside collection system conveys wastewater from areas in the southeastern and eastern parts of the city, including the Northeast Industrial Area. The Corral Hollow sewer system conveys wastewater, mainly from residential development, from the southwestern part of the city. The Hansen sewer system conveys wastewater from the western and northern parts of the City including the Patterson Pass Business Park and the West Valley Shopping Center. The downtown area conveys wastewater directly to the WWTP using sewer mains in Holly Drive.

Wastewater Treatment

Wastewater from the City is currently treated at the WWTP. The WWTP is located between MacArthur Drive and Holly Drive just north of Interstate 205. The National Pollutant Discharge Elimination System (NPDES) permit CA 0079154 allows for discharge of 10.8 mgd and up to 16 mgd if applicable treatment facilities are constructed. The WWTP provides disinfected tertiary level

treatment meeting Title 22 requirements of the Code of Regulations from the State Water Resource Control Board. The WWTP includes primary clarifiers, activated sludge, secondary clarifiers, flocculation, tertiary filtration, and disinfection.

The City's WWTP currently provides tertiary-level treatment for all flows received within the City's limits. Influent wastewater is primarily from domestic sources with the exception of industrial flows generated by Leprino Foods. Leprino Foods provides pretreatment to their industrial flows and sends it to the main plant for further treatment, entering at the primary clarifier. Treated and disinfected effluent is discharged to Old River via a 3.5-mile outfall pipeline and diffuser system. Stabilized biosolids are dried and hauled offsite for land application. There have been several modifications to the WWTP, with the extensive upgrades completed in 2007. At present, an additional digestor and primary clarifier is under construction to create additional treatment capacity to meet existing demands.

The existing headworks system includes three mechanical screens operating in a duty/ duty/standby configuration with a PWWF flow capacity of 38.7 mgd. Screen openings are 6 millimeters (mm) and provide acceptable trash removal for the current treatment scheme. Three screenings washer compactors are installed to remove organics from the screened material, which are then compacted and discharged to a hopper for disposal to landfill. Primary treatment includes a 90-foot-diameter circular clarifier, and an additional circular clarifier is under construction for future use.

A new activated sludge system was brought online as part of the 2007 construction project to replace the trickling filter activated sludge system. The activated sludge system comprises three 1.69-million-gallon (MG) aeration basins with anoxic selectors. Anoxic selectors comprise approximately 17 percent of the total basin volume and are equipped with mixers to keep solids in suspension. Fine-bubble diffusers are used to distribute the low-pressure air supply to the aerobic zones. Three mixed-liquor return pumps are installed for selector operation and not for enhanced nitrogen removal. Solid separation is provided by three 100-foot diameter secondary clarifiers with a 14-foot-sidewater depth.

Secondary effluent is filtered using conventional deep bed filters with anthracite media. The filtration system includes eight cells with a total filter area of 4,400 square foot (ft^2). This results in a hydraulic loading rate of 2.9 gallons per minute per square foot (gpm/ft^2) at 16 mgd and 4.9 gpm/ft^2 at 27 mgd, with the latter being the current equalized flow rate. A chemical feed and storage system allows the plant to dose polymer upstream of the filters for enhanced performance.

The WWTP's disinfection system comprises chlorination and dichlorination processes. Tertiary effluent is dosed with chloramines and conveyed to chlorine contact basins for pathogen reduction. The current target chlorine concentration entering the chlorine contact basins is 10 mg/L. Chlorine and ammonia injection is achieved using an in-line chemical induction system that allows mixing of the chemical solutions prior to injection to the tertiary effluent. Six chlorine contact basins have a total volume of 1.15 MG, each consisting of a baffled basin to provide plug flow conditions and to prevent short circuiting. Dichlorination is provided using sulfur dioxide to

neutralize the chlorine from the plant effluent before discharging into Old River. Post-aeration is provided to achieve a final effluent dissolved oxygen concentration of 5 mg/L, as required by the NPDES permit.

Solids handling includes thickening, stabilization, and dewatering processes. Waste activated solids (WAS) are currently thickened using two dissolved air floatation thickeners. Thickened WAS is pumped to digestion via progressing cavity pumps. Thickened WAS and primary sludge are stabilized with two 75-foot anaerobic digesters. Digester gas is used to fuel boilers for digester heating as well as produce hot water for use in Headworks screen cleaning with unused gas flared to the atmosphere. Digested solids are centrifuged as well as dewatered in drying beds with a total area of approximately 445,000 ft.

Planned Infrastructure Upgrades

Both the 2012 Citywide Water System Master Plan and Tracy Wastewater Master Plan included recommended capital improvement projects for the development of the City's recycled water system, including pump station and pipeline facilities to deliver recycled water within the City's service area for use for landscape irrigation and other non-potable uses. To date, the City has spent approximately $85 million on improvements to the City's Wastewater Treatment Plant to allow for the production of tertiary treated wastewater meeting Title 22 requirements for recycled water use for landscape irrigation and other non-potable uses.

In March 2019, the City received an amended order from the State Water Resources Control Board (SWRCB) approving the change in place of use of its treated wastewater. The order allows for the City to change the point of discharge and place of use of treated wastewater by a reduction in discharge to Old River of up to 8.1 mgd, with a maximum annual limit of 5,900 acre-feet per year (AFY) and use the treated wastewater for industrial and irrigation purposes within the service areas of the City's Sphere of Influence, BBID within the City's Sphere of Influence and WSID. The City recently completed construction of a recycled water pump station at the City's WWTP and a recycled water pipeline from the WWTP west to Lammers Road and south to Kimball High School using the Proposition 84 grant funding mentioned above. A second phase of construction will include a second pump station and additional recycled water pipeline to further extend the distribution of recycled water supplies within the City.

Further, the City's Wastewater Master Plan outlines future WWTP improvement projects, prioritized in the following order:

- Upgrade existing facilities to mitigate current capacity deficiencies.
- Upgrade existing facilities to accommodate increased wastewater flows associated with long term planning (2040) and buildout.
- Construct new infrastructure required to serve future users.

REGULATORY SETTING

Clean Water Act / National Pollutant Discharge Elimination System Permits

The Clean Water Act (CWA) is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, storm water associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment usually in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before being discharged to surface water.

The City's current NPDES Permit, which regulates the wastewater effluent quantity and quality upon discharge, was issued by the Central Valley Regional Water Quality Control Board and is Order R5-2007-0038.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the SWRCB has the authority and responsibility for establishing policy related to the

State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge.

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant wastewater. General Plan policies applicable to the Project are identified below:

POLICIES: PUBLIC FACILITIES ELEMENT

- PF-7.1-P1. The City shall maintain wastewater conveyance, treatment and disposal infrastructure in good working condition in order to supply municipal sewer service to the City's residents and businesses.
- PF-7.1-P2. The City shall expand the existing wastewater treatment plant to the extent possible or pursue a single new west side facility instead of building new facilities at multiple locations to meet future needs.
- PF-7.1-P3. New habitable structures located within the City limits shall connect to the public wastewater collection system.
- PF-7.2-P1. Wastewater collection and treatment facilities shall be designed to serve expected buildout of the areas served by these facilities but constructed in phases to reduce initial and overall costs.
- PF-7.2-P2. The City shall construct new wastewater trunk lines as needed. Individual development projects shall be responsible for construction of all collection lines other than trunk lines.
- PF-7.2-P3. The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater collection and treatment system to serve the project.
- PF-7.2-P4. "Package" treatment plants shall not be allowed in the City.
- PF-7.2-P5. New development shall fully fund the cost of new wastewater treatment and disposal facilities.
- PF-7.2-P6. Prior to any development approvals within an Urban Reserve, the City shall complete new wastewater master planning and wastewater treatment and disposal studies, particularly for the west side of the city. These studies are to be funded by proponents of new development and must show how adequate wastewater treatment will be provided to the Urban Reserve in question.
- PF-7.3-P1. New wastewater treatment plants should be located to allow for distribution of recycled water to application areas by gravity flow where feasible.
- PF-7.3-P2. The City shall integrate public facilities and wastewater reclamation sites with agricultural and open space preservation programs where feasible.

- PF-7.3-P3. Biosolid disposal shall be managed so as to minimize impacts to the environment and public health.
- PF-7.3-P4. The City shall establish wastewater treatment demand reduction standards for new development and redevelopment to reduce per capita and total demand for wastewater treatment.

City of Tracy Municipal Code

The City of Tracy Municipal Code (Code), Article 4, Wastewater Discharge Surveys, Permits, Monitoring, and Administration, consists of a number of provisions relating to wastewater, including Section 5.24.390 (Wastewater discharge surveys) which requires that all potential dischargers, as determined by the City, must file an annually updated Discharge Survey Report. Section 5.24.410 (Mandatory Discharge Permits) requires significant industrial users connecting to or discharging into the sewer to obtain a wastewater discharge permit. The application for the wastewater discharge permit must include a baseline monitoring report that details wastewater constituents and characteristics and total, average, and peak wastewater flow rates, spill prevention and control measures, and certification that Pretreatment Standards are being consistently met, in compliance with Section 5.24.440 (Permit application and baseline monitoring report) of the Code. Wastewater Discharge Permits may contain a variety of conditions, as described in Section 5.24.450 (Permit conditions) of the Code, including the average and maximum allowable wastewater constituents and characteristics, limits on rate and time of discharge, specifications for monitoring programs, civil penalties and fees for non-compliance, and specifications as to what waste streams are authorized for discharge. Other sections of the Code relevant to wastewater include Section 5.24.550 (Data Collection) and Section 5.24.560 (Reporting Requirements) which describe the information that wastewater dischargers must provide, how such information will be collected, and the various standards that must be met in order to comply with discharge reporting requirements.

Utility Master Plans

The City of Tracy maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *Urban Water Management Plan* (2020), *Citywide Water System Master Plan* (2012), *Citywide Storm Drain Master Plan* (2021) *Wastewater Master Plan* (2012), and the *Citywide Public Facilities Master Plan (2012)*.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

- Require or result in the relocation or construction of new or expanded wastewater treatment and/or collection facilities, the construction of which could cause significant environmental effects.

- Result in a determination by the wastewater treatment provider which serves or may serve the Project that it does not have adequate capacity to serve the project's projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The proposed project does not have the potential to result in a determination by the wastewater treatment and/or collection provider which serves the project that the provider does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (Less than Significant)

WASTE DISCHARGE REQUIREMENTS (WDRS) BOARD ORDER NUMBER NO R5-2007-0036 (NPDES PERMIT NO. CA0079154).

The NPDES permit for the Tracy WWTP was adopted in May 2007 with proposed amendments initiated in 2008 and 2010. Treated wastewater from the Tracy WWTP is discharged to Old River under Order No. R5-2007-0036 (NPDES No. CA0079154). Because, in the opinion of the Water Board, there is a potential impact to groundwater at the facility, the Tracy WWTP's industrial pretreatment ponds, industrial holding ponds, sludge drying beds, and biosolids storage areas of the facility are regulated by separate waste discharge requirements as defined in Order No. R5-2007-0038. The NPDES permit CA 0079154 allows for discharge of 10.8 mgd and up to 16 mgd if applicable treatment facilities are constructed. The WWTP provides disinfected tertiary level treatment meeting Title 22 requirements of the Code of Regulations from the State Water Resource Control Board. The WWTP includes primary clarifiers, activated sludge, secondary clarifiers, flocculation, tertiary filtration, and disinfection.

The City's WWTP currently provides tertiary-level treatment for all flows received within the City's limits. Influent wastewater is primarily from domestic sources with the exception of industrial flows generated by Leprino Foods. Leprino Foods provides pretreatment to their industrial flows + disinfected effluent is discharged to Old River via a 3.5-mile outfall pipeline and diffuser system. Stabilized biosolids are dried and hauled offsite for land application. There have been several modifications to the WWTP, with the most recent and extensive upgrades completed in 2007 and most recently an additional digestor and primary clarifier is under construction to create additional treatment capacity to meet existing demands.

The existing headworks system includes three mechanical screens operating in a duty/ duty/standby configuration with a PWWF flow capacity of 38.7 mgd. Screen openings are six mm and provide acceptable trash removal for the current treatment scheme. Three screenings washer compactors are installed to remove organics from the screened material, which are then compacted and discharged to a hopper for disposal to landfill. Primary treatment includes three sedimentation basins, one 90-foot-diameter circular clarifier, and two 72-foot by 32-foot rectangular clarifiers. Currently, only the circular clarifier is in service, with the rectangular basins on standby.

The City of Tracy's wastewater treatment system is currently in compliance with the WDR requirements of Order No. R5-2007-0036 NPDES NO. CA0079154 ("WDR Order"). The wastewater treatment system options covered under this Order include: City of Tracy WWTP including the collection system, basin/disposal fields, discharge to the Old River, and recycling conveyance and irrigation system.

The City's *Wastewater Quality Master Plan Update* includes projected wastewater generation factors for various land uses. The study includes a reduction of industrial and general commercial wastewater generation factors to reflect historical water use data from local businesses.

The overall collection sewer strategy for the City of Tracy, including the proposed Project, consists of a combination trunk sewer gravity collection system with pump or lift stations located along the collection system to convey wastewater to an influent pump station located at the City WWTP.

According to the City's 2012 Wastewater Master Plan, Industrial uses are estimated to generate 1,500 gallons per gross acre per day. The Development Area includes approximately 103 acres of Industrial uses. Using this rate, the proposed Industrial uses would generate approximately 154,500 gallons per day (gpd) of wastewater. The proposed Project would increase the amount of wastewater requiring treatment. The wastewater would be treated at the WWTP, which has an ADWF design capacity of 10.8 mgd. Additionally, the City is in the process of constructing a project to increase the capacity of the WWTP to manage growth in the future. According to the Wastewater Letter Report completed for the Project (see Appendix H), the existing WWTP has the capacity to treat and dispose of the proposed 0.078 mgd increase in flows from the Costco project. Occupancy of the proposed Project would be prohibited without sewer allocation.

The development of the proposed Project under this permitted option would not exceed the wastewater discharge requirements in the WDR Order. The proposed Project is anticipated to have a ***less than significant*** impact relative to this topic.

Impact 3.14-2: The proposed Project has the potential to require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. Sizing of existing infrastructure in the City varies based on location, but generally includes gravity sewers and force mains ranging in size from 8 to 24 inches, and pump stations. Currently, the project site has an existing 8-inch sewer line within Schulte Road which flows into the City's wastewater collection system. The existing facilities have undergone environmental review and have waste discharge permits from the State. The proposed facilities will be located within the bounds of the Project site, or within the adjacent Schulte Road.

New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific

locations, elevations, and gradients. Utility lines within the Project site and adjacent roadways would be extended throughout the Project site. Wastewater lines would be connected via existing lines along West Schulte Road. Eight-inch sanitary sewer lines are currently located along West Schulte Road. These future on-site effluent collection facilities will discharge into the City system at various locations. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvements plan which will undergo a review by the Public Works Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Tracy standards and specifications. Sanitary sewer disposal and treatment will be to the City of Tracy WWTP.

Utilizing a flow factor of 750 gpd per acre and the Project site acreage of approximately 104 acres, the ADWF resulting from the project would be 78,000 gpd (or 0.078 MGD). See Appendix H for the Costco Depot Wastewater Letter Report. The City of Tracy WWTP has the capacity to treat and dispose of the proposed 0.078 mgd increase in flows from the Costco project. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

3.14.2 WATER SUPPLIES

ENVIRONMENTAL SETTING

The City receives water supplies from three sources: Central Valley Project via the Delta Mendota Canal (DMC), South County Water Supply Project (SCWSP) via the Stanislaus River, and groundwater from nine wells. The United States Bureau of Reclamation (USBR) is the wholesale supplier for the Central Valley Project water and the South San Joaquin Irrigation District (SSJID) is the wholesale supplier for the South County Water Supply Project. The proposed Project, if approved by the City, is capable of being served by the City from the City's existing and future portfolio of water supplies. The water supply for the proposed Project will have the same water supply reliability and water quality as the water supply available to each of the City's other existing and future water customers.

The following information is contained in the *Tracy Costco Depot Project Water Supply Assessment* (West Yost Associates, 2021). The City's most recently adopted *Urban Water Management Plan* (UWMP) was adopted by the City Council in June 2021. The City's 2020 UWMP included existing and projected water demands for existing and projected future land uses to be developed within the City's Sphere of Influence through 2045. The water demand projections in the City's 2020 UWMP included existing City water demands, future water demands for developments within the existing City limit, and future water demands for future service areas outside the existing City limit.

City of Tracy Water Service

This section presents the City's water service area including history and growth information for the City.

CITY OF TRACY WATER SERVICE AREA

The City of Tracy is located in San Joaquin County, California, about 68 miles south of Sacramento and 60 miles east of San Francisco. The existing incorporated area of the City encompasses approximately 22 square miles. The City's General Plan includes the area outside of the City limits that the City expects to annex and urbanize in the future. It is the expected physical limit of the City based on the most current information. During the City's recent General Plan update process and in response to Local Agency Formation Commission (LAFCo) policies established in 2007, revisions to the City's SOI were made to more accurately reflect locations where the City may grow in the future and locations where no urban growth is expected. The recently adopted revised SOI encompasses an area of approximately 42 square miles and is 20 square miles larger than the current City limits.

The City's water service area is coterminous with the City limits. As future developments within the SOI, but outside the City Limits, are approved, they will be annexed into the City and served by the City water system. Figure 2-1 illustrates the current City Limits and the SOI. The Proposed Project is located outside the City's existing City Limits, but within the SOI.

CITY OF TRACY CURRENT AND PROJECTED POPULATION

The State of California Department of Finance (DOF) population estimate for the City as of January 1, 2020 was 95,931 people. In 2020, the City also served 118 residences in the Larch Clover County Services District (CSD), and the average persons per household factor was 3.51 (per DOF). Therefore, the City's total population served in 2020 was estimated to be 96,345.

Future population projections for the City are described in the 2020 UWMP and are summarized as follows. Population growth was rapid in the City over the 15-year period of 1990 through 2005, with the City growing by 139 percent. Between 2005 and 2020, however, growth has slowed relative to historical rates; population increased approximately 68 percent during this 15-year period. The reduction in growth rate has likely been caused by a combination of economic forces, such as the economic downturn of 2008 through 2011, and measures taken by the City to limit growth. In 1987, the City adopted a residential Growth Management Ordinance (GMO), which was amended in 2000 by the voter-initiative Measure A. The objective of the GMO and Measure A is to achieve a steady and orderly growth rate that allows for the adequate provision of services and community facilities and includes a balance of housing opportunities. Under the GMO, builders must obtain a Residential Growth Allotment (RGA) to secure a residential building permit. The GMO limits the number of RGAs and building permits to an average of 600 housing units per year for market-rate housing, with a maximum of 750 units in any single year, although there are exceptions for affordable housing and certain active adult residential uses (General Plan, 2011).

The population estimates for 2020 through 2045 presented in the 2020 UWMP are projected using the methodology used in the City's Water System Master Plan (WSMP) Update, which is currently in draft form. It incorporates assumptions about the number of dwelling units for each proposed development and planning area at buildout, an assumed number of people per dwelling unit (people/du), and the timing of planned development over this time frame. Table 3.14-1 shows the City's projected population in five-year increments to the year 2045.

TABLE 3.14-1: HISTORICAL AND PROJECTED POPULATION FOR CITY OF TRACY WATER SERVICE AREA

CALENDAR YEAR	*ESTIMATED POPULATION*
2015	85,707
2020	96,345
2025	109,900
2030	120,367
2035	130,833
2040	141,300
2045	166,700

SOURCE: CITY OF TRACY 2020 UWMP, TABLE 3-1, CURRENT AND PROJECTED SERVICE AREA POPULATION.

City of Tracy Water Demand

EXISTING AND PROJECTED WATER DEMAND

The City's water demand has increased significantly in the last 30 years. In 1986, the City's water demand was 8,104 AFY and by 2007 the City's water demand had increased to 19,176 AFY. In

recent years, the City's water demand has decreased as a result of the economic downturn of 2008 through 2011 and water use reductions in response to recent drought conditions. Water demands have rebounded (increased) somewhat in recent years with the end of drought conditions and increased development activity. Table 3.14-2 shows the City's water demand (based on water production) from 2012 to 2020.

TABLE 3.14-2: HISTORICAL POTABLE WATER DEMAND

	2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Total Water Demand (AFY)	18,052	18,587	16,213	14,041	15,360	18,160	17,420	17,672	19,527

SOURCE: CITY OF TRACY 2020 UWMP, TABLE 4-2 CURRENT AND HISTORICAL POTABLE WATER DEMAND AND POPULATION, JUNE 2021.

The City's water demand is anticipated to continue to increase as approved projects build out and new developments are approved and constructed within the City's water service area in accordance with the City's General Plan. However, as discussed above, the rate of growth within the City's water service area has slowed as a result of the GMO and the slow economic recovery from the economic downturn between 2008 and 2011. Hence, water demands are not anticipated to increase as rapidly as they have in past years. Buildout for the City is not anticipated within the planning horizon of this WSA. However, in the 2020 UWMP and for the purposes of the WSA, buildout is assumed to occur in 2045 to be conservative in the water reliability analysis.

The 2020 UWMP projected water demands, as documented in the City's 2020 UWMP, are shown in Table 3.14-3. The City's projected future water demand was determined based on adopted potable water use factors for various land uses, which were developed based on historical metered water use data, and anticipated timing of future development projects. Buildout of the Proposed Project is included in the 2025 (near-term) water demand projection. A detailed explanation of the adopted demand projection methodology is provided in the City's WSMP Update. The water demand projections include consideration for reduced future water use as a result of new building codes, improved water use efficiency, and implementation of water conservation measures. The projections also include savings from passive conservation which refers to water savings resulting from actions and activities that do not depend on direct financial assistance or educational programs from the City. These savings result primarily from: (1) the natural replacement of existing plumbing fixtures with water-efficient models required under current plumbing code standards, and (2) the installation of water-efficient fixtures and equipment in new buildings and retrofits as required under CALGreen Building Code Standards.

TABLE 3.14-3: PROJECTED WATER DEMAND, AFY

CONDITION	*2025*	*2030*	*2035*	*2040*	*2045*
Potable Water Demand	20,509	23,100	25,738	28,403	33,079
Recycled Water Demand	1,000	2,067	3,133	4,200	6,300
Total Water Demand	**21,509**	**25,167**	**28,871**	**32,603**	**39,379**

SOURCE: TRACY COSTCO DEPOT WATER SUPPLY ASSESSMENT (WEST YOST ASSOCIATES, 2021).

DRY YEAR WATER DEMAND

The projected future water demand presented in Table 3.14-3 includes continued implementation of the City's existing water conservation program demand management measures and is based on future normal hydrologic years. In the 2020 UWMP, the additional water conservation which may occur in single dry or multiple dry years was not assumed to happen. This was a conservative assumption as additional water conservation would likely occur as a result of the City's implementation of additional water conservation measures as outlined in the City's Water Shortage Contingency Plan in response to multiple dry years or other water supply shortages. The City's Water Shortage Contingency Plan includes shortage response actions to reduce water demand and manage supply for water shortage conditions of up to and greater than 50 percent.

As shown in Table 3.14-2, the City's 2015 demand was significantly lower than 2014 demand in response to the Governor's April 2015 Executive Order B-29-15 mandating 25 percent water conservation statewide. To reduce water use by 25 percent statewide, the SWRCB adopted a regulation which placed each urban water supplier into one of eight tiers which were assigned a conservation standard, ranging between 4 percent and 36 percent. Each month, the SWRCB compared every urban water suppliers' water use with their use for the same month in 2013 to determine if they were on track for meeting their conservation standard. The City was initially placed into Tier 7 with a water conservation standard of 28 percent as compared to 2013 use (the City's conservation standard was reduced to 25 percent in early 2016).

In response, the Tracy City Council authorized the implementation and amendment of the City's Phase III and IV water restrictions in June 2015 (as defined in Chapter 11.28 of the Tracy Municipal Code) to meet SWRCB emergency drought regulations described above. The City's water conservation efforts and results are an example of the City's ability to implement its Water Shortage Contingency Plan and reduce water demands in the event of an emergency water supply shortage. In May 2016, the City's water demand was 32.6 percent less than in May 2013, and the City's cumulative savings from June 2015 to May 2016 was 27.2 percent as compared to 2013, indicating the responsiveness of the City's residents to the call for water conservation[1].

As described above, in the 2012-2016 statewide drought, the City met (exceeded) its water conservation goals of 25 percent. For purposes of the WSA, the City assumes that dry year potable water demand is the same as normal year demand.

City of Tracy Potable Water Supplies

The City currently receives water from the following sources:

- Untreated surface water from the Delta-Mendota Canal (Central Valley Project) (treated at the City's John Jones Water Treatment Plant);

[1] SWRCB May 2016 Supplier Conservation Compliance (data from June 21, 2016), SWRCB Water Conservation Portal – Conservation Reporting.

- Surface water from the Stanislaus River via the South County Water Supply Project (delivered by the SSJID);
- Groundwater pumped from nine groundwater wells located within the City; and
- Untreated surface water from the Byron Bethany Irrigation District (BBID) pre-1914 rights (treated at the City's John Jones Water Treatment Plant).

Also, the City has entered into an agreement with the Semitropic Water Storage District for storage of water supplies for use in dry years and has implemented an Aquifer Storage and Recovery (ASR) Program to allow for injection of surface water supplies into the underlying groundwater basin for storage and later extraction. Each of these existing supplies is described below. Summary tables listing the City's existing and additional planned future water supplies, and historical and anticipated future quantities, are provided following the discussion of the City's additional planned future water supplies.

SURFACE WATER SUPPLY

Central Valley Project Water via the Delta-Mendota Canal

The City has contractual entitlements for Central Valley Project (CVP) water as detailed below. In the aggregate, the City's contractual entitlement to the municipal and industrial (M&I) reliability CVP water and assignments of agricultural (Ag) reliability water CVP water from BCID and WSID are referred to as the City's "Existing Contract" with the United States Bureau of Reclamation (USBR). The total quantity of CVP water available to the City under its Existing Contract is 20,000 AFY (10,000 AFY of M&I-reliability water and 10,000 AFY of Ag-reliability water).

The City's CVP water supplies are treated at the City's John Jones Water Treatment Plant (JJWTP), which was originally constructed in 1979, expanded in 1988, and then expanded again in 2008. The JJWTP is located just north of the DMC in the southern portion of the City. With the latest plant expansion, the current treatment capacity of the JJWTP is 30 million gallons per day (mgd) which is sufficient to treat all of the City's CVP water supplies.

The City also treats and serves CVP water purchased by others. Over the period 2010 through 2018, an average of approximately 630 AFY of water from the Plain View Water District's (now BBID's) USBR allocation was treated at the JJWTP and delivered to the Patterson Pass Business Park through the City's water distribution system. A comparable quantity of BBID water is anticipated to be treated and delivered annually to the Patterson Pass Business Park in the future. Neither the water supply nor the demand for Patterson Pass Business Park are included in the City supply and demand estimates because the water supply is BBID's, not the City's, and the City only provides water treatment, delivery and billing services on a contractual basis for the Patterson Pass Business Park; the City does not manage either the supply or the demand.

In July 1974, the City entered into a 40-year contract with the United States Bureau of Reclamation (USBR) for an annual entitlement of 10,000 AFY of surface water from the CVP via the DMC. The original USBR contract expired in 2014; however, since December 2013, the City and USBR have entered into a series of two-year interim renewal contracts to provide water service to the City

while the terms of the long-term contract renewal were negotiated. In November 2021, the Tracy City Council approved a new long-term contract with USBR which became effective on December 1, 2021. The new contract is for 20,000 AFY, which aggregates the City's M&I-reliability supplies and Ag-reliability supplies (discussed below) from the CVP. The new contract does not have a termination date and would continue as long as water is available and delivered.

In 2004, the USBR approved the assignment of 5,000 AFY of Ag-reliability CVP contract entitlement to the City from the Banta Carbona Irrigation District (BCID). Concurrently, the USBR approved the assignment of 2,500 AFY of Ag-reliability CVP contract entitlement water to the City from WSID, with the option to purchase an additional 2,500 AFY of CVP contract entitlement from the WSID. In December 2013, the City and WSID approved the additional assignment in which the City's current assignment of WSID CVP water is 5,000 AFY.

The City's CVP water supplies are subject to allocations determined by the USBR for 'South-of-Delta' contractors. Based on the historical record, the City's long-term average allocation of CVP water pursuant to the contract is anticipated to be at least 85 percent of the total entitlement. However, due to recent environmental concerns in the Delta and potential future impacts due to climate change, the normal year reliability of CVP water was assumed to be 75 percent in the 2020 UWMP. In addition, the City conservatively estimated that it will receive 50 percent of its Ag-reliability contractual entitlement in normal water years.

During dry years, a CVP M&I contractor is typically eligible for a minimum shortage allocation equal to 75 percent of adjusted historical use. Per the CVP M&I Water Shortage Allocation Plan, the minimum shortage allocation may be reduced further when the allocation of Ag-reliability water in that year is reduced below 25 percent of contract entitlement. The component of the City's CVP supply that carries Ag-reliability is subject to more significant reductions and is much more dependent on yearly hydrologic conditions than the City's M&I-reliability allocation.

In February 2017, new guidelines and procedures went into effect associated with the updated CVP Municipal and Industrial Water Shortage Policy. In general, the policy provides for the following:

- When M&I contractor allocations are at 100 percent, the allocation of M&I water will be based on Contract Total.
- When M&I contractor allocations are below 100 percent, the allocation of M&I water will be based on a contractor's historical use of CVP M&I water.
- An M&I contractor's historical use will be determined by calculating the average quantity of CVP water put to beneficial use within the service area during the last three years of water deliveries that were unconstrained by the availability of CVP water.

The City's reliability assumptions in the 2020 UWMP are sufficiently conservative to adhere to the 2017 guidelines. The City's CVP water single dry year reliability is based on adjusted historical use and provided in its 2020 UWMP, and are assumed as 25 percent for M&I CVP water, and 0 percent for Ag CVP water.

Similarly, the City's CVP water multiple dry year reliability is based on adjusted historical use and provided in its 2020 UWMP and are assumed as 40 percent for M&I CVP water, and 0 percent for Ag CVP water.

Surface Water from BBID Pre-1914 Water Rights

Part of the proposed Tracy Hills Specific Plan area was annexed into the BBID and is entitled to water service from BBID, using BBID's pre-1914 appropriative water rights. This water is delivered to the City via the DMC and is treated at the City's JJWTP before delivery to the Tracy Hills Specific Plan area. The City anticipates that up to 4,500 AFY of pre-1914 water rights water could be provided by BBID on a year-round basis to serve the Tracy Hills Specific Plan in the BBID service area. However, the volume of water available to the City through this agreement is limited to the demand in the BBID service area portion of the Tracy Hills Specific Plan. The projected potable water demand in this area is estimated to be 3,330 AFY at Buildout. Because the water supply is based on pre-1914 appropriative rights, the supply is considered to be firm and well-established.

Stanislaus River Water

The City receives Stanislaus River water, in partnership with the cities of Manteca, Lathrop and Escalon, and the SSJID. This partnership constructed the South County Water Supply Project (SCWSP), which consists of the 36 mgd Nick C. DeGroot Water Treatment Plant (DGWTP) near Woodward Reservoir in Stanislaus County and a transmission pipeline to deliver treated surface water to each city. The water supply source for the SCWSP is based on SSJID's senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones Reservoir.

As part of the SCWSP, the City was initially allocated up to 10,000 AFY of water based upon SSJID's senior water rights. In 2006, the City entered into a temporary contract with Escalon to purchase Escalon's allocation of 2,015 AFY of SCWSP supply until Escalon constructs the necessary infrastructure to convey the SCWSP water. In August 2013, SSJID and the Cities of Tracy and Lathrop approved a Lathrop-Tracy Purchase, Sale and Amendment Agreement for the sale of a portion of the City of Lathrop's SCWSP supply and capacity to the City of Tracy. The agreement provides the City with an additional 1,120 AFY of SCWSP supply and two mgd of SCWSP capacity. Thus, the City's current contractual amount of SCWSP water is 13,135 AFY in total. Once the agreement with Escalon sunsets (anticipated to occur in 2025), the City's contractual allocation will be reduced to 11,120 AFY. This additional SCWSP supply has the same reliability as the City's original SCWSP supplies.

Treated water deliveries from the SCWSP commenced in July 2005, and deliveries have been essentially uninterrupted since then). Although the City's full allocation was available in the first few years, deliveries to the City were less than its allocation because the full allocation was not needed. However, in some years since 2009 the City has actually received more than its allocation.

Due to the seniority of the water rights underling the SCWSP, SSJID's pre-1914 appropriative rights to Stanislaus River water, the City has historically assigned a high reliability to SCWSP water. However, in December 2018, the SWRCB released amendments to the Water Quality Control Plan

for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) which included significant changes and could result in significant surface water cutbacks. In its 2020 UWMP, SSJID presented a water reliability analysis assuming that the Bay-Delta Plan Amendment will not be implemented given its uncertainties. As an SSJID retail agency customer, the City relies on SSJID for the reliability projections for the Stanislaus River water supply. Consistent with SSJID's approach, the City's 2020 UWMP assumes that the Bay-Delta Plan Amendment will not be implemented. However, to fully assess the potential impacts of the Bay-Delta Plan Amendment and better plan for the potential shortfalls, the City conducted a parallel set of reliability analyses assuming that the Bay-Delta Plan Amendment will be implemented and included it as Appendix G of its 2020 UWMP.

Consistent with the City's 2020 UWMP and for the purposes of the WSA, the City is assumed to receive 100 percent of its SCWSP contractual entitlement in normal years. In future dry years, the City assumed that allocations would be based on the City's contractual entitlement, rather than consumption in a given year. In single dry years, the City expects to receive 76 percent of its SCWSP water supply allocation during 2025, 2030, and 2035 and 56 percent during 2040 and 2045, based on information received from SSJID. In multiple dry years, the City expects to receive 56 to 100 percent of its SCWSP water supply allocation, depending on hydrological conditions. In addition, SCWSP water transferred from Escalon is assumed to be unavailable after 2025.

The anticipated availability and reliability of the SCWSP supply under normal years, single dry years and multiple dry years may be revised based on updated evaluations in conjunction with resolutions of issues associated with the Bay-Delta Plan Amendment. Further, SSJID anticipates the likelihood that more water will be available for local purposes in 2040 based on more efficient water management and urban development displacing irrigated agricultural land uses.

GROUNDWATER SUPPLY

The City's surface water supply is supplemented by local groundwater. The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Subbasin (Tracy Subbasin). The City currently operates nine groundwater wells, with a total extraction capacity of about 18,300 gallons per minute (gpm), or 26 mgd (GEI, 2015). Four wells (Production Wells 1, 2, 3 and 4) are located near the City's JJWTP and pump directly into the JJWTP clearwells, where the groundwater is blended with treated surface water. The other wells (Lincoln Well, Lewis Manor Well (Well 5), Park and Ride Well (Well 6), Ball Park Well (Well 7) and Well 8) are located throughout the City and pump water directly into the distribution system after disinfection. The City's newest well, Well 8, located near the intersection of Tracy Boulevard and 6th Street, was designed as an ASR well, and has been put into service as an ASR well as permitted by the Central Valley Regional Water Quality Control Board.

Basin Description. The City overlies the Tracy Subbasin (Basin; Department of Water Resources [DWR] 5-22.15) of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is not adjudicated, and it is not in a condition of critical overdraft.

The Tracy Subbasin covers an area of approximately 373 square miles. It is bounded on the northwest by the Old River south to the tri-county confluence point and on the south by the Clifton Forebay where it then follows the Contra Costa-Alameda County line to the foothills of the Coastal Range mountains. The northeast boundary follows the San Joaquin River south to the San Joaquin County Line with a slight jog to include the City of Lathrop on the west side of the river. The southern border of the Subbasin generally follows the San Joaquin-Stanislaus County line, with some irregular areas belonging to the Delta-Mendota Subbasin to the south. The western border follows the Coastal Range foothills from the San Joaquin-Stanislaus County line; north to the Contra Costa-Alameda County line. The Subbasin is a mix of Delta islands (mostly agriculture) and waterways along with urban and agricultural communities on the southern edge.

Adjacent to the Tracy Subbasin are the Eastern San Joaquin Subbasin to the east, the Delta-Mendota Subbasin to the south, and the Sacramento Valley Groundwater Basin to the north. The three subbasins, not including the Sacramento Valley Groundwater Basin, are part of the San Joaquin Valley Groundwater Basin. The San Joaquin River and one of its major west side tributaries, Corral Hollow Creek, provide drainage from the Tracy Subbasin. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta and discharges into San Francisco Bay. The Tracy Subbasin is comprised of continental deposits of Late Tertiary to Quaternary age. These deposits include the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium. The cumulative thickness of these deposits increases from a few hundred feet near the Coast Range foothills on the west to about 3,000 feet along the eastern margin of the subbasin.

Aquifer Storage and Recovery (ASR). The City has been implementing an ASR Program to store surplus treated surface water in the confined aquifer beneath Tracy and extract that water to meet peak demands or supplement surface water sources during dry years. The City has one former groundwater extraction well, Well 8, which has been operated as an ASR well since 2013. Well 8 is located near the intersection of Tracy Boulevard and 6th Street and penetrates the Lower Tulare Formation.

The recharge water source of the City's ASR Program is treated SCWSP water. The City's SCWSP water supply is of exceptionally high water quality, with a Total Dissolved Solids (TDS) concentration of approximately 64 milligrams per liter (mg/L). Since the TDS concentration of the recharge water source is much lower than that of the Lower Tulare Formation aquifer's native groundwater, operation of the City's ASR Program reduces the localized salinity of the aquifer, resulting in lower TDS content in water supplies extracted from Well 8 than would be expected in the absence of the ASR Program. Additionally, the reduced salinity in groundwater recovered from Well 8 results in lower salt loading at the City's WWTP, which eventually reduces the salinity of effluent from the WWTP. This helps the City meet its Regional Water Quality Control Board (RWQCB) effluent salinity requirements and provides environmental benefits to the river ecosystems.

Injection of SCWSP water into the ASR well occurs during the winter months (i.e., November through April), when City demands are low. Extraction occurs primarily in the summer months to meet increased demands associated with irrigation needs, and as needed during droughts and water shortage emergencies. It is estimated that between 685 and 915 AFY of potable water could

be injected into the aquifer, assuming a 5-month continuous injection rate of 1.5 to 2.0 mgd at Well 8. The City's strategic plan for ASR operations at Well 8 involves injecting up to 1,000 AFY over six months during the winter and extracting 75 percent of the injection volume during the following summer. These operations would result in net injection into the Lower Tulare Formation aquifer, which will gradually create a "buffer supply" that the City can utilize in dry years or during water shortage emergencies. In 2020, a net volume of approximately 190 af was injected and stored at Well 8 for the following year.

The City plans to implement its ASR Program stages as new ASR wells are constructed. The ASR supply will be available to meet demands in dry years, thereby increasing the reliability of the City's water supply during drought conditions or water shortage emergencies.

Semitropic Groundwater Storage. The City has acquired the rights to store and recover water in the Semitropic Groundwater Storage Bank (Semitropic) operated by the Semitropic Water Storage District (Semitropic WSD). The Semitropic facilities are located in Kern County alongside the California Aqueduct and the DMC. The first phase of Semitropic was initiated in the early 1990s and established one million acre-feet of storage for a group of agencies referred to as the Original Banking Partners. In response to increased demand for banking capacity, up to 650,000 af of additional storage was created for the Stored Water Recovery Unit (SWRU). When an agency purchases storage capacity in Semitropic, it is able to recover the volume of water it has banked over a period of three consecutive years (i.e., 3,000 af equates to a maximum recovery rate of 1,000 AFY for three years). The City originally entered into a pilot agreement with Semitropic WSD in June 2006 for 1,000 af of water storage in Semitropic's SWRU. The pilot agreement was intended to establish the procedures for water deposits and withdrawals by the City and was terminated when the permanent agreement was implemented. In 2012, the City entered into a long-term agreement with Semitropic WSD for up to 10,500 af of storage volume. This storage agreement allows the City to withdraw up to 3,500 af of water annually for three years. To store water in Semitropic, the City withdraws less than its available allocation of CVP water from the DMC. This water travels through the DMC where it is diverted by Semitropic and used for local groundwater recharge. When the City wishes to withdraw water that it has banked previously, Semitropic arranges for the City to divert CVP water beyond its allocation from the DMC. This source of water is provided through either an exchange of Semitropic WSD's contractual entitlement to State Water Project (SWP) water or through direct "pump back" of stored groundwater into the California Aqueduct by Semitropic WSD.

Though the City could utilize this supply in any year, it is most valuable during extended drought years when the City's surface water supplies are reduced. The City anticipates that banking water at Semitropic will increase the reliability of the City's water supply and help close the potential future gap between supply and demand during drought conditions or other water supply shortage emergencies. If the City uses water from the Semitropic water bank in any given year, it would manage its supplies during subsequent years such that it could refill the water bank for future use. The City plans to actively maintain storage in Semitropic as feasible.

As of December 2020, the City had 6,887 af of water in storage at Semitropic.

Groundwater Yield. Based on a groundwater study the City completed in 2001 (Bookman-Edmonston, 2001), the City is able to withdraw up to 9,000 AFY from the Tracy Subbasin on an average annual basis. However, groundwater production is constrained by the City's well production and treatment capacity, as the infrastructure is aging. Production is further limited by the water quality issues of the City's groundwater supplies, including high TDS concentrations, hardness, and potential formation of chloramines. As the Groundwater Sustainability Plan (GSP) for the Tracy Subbasin is developed and implemented, the City's groundwater supply reliability may be revisited.

A 1990 Kennedy/Jenks/Chilton (K/J/C) study estimated a perennial groundwater yield of 6,700 AFY in the Tracy Sub-basin within the Tracy Study Area. However, in 2001, to determine if additional groundwater resources were available in the Tracy Study Area, the City conducted an updated groundwater analysis. The Estimated Groundwater Yield Study, prepared by Bookman-Edmonston Engineering provided an evaluation of potential groundwater yield and determined that a 2,300 AFY increase of the average annual operational groundwater yield above the groundwater yield recommended in the 1990 K/J/C study could be provided within the estimated safe yield of the Tracy Sub-basin in the Tracy Study Area, without adverse impact to groundwater resources or quality in the Tracy Study Area over a 50-year timeframe. This expansion of groundwater usage to 9,000 AFY would be within the City's estimated 22,000 AFY share of the aquifer's estimated total safe yield of 28,000 AFY (total includes City groundwater usage as well as groundwater usage within West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District [now part of the Byron Bethany Irrigation District], and Banta-Carbona Irrigation District). It was also estimated that this expansion of groundwater usage would result in a groundwater level drop of 10 feet but would stabilize at this level.

In 2015, the City had an assessment conducted on what the effects would be if the City were to pump between 16,000 and 22,000 AFY for a single year to meet its demands during a drought emergency when no surface water supplies were available. The assessment considered potential impacts on groundwater levels, groundwater quality, and land subsidence. The approach to this assessment was to estimate drawdown beneath the City, including drawdown caused by well interference, under scenarios wherein all of the City's wells were pumped for a single year at rates needed to meet the above stated demands. Drawdown estimates were made using analytical methods and aquifer hydraulic property data from pumping tests performed at two of the City's wells. Results showed that the City does have capacity to pump its wells to meet these single dry year demands, but that drawdown in the City's wells and at locations proximate to the City would exceed that which has been historically observed. The assessment estimated that groundwater levels would recover from their drawdown within approximately seven years.

Groundwater Quality. Groundwater quality in the Tracy Subbasin varies spatially and with depth. In general, the northern part of the Tracy Subbasin is characterized by a sodium water type, and the southern part of the Tracy Subbasin is characterized by calcium-sodium water type (Sorenson, 1981). The northern part of the Tracy Subbasin is also characterized by a wide range of anionic water types, including bicarbonate; chloride; and mixed bicarbonate-chloride. Major anions in the southern part of the Tracy Subbasin include sulfate-chloride and bicarbonate-chloride.

There is also a difference between the water quality in the water-bearing zones above the Corcoran Clay (termed the "semi-confined aquifer") and below the Corcoran Clay (termed the "confined aquifer"). Generally, the water quality of the confined aquifer is better than that of the semi-confined aquifer (Stoddard & Associates 1996).

Constituents present at elevated concentrations throughout the Tracy Subbasin in both the semi-confined and confined aquifers include chloride, nitrate, sulfate, and boron. Elevated chloride occurs in several areas near Tracy and along the San Joaquin River. Areas of elevated nitrate occur in the northwestern part of the Tracy Subbasin and in the vicinity of Tracy. Elevated boron occurs over a large portion of the Tracy Subbasin from south of Tracy extending to the northwest side of the Tracy Subbasin. Sulfate concentrations of up to 500 mg/L have been detected in Tracy Subbasin groundwater. The groundwater near Tracy is considered to be very hard (Stoddard & Associates, 1996). The water quality conditions in groundwater represent conditions for source water, prior to treatment by the City and service to customers.

One water quality concern that the City actively manages is TDS. The City's groundwater supply typically meets the primary maximum contaminant level (MCL) of 1,000 milligrams per liter (mg/L) but frequently exceeds the secondary MCL of 500 mg/L. In 2019, the City's groundwater supply ranged from 386 to 876 mg/L of TDS, with an average concentration of 752 mg/L. Because the TDS concentrations are significantly higher in the groundwater supply than in the City's other water supply sources, in order to meet the secondary MCL in its overall water supply, the City typically scales back its groundwater production from its estimated sustainable yield of 9,000 AFY, particularly in normal rainfall years.

The City continues to rely on groundwater for peaking, and under drought conditions, it typically increases its groundwater production as needed to meet demands when surface water supplies become more limited. Groundwater quality is not expected to impact the reliability of available water supplies in the 2020 UWMP planning horizon.

Historical Groundwater Use. Historically, groundwater had accounted for up to 50 percent of the City's water supply. Prior to 2001, groundwater extraction in Tracy totaled less than 6,000 AFY. Between 2001 and 2004, to meet increased demands for water, Tracy began extracting additional groundwater, ranging from 6,878 to 7,717 AFY. In 2005, groundwater extraction decreased to approximately 6,000 AFY because: (1) the SCWSP was completed and the City began receiving Stanislaus River water, and (2) rainfall was above normal, meaning that the City received a high percentage of its DMC/CVP contractual entitlements. From 2006 to 2010, groundwater extraction ranged from 3,672 AFY to 498 AFY, declining as more water was used from SSJID. The City's groundwater production over the last several years is provided in Table 3.14-4.

TABLE 3.14-4: HISTORICAL GROUNDWATER PRODUCTION, AFY

	2012	*2013*	*2014*	*2015*	*2016*	*2017*	*2018*	*2019*	*2020*
Total Groundwater Production (AFY)	252	515	680	519	648	995	817	645	1,181

SOURCE: CITY OF TRACY 2020 UWMP, TABLE 5-1, CURRENT AND HISTORICAL WATER SUPPLY.

Other groundwater users in the Tracy area include the West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District (now the Byron Bethany Irrigation District), and Banta-Carbona Irrigation District. Although current groundwater pumpage by these users was not available for inclusion in the WSA, the 2001 Estimated Groundwater Yield Study, which established the City's estimated groundwater yield of 9,000 AFY, considered the cumulative groundwater usage in the study area by the City and other users in the Tracy area.

Project Future Groundwater Use. The City may sustainably pump up to 9,000 AFY from the local groundwater basin. Since the hard, high TDS groundwater is of lower quality than the City's surface water sources, the City has scaled back its groundwater extraction in most years. However, the City will continue to rely on groundwater for peaking and drought and emergency water supply. Table 3.14-5 shows the anticipated future groundwater production during a normal year and during dry years.

The projected uses of groundwater during droughts shown in Table 3.14-5 are consistent with the City's Groundwater Management Policy (PMC, 2001). In the event that the City is unable to secure additional high-quality surface water supplies in the future, the City is able to expand groundwater production up to 9,000 AFY. In the event of a severe water supply shortage or emergency, the City has the ability to increase production dramatically, up to 22,000 AFY (GEI, 2015).

TABLE 3.14-5: PROJECTED FUTURE GROUNDWATER PRODUCTION IN NORMAL AND DRY YEARS, AFY

	2020	*2025*	*2030*	*2035*	*2040*	*2045*
Total Groundwater Production During a Normal Year (AFY)	2,500	2,500	2,500	2,500	2,500	2,500
Total Groundwater Production During Dry Years (AFY)	4,500	4,500	4,500	4,500	4,500	4,500

SOURCE: CITY OF TRACY 2020 UWMP, TABLE 7-2, PROJECTED POTABLE WATER SUPPLY IN NORMAL YEARS.

As can be seen in Table 3.14-5, the City anticipates that total extraction during a normal year will be 2,500 AFY through the planning horizon. By reducing groundwater extraction on an average annual basis, the City will: (1) increase the overall quality of its drinking water, thus increasing customer satisfaction and reducing system maintenance and repair caused by the lower-quality groundwater; and (2) recharge the underlying aquifer, effectively increasing the availability of groundwater during a drought or emergency condition (i.e., effectively "banking" groundwater). At the production volumes shown in Table 3.14-5, the City's groundwater supplies are considered to be 100 percent reliable.

Potable Water Supply Availability and Reliability

The City's surface water and groundwater supply reliability as described in the City's 2020 UWMP is summarized below.

The reliability of each of the City's existing and additional planned water supplies and their projected availability during normal, single dry, and multiple dry years as described in Section 6 of the City's 2020 UWMP, is described below and summarized in Table 3.14-6.

TABLE 3.14-6: WATER SUPPLY RELIABILITY IN NORMAL, SINGLE DRY AND MULTIPLE DRY YEARS, AFY

SUPPLY SOURCE	ANTICIPATED RELIABILITY (% OF ENTITLEMENT)		
	NORMAL YEARS	SINGLE DRY YEARS	MULTIPLE DRY YEARS
EXISTING WATER SUPPLIES			
USBR CVP			
M&I Reliability Water (Tracy Contract)	75%	25%	40%
Ag Reliability Water (BCID & WSID Contract)	50%	0%	0%
South County Water Supply Project	100%	56-76%	56-100%
Groundwater	100%	100%	100%
BBID (pre-1914)	100%	100%	100%
Semitropic Water Storage Bank	--	0%	67%
Aquifer Storage and Recovery	--	100%	100%
ADDITIONAL PLANNED FUTURE WATER SUPPLIES			
USBR CVP (BBID contract) (Ag Reliability Water)	0%	0%	0%
Recycled Water Exchange (Potable)	100%	100%	100%
Recycled Water (for non-potable uses	100%	100%	100%

[A] ALTHOUGH THE CITY CAN SUSTAINABLY EXTRACT UP TO 9,000 AFY OF GROUNDWATER ON A CONTINUOUS BASIS, THE CITY IS PLANNING TO SCALE BACK ITS GROUNDWATER EXTRACTION IN NORMAL YEARS TO INCREASE THE OVERALL QUALITY OF ITS WATER SUPPLY. WITH THESE REDUCED SUPPLY VOLUMES, THE GROUNDWATER RESOURCE IS CONSIDERED 100 PERCENT RELIABLE.

[B] DUE TO THE DIFFICULTIES EXPERIENCED BY THE CITY IN ACCESSING STORED WATER VIA THE DMC, THE CITY HAS CONSERVATIVELY ASSUMED THAT 0% OF THE CITY'S SEMITROPIC WATER SUPPLY WILL BE AVAILABLE IN THE FIRST YEAR OF A MULTIPLE DRY YEAR PERIOD AND 100% WILL BE AVAILABLE IN THE SECOND AND THIRD YEAR. THE 67% PRESENTED IN THIS TABLE FOR MULTIPLE DRY YEARS IS THE AVERAGE VALUE FOR A THREE-YEAR PERIOD.

[C] ALTHOUGH RECYCLED WATER SUPPLIES ARE CURRENTLY AVAILABLE FROM THE CITY'S WWTP, REQUIRED RECYCLED WATER PIPELINES AND PUMP STATIONS TO CONVEY AND DELIVER THE RECYCLED WATER TO THE RECYCLED WATER USE AREAS HAVE NOT YET BEEN CONSTRUCTED. SEE SECTION 6.3.1 OF THE WSA FOR ADDITIONAL INFORMATION REGARDING THE CITY'S PLAN FOR IMPLEMENTATION OF ITS RECYCLED WATER SYSTEM.

NORMAL YEARS

Normal or wet water years are those water years that match or exceed median rainfall and runoff levels. The following describes the availability and reliability of the City's existing and additional planned future water supplies under normal year conditions:

- The City's contract with the USBR for 10,000 AFY of DMC/CVP water is subject to M&I reliability. Based on the historical record, the City's long-term average allocation of DMC/CVP water pursuant to this contract is anticipated to be at least 85 percent of the total entitlement. However, due to recent environmental concerns in the Delta and potential future impacts due to climate change, the normal year supply of DMC/CVP M&I water is assumed to be 75 percent of the City's historical use. Based on a historical use of 5,930 AFY (i.e., the average quantity of CVP water put to beneficial use by the City during the last three years of water deliveries that were unconstrained by the availability of CVP water), the projected normal year supply is 4,448 AFY.

- The City has received acquired assignments from Banta-Carbona Irrigation District (BCID; 5,000 AFY) and West Side Irrigation District (WSID; 5,000 AFY) for a total entitlement of 10,000 AFY of DMC/CVP water. These supplies are subject to Ag-reliability. The City is

conservatively estimating that it will receive 50 percent of its Ag-reliability contractual entitlement, or 5,000 AFY, in normal years.

- The City has acquired up to 4,500 AFY of pre-1914 appropriative water rights water from BBID. These supplies are restricted in their place of use, and therefore the supply is anticipated to be equal to the projected demand within that place of use (i.e., the Tracy Hills area) ranging from 800 AFY in 2025 to 3,300 AFY in 2045. The City anticipates being able to receive 100 percent of this supply in normal years.

- The City has a total contractual entitlement of 13,135 AFY of Stanislaus River water provided through the SCWSP, including 10,000 AFY from its original contract with SSJID, 1,120 AFY purchased from Lathrop, and 2,015 AFY purchased on an interim basis from Escalon. The agreement between Tracy and Escalon is assumed to terminate after 2025. Based on information provided by SSJID, the City expects to receive 100 percent of its SCWSP water supply allocation during a normal water year. As such, the City anticipates being able to receive 13,135 AFY of SCWSP supply in 2025 and 11,120 AFY afterwards, assuming normal year conditions.

- The City is able to withdraw up to 9,000 AFY of groundwater from the Tracy Subbasin. However, due to the aging infrastructure and water quality issues in the City's groundwater supplies, the City is projecting to be able to withdraw up to 2,500 AFY in normal years. This groundwater supply is considered to be 100 percent reliable.

- The City does not anticipate using its Semitropic water or ASR water in normal years.

- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected to supply an amount ranging from 1,925 AFY in 2030 to 7,500 AFY in 2045. This water supply is considered to be 100 percent reliable.

The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 AFY of recycled water supply in 2025, increasing to 6,300 AFY in 2045.

SINGLE DRY YEARS

During a single dry year, all of the City's existing surface water allotments are subject to some level of reduction. Assumed reductions are based on actual reductions in CVP deliveries experienced in the recent drought and the new USBR M&I Reliability Policy adopted in 2017. The actual reductions will vary with the severity of the regional water supply shortage and climatic conditions, and the consideration of contract agreements.

The following describes the availability and reliability of the City's existing and additional planned future water supplies under single dry year conditions:

- The City's contract with the USBR for 10,000 AFY of DMC/CVP water is subject to M&I reliability. During a single dry year, the City estimates to receive 25 percent of the City's historical use. Based on the historical use of 5,930 AFY, the projected supply is 1,483 AFY.

- The City has a total entitlement of 10,000 AFY of DMC/CVP Ag-reliability water. The City anticipates receiving 0 percent of its DMC/CVP Ag-reliability water in a single dry year.

- The City has acquired up to 4,500 AFY of pre-1914 appropriative water rights water from BBID. This supply is restricted with regard to the place of use (Tracy Hills). The City anticipates being able to receive 85 percent of its contractual entitlement in a single dry year (3,825 AFY). As the projected demand is 3,300 AFY in 2045 and is lower than the 3,825 AFY of available supply, the reduction in reliability does not result in a reduction to actual amount of water used. Therefore, the supply in a single dry year is anticipated to be equal to the projected demand within the Tracy Hills area, ranging from 800 AFY in 2025 to 3,300 AFY in 2045.

- The City has a total contractual entitlement of 13,135 AFY of Stanislaus River water provided through the SCWSP. Based on information provided by SSJID, the City expects to receive 76 percent of its SCWSP water supply allocation during 2025, 2030, and 2035 and 56 percent during 2040 and 2045. In addition, the SCWSP water transferred from Escalon is assumed to be unavailable after 2025. As such, the City estimates 9,974 AFY of SCWSP supply in 2025, 8,444 AFY in 2030 and 2035, and 6,177 AFY afterwards.

- During a single dry year, the City anticipates increasing its groundwater production on a short- term basis from the normal year production of 2,500 AFY to 4,500 AFY. The groundwater supply is considered to be 100 percent reliable.

- The City anticipates that 700 AFY of water will be available for use in a single dry year through operation of its ASR well. An additional 300 AFY is estimated to be available by 2040 for a total of 1,000 AFY. This water supply is considered to be 100 percent reliable assuming that the City is consistently able to refill the ASR storage during non-drought years to maintain at least 1,000 af in storage at the beginning of a single dry year.

- The City has acquired 10,500 AFY of storage in Semitropic, which allows the City to withdraw up to 3,500 AFY for three consecutive years. Due to the difficulties experienced by the City in accessing stored water via the DMC on a short timeframe, the City has conservatively assumed that the Semitropic water will not be available in a single dry year.

- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected

to supply an amount ranging from 1,925 AFY in 2030 to 7,500 AFY in 2045. This water supply is considered to be 100 percent reliable.

- The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 AFY of recycled water supply in 2025, increasing to 6,300 AFY in 2045.

MULTIPLE DRY YEARS

During multiple dry years, the City's surface water supplies (from both the CVP and SCWSP) may be significantly reduced. Thus, in the event of drought, the City will have to depend more heavily on conservation efforts, groundwater, and the proposed future supply projects.

The following describes the availability and reliability of the City's existing and additional planned future water supplies under multiple dry year conditions:

- The City's contract with the USBR for 10,000 AFY of DMC/CVP water is subject to M&I reliability. During multiple dry years, the City estimates that it will receive 40 percent of the City's historical use. Based on the historical use of 5,930 AFY, the projected supply is 2,372 AFY. The City has a total entitlement of 10,000 AFY of DMC/CVP Ag-reliability water. The City anticipates receiving 0 percent of its DMC/CVP Ag-reliability water in multiple dry years.

- The City has acquired up to 4,500 AFY of pre-1914 appropriative water rights water from BBID. This supply is restricted with regard to the place of use (Tracy Hills). The City anticipates being able to receive 85 percent of its contractual entitlement in multiple dry years (3,825 AFY). As the projected demand is 3,300 AFY in 2045 and is lower than the 3,825 AFY of available supply, the reduction in reliability does not result in a reduction to actual amount of water used. Therefore, the supply in multiple dry years is anticipated to be equal to the projected demand within the Tracy Hills area, ranging from 800 AFY in 2025 to 3,300 AFY in 2045.

- The City has a total contractual entitlement of 13,135 AFY of Stanislaus River water provided through the SCWSP. Based on information provided by SSJID, the City's SCWSP water supply reliability during multiple dry years range from 56 to 100 percent. In addition, the SCWSP water transferred from Escalon is assumed to be unavailable after 2025.

- During multiple dry years, the City anticipates increasing its groundwater production on a short-term basis from the normal year production of 2,500 AFY to 4,500 AFY. The groundwater supply is considered to be 100 percent reliable.

- The City anticipates that 700 af of water will be available for use in multiple dry years through operation of its ASR well. An additional 300 af is estimated to be available by 2040 for a total of 1,000 af. The City is assumed to be unable to refill the ASR storage during multiple dry years. Therefore, the annual ASR supply available is assumed to equal one

fifth of the total stored volume (i.e., 140 AFY between 2025 and 2035 and 200 AFY between 2040 and 2045). This water supply is considered to be 100 percent reliable assuming that the City is consistently able to refill the ASR storage in non-drought years to maintain at least 1,000 af in storage at the beginning of a multiple dry year sequence.

- The City has acquired 10,500 AFY of storage in Semitropic, which allows the City to withdraw up to 3,500 AFY for three consecutive years. Due to the difficulties experienced by the City in accessing stored water via the DMC on a short timeframe, the City has conservatively estimated that the 0 percent of the City's storage will be available in the first year of a five-consecutive-year drought, and 100 percent will be available over the following four years. Based on the City's current storage at Semitropic of 6,887 af, the amount available in the second to fifth year of a five- consecutive-year drought is assumed to be 1,722 AFY (6,887 af divided by four). A similar reliability estimate is provided for all dry-year sequences under the assumption that the City is consistently able to re-fill the water bank in non-drought years to maintain at least 7,000 AFY in storage at the beginning of a multiple dry year sequence.

- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected to supply an amount ranging from 1,925 AFY in 2030 to 7,500 AFY in 2045. This water supply is considered to be 100 percent reliable.

- The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 AFY of recycled water supply in 2025, increasing to 6,300 AFY in 2045.

Planned Infrastructure Updates

The City anticipates implementation of the following projects for additional future potable water supplies:

- ASR Program Expansion
- Recycled Water Distribution Network and Exchange Program for Additional CVP Water Supplies.
- The City also anticipates increased water supply to meet M&I demands as agricultural land is developed. However, additional water supply through land use conversion has associated constraints that must be resolved.

As described above, the City currently has one ASR well (Well 8) which allows the City to inject excess SCWSP water supplies into the groundwater basin for later extraction when needed. The current injection and extraction capacity is 700 AFY. The City is planning to expand the ASR program with the installation of additional ASR wells. According to the WSMP Update, the City's

ASR Program will be expanded to provide up to 1,000 AFY of water supplies from the existing and new ASR wells by 2040. The ASR supply will be used to meet demands during dry years, thereby increasing the reliability of the City's water supply and helping to close the potential gap between supply and demand during drought conditions or water shortage emergencies.

One constraint with the City's ASR Program is that the permit only allows for SCWSP water to be injected. This means that the City has to shut down the JJWTP and the groundwater wells during the injection period so that only SCWSP supplies are being utilized. A potential alternative to avoid this operational restriction, if the City's ASR permit cannot be modified to allow for other water supplies to be injected, would be to construct a dedicated SCWSP water pipeline to the ASR well(s). Future expansion of the ASR program will need to fully evaluate these operational restrictions and potential alternatives.

The City is evaluating indirect reuse of its recycled water through an exchange agreement with the USBR, where a portion of the City's recycled water would be discharged into the DMC, and a like amount of water would be diverted from the DMC for treatment at the JJWTP for potable use. This project is considered an essential part of the City's projected future water supply portfolio as it provides the following multiple benefits:

- Provides for the beneficial use of recycled water;
- Provides an additional potable water supply for the City;
- Improves water supply reliability and reduces the City's dependence on other imported supplies;
- Builds on the existing wastewater and recycled water infrastructure; and
- Reduces salt loading in the Delta as USBR has to release additional water from the New Melones Reservoir to meet Delta salinity standards.

The Recycled Water Distribution Network and Exchange Program would require development of a project description, National Environmental Policy Act (NEPA) / California Environmental Quality Act (CEQA) review, an exchange agreement with the USBR, and design and construction of a new recycled water pipeline to discharge recycled water to the DMC downstream of the City's JJWTP intake. Assuming such a project is implemented, the City expects that it would initially provide an estimated 1,925 AFY of potable water, and future expansion of the program could be implemented as needed to meet future demands up to 7,500 AFY. This supply would be 100 percent reliable and would not be subject to drought cutbacks.

Additional BBID DMC/CVP water supplies may be available to the City as agricultural land is converted to M&I uses. The land area that could potentially provide this additional water supply includes the portion of BBID's service area that falls within the City's planning areas (excluding the BBID Raw Water Service Area 2). Eligible land area is estimated to be approximately 2,600 acres. While the exact quantity of water that would be available is unknown, a contractual entitlement equal to 3.4 AFY /acre may be available, resulting in a total supply of up to 8,800 AFY (2,600 acres x 3.4 AFY/acre).

The additional water supplies would, however, have agricultural reliability similar to the City's Ag reliability CVP supplies and would be subject to significant cutbacks in dry years. Agreements between the City and BBID, as well as environmental review, would need to occur before such a transaction could take place. Because of the uncertainty associated with the availability and reliability of this supply source, especially in dry years, for purposes of the City's 2020 UWMP and this WSA, this future water supply is assumed to be unavailable to the City.

The City has invested in infrastructure to produce and deliver recycled water. The City's WWTP has sufficient treatment capacity to produce approximately 9.0 mgd of tertiary-treated recycled water meeting the Title 22 requirements, which can be reused for landscape irrigation and other non-potable uses. The City's current recycled water system consists of a pump station at the WWTP and approximately 7.6 miles of recycled water transmission line from the WWTP west to Lammers Road and south to W. Schulte Road. Currently the only service connection is for the Legacy Fields Sports Complex.

The City is planning to expand the existing recycled water system to serve future development areas, as well as a small number of existing parks and irrigated areas. New developments in the City are required to include recycled water distribution systems in accordance with the City's Recycled and Non-Potable Water Ordinance (Tracy Municipal Code, Chapter 11.30). The City's Department of Utilities and Development Services are coordinating planning efforts to connect existing water customers and new development to recycled water.

The City intends to expand the existing recycled water system to serve non-potable water demands in most of the new development areas. Recycled water is planned to be used at: (a) parks, sports fields, and other landscape areas; (b) industrial facilities such as the Tracy Power Plant; (c) fill stations for dust control during construction, street sweeping, and residential emergency landscape irrigation; and (d) the proposed lakes at Tracy Village. The future recycled water use was estimated to be 1,000 AFY in 2025, increasing to 6,300 AFY in 2045 as new development areas build out, based on the adopted unit water demand factors and the future dwelling units or gross acreage.

Several future service areas already have recycled water distribution pipelines installed by developers, including Cordes Ranch, Ellis Specific Plan Phase 1, and Tracy Hills Phase 1. These pipelines are not yet connected to the recycled water mains, but instead are temporarily connected to the potable water system to meet irrigation demands. Once recycled water system construction is complete and the appropriate permitting is completed, the pipelines will be connected to the recycled water system and the temporary connections to the potable water system will be removed.

The City is considering other potential future uses for recycled water. The City is evaluating the use of recycled water in exchange for additional CVP supply through the proposed Recycled Water Distribution Network and Exchange Program.

The City is also considering the potential for direct potable reuse of recycled water in the future. With direct potable reuse, recycled water would be discharged directly into the DMC and then

conveyed to downstream users, including the City. However, the project is in the conceptual evaluation stage and therefore the future recycled water use associated with this potential approach is not quantified.

REGULATORY SETTING

Safe Drinking Water Act

The federal Safe Drinking Water Act as passed in 1947 and amended in 1986 and 1996 is the Country's primary law regulating drinking water quality and is implemented by the United States Environmental Protection Agency (US EPA). The Safe Drinking Water Act authorizes the US EPA to set national health-based standards for drinking water and requires actions to protect drinking water and its sources. Additionally, it provides for treatment, monitoring, sampling, analytical methods, reporting, and public information requirements. Implementation of the Act, in California, is under the jurisdiction of the California Department of Public Health (CDPH), Division of Drinking Water and Environmental Management. Drinking Water regulations are set forth in the California Code of Regulations (CCR), Titles 7 and 22.

Water Conservation Projects Act

California's requirements for water conservation are codified in the Water Conservation Projects Act of 1985 (Water Code Sections 11950 – 11954).

Consistent with California Water Code Sections 11950 – 11954, the City has implemented various water conservation efforts, as well as Water Shortage Contingency Plan that identifies actions that can be taken to respond to catastrophic interruption of water supply.

Senate Bill (SB) 610

Senate Bill (SB) 610 was adopted in 2001 and reflects the growing awareness of the need to incorporate water supply and demand analysis at the earliest possible stage in the land use planning process. SB 610 amended the statutes of the Urban Water Management Planning Act, as well as the California Water Code Section 10910 et seq. The foundation document for compliance with SB 610 is the Urban Water Management Plan (UWMP), which provides an important source of information for cities and counties as they update their general plans. Likewise, planning documents such as general plans and specific plans form the basis for the demand information contained in an UWMP, as well as a Water Supply Assessment required under SB 610.

Water Code Section 10910 (c)(4) states "If the city or county is required to comply with this part pursuant to subdivision (b), the water assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses."

Water supply planning under SB 610 requires reviewing and identifying adequate available water supplies necessary to meet the demand generated by a project, as well as the cumulative demand

for the general region over the next 20 years, under a broad range of water conditions. This information is typically found in the current UWMP for the project area. SB 610 requires the identification of the public water supplier for a project.

In addition, SB 610 requires the preparation of a Water Supply Assessment if a project meets the definition of a "Project" under Water Code Section 10912 (a). The code defines a "Project" as meeting any of the following criteria:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space;
- A commercial building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A hotel or motel with more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park, planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of these elements; or
- A project creating the equivalent demand of 500 residential units.

Based on the following assumptions, SB 610 does apply to the proposed Project:

1. The proposed Project is subject to CEQA and an EIR is required.
2. The proposed Project, an industrial building having 1,745,052 of floor space and occupying more than 40 acres, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (3) as defined for industrial development.

The proposed Project has not been the subject of a previously adopted Water Supply Assessment (WSA) and has not been included in an adopted WSA for a larger project. Thus, a WSA, as required by these criteria under SB 610, has been prepared for the Project. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA. The Water Supply Assessment is included in Appendix G of this EIR.

California Model Water Efficient Landscape Ordinance

The Water Conservation in Landscaping Act was enacted in 2006, requiring the DWR to update the Model Water Efficient Landscape Ordinance (MWELO). In 2009, the Office of Administrative Law (OAL) approved the updated MWELO, which required a retail water supplier or a county to adopt the provisions of the MWELO by January 1, 2010, or enact its own provisions equal to or more restrictive than the MWELO provisions. Because the City of Tracy is a "local agency" under the MWELO, it must require "project applicants" to prepare plans consistent with the requirements of MWELO for review and approval by the City.

The MWELO applies to new construction with a landscape area greater than 2,500 square feet. The MWELO "highly recommends" use of a dedicated landscape meter on landscape areas smaller than 5,000 square feet, and requires weather-based irrigation controllers or soil-moisture based

controllers or other self-adjusting irrigation controllers for irrigation scheduling in all irrigation systems. The MWELO provides a methodology to calculate total water use based upon a given plant factor and irrigation efficiency.[2] Finally, the MWELO requires the landscape design plan to delineate hydrozones (based upon plant factors) and then to assign a unique valve for each hydrozone (low, medium, high water use).

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to utilities and public services. General Plan policies applicable to the Project are identified below:

POLICIES: PUBLIC FACILITIES ELEMENT

- PF-6.1-P1. The City shall promote water conservation by implementing the Best Management Practices contained in the Urban Water Management Plan.
- PF-6.1-P2. The City shall continue to acquire additional sources of water supplies to meet the City's future demands.
- PF-6.1-P3. To the extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.
- PF-6.1-P4. The City shall establish water demand reduction standards for new development and redevelopment to reduce per capita and total demand for water.
- PF-6.2-P1. The City shall maintain water storage, conveyance and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flows and pressures.
- PF-6.2-P2. Storage reservoirs should be buried or partially buried depending on local groundwater conditions to allow for the joint use of the site with parks or recreational facilities, unless reservoirs are elevated to provide a gravity flow system, in which case the reservoirs shall be screened by landscaping and/or earthen berms.
- PF-6.3-P1. Structures with plumbing that are located within the City limits shall connect to the City water supply system.
- PF-6.3-P2. New developments shall dedicate land for utility infrastructure such as treatment facilities, tanks, pump stations and wells as needed to support the development of their project.
- PF-6.3-P3. The City shall be responsible for constructing new transmission water lines, as needed to meet future needs. Individual development projects shall be responsible for the construction of all water transmission means.

[2] In calculating Estimated Total Water Use, the MWELO requires use of at least a 71% irrigation efficiency factor. Assuming 71% irrigation efficiency, the average plant factor must be 0.50. It would be possible to stay within the water budget if the average plant factor were higher than 0.50 by designing a system with an irrigation efficiency higher than 71%. The relationship between a Plant Factor (PF) and Irrigation Efficiency (IE) in the Applied Water formula is: AW=(ETo*PF)/IE.

- PF-6.3-P4. All new water facilities shall be designed to accommodate expected capacity for buildout of areas served by these facilities but may be constructed in phases to reduce initial and overall costs.
- PF-6.3-P5. The availability of sufficient, reliable water shall be taken into account when considering the approval of new development.
- PF-6.3-P6. Costs for water service expansion shall be distributed among new water users fairly and equitably.
- PF-6.4-P1. Groundwater supplies should be reserved for emergency use during water treatment shutdowns, short-term shortages of surface water supplies or during droughts.
- PF-6.4-P2. Backup emergency power systems shall be provided at all essential water facilities that rely on electric power.
- PF-6.4-P3. Storage reservoir facilities should be located at naturally high topographic locations to capitalize on gravity flow, whenever possible.
- PF-6.4-P4. Future water systems and facilities shall be designed to minimize the likelihood of damage from vandalism or terrorist activity.
- PF-6.5-P1. The City shall provide recycled water systems, including pipelines, pump stations and storage facilities, to serve primarily City-owned facilities, schools and parks as funding becomes available.
- PF-6.5-P2. Recycled water piping systems ("purple pipe") shall be constructed as appropriate in all new development projects to facilitate the distribution and use of recycled water. The specific location and size of the recycled water systems shall be determined during the development review process.
- PF-6.5-P3. Recycled water shall be used for all public properties and large private open spaces or common areas to the extent feasible.
- PF-654-P4. The City shall plan for recycled water infrastructure in the City's Infrastructure Master Plans and, to the extent feasible, recycled water should be utilized for nonpotable uses, such as landscape irrigation, dust control, industrial uses, cooling water and irrigation of agricultural lands.

Utility Master Plans

The City of Tracy maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *Urban Water Management Plan* (2015), Citywide *Water System Master Plan* (2012), Citywide *Storm Drain Master Plan* (2021) *Wastewater Master Plan* (2012), and the *Citywide Public Facilities Master Plan (2012)*.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded water treatment facilities, the construction of which could cause significant environmental effects; or

- Have insufficient water supplies available to serve the Project from existing entitlements and resources, or if new or expanded entitlements are needed.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-4: The proposed Project has the potential to require construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)

The provision of public services and the construction of onsite infrastructure improvements will be required to accommodate the development of the proposed Project. Water distribution will be by an underground distribution system to be installed as per the City of Tracy standards and specifications.

The proposed Project would require extension of offsite water conveyance infrastructure to the Project site for potable water and irrigation water. All offsite water utility improvements will be in or adjacent to existing roadways along the perimeter of the Project site, thereby limiting any potential impact to areas that were not already disturbed.

The proposed Project would also require the construction of new onsite water conveyance infrastructure for potable water and irrigation water. All onsite water utility improvements will be within existing agricultural lands, the impacts of which are discussed in Section 3.2, Agricultural Resources. Construction of the onsite potable water infrastructure would not have the potential to induce growth beyond what is proposed because the infrastructure is not oversized to accommodate additional projects or growth.

As described in the Environmental Setting, the City's surface water supplies are treated at the JJWTP. The permitted treatment capacity is 30 million gallons per day, with a potential future expansion to 45 MGD. The proposed Project would increase the amount of water requiring treatment. As shown in Table 3.14-7 below, projected water demands for buildout of the Proposed Project total approximately 158 acre-feet per year (AFY) of which about approximately 114 AFY is industrial demand, approximately 29 AFY is irrigation demand, and approximately 15 AFY is unaccounted-for water. Therefore, the project would require approximately 0.4 percent of available water treatment capacity of the JJWTP to serve the project.

The proposed Project would not require the construction of new water treatment facilities or expansion of existing water treatment facilities for water service. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

Impact 3.14-5: The proposed Project has the potential to have insufficient water supplies available to serve the Project from existing entitlements and resources. (Less than Significant)

PROJECTED WATER SUPPLY FOR THE PROPOSED PROJECT

Water demands for the Proposed Project will be served using the City's existing and future portfolio of water supplies.

Proponents of the proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

Recycled water infrastructure will need to be constructed to deliver recycled water supplies to the Proposed Project. The City's WSMP included recommended capital improvement projects for the development of the City's recycled water system. In 2015, the City was awarded a Proposition 84 grant from the California Department of Water Resources (DWR) to fund construction of recycled water distribution facilities. Construction of these facilities is nearly complete. In March 2019, the city received an amended order from the SWRCB approving the change in place of use of its treated wastewater. The order allows for the City to change the point of discharge and place of use of treated wastewater by a reduction in discharge to Old River and use the treated wastewater for industrial and irrigation purposes within the service areas of the City's SOI, Byron Bethany Irrigation District (BBID) within the City's SOI, and West Side Irrigation District (WSID).

PROJECTED WATER DEMAND FOR THE PROPOSED PROJECT

Projected water demands for buildout of the Proposed Project total approximately 158 acre-feet per year (AFY) of which about approximately 114 AFY is industrial demand, approximately 29 AFY is irrigation demand, and approximately 15 AFY is unaccounted-for water. The projected water demand for the Project is shown in Table 3.14-7.

TABLE 3.14-7: PROJECTED WATER DEMAND FOR BUILDOUT OF THE PROPOSED PROJECT

LAND USE	*TOTAL AREA, GROSS ACRES[A]*	*POTABLE WATER USE AREA, ACRES[B]*	*LANDSCAPED AREA, ACRES[C]*	*UNIT POTABLE WATER USE FACTORS[D], AF/ACRE/YR*	*ANNUAL POTABLE WATER USE, AFY*
Industrial	103.0	87.6	-	1.3	114
Irrigation Demand	-	-	15.4	1.9	29
				UAFW[E]	15
				Total Demand	***158***

[A] DATA PROVIDED BY CITY STAFF.

[B] CONSISTENT WITH ASSUMPTIONS IN THE 2021 WSMP; 85 PERCENT OF GROSS ACRES ARE ASSUMED TO USE POTABLE WATER.

[C] CONSISTENT WITH ASSUMPTIONS IN THE 2021 WSMP; 15 PERCENT OF GROSS ACRES ARE ASSUMED TO BE LANDSCAPED.

[D] BASED ON 2021 WSMP

[E] UNACCOUNTED-FOR WATER (UAFW) IS EQUAL TO 9.6 PERCENT.

SOURCE: TRACY COSTCO DEPOT WATER SUPPLY ASSESSMENT (WEST YOST ASSOCIATES, 2021).

It is anticipated that the Proposed Project, if approved by the City, would be served from the City's existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by Water Code Section 16031(b).

Since recycled water infrastructure may not be initially available to deliver recycled water to the Proposed Project, potable water supplies may be used in the interim period before recycled water becomes available to meet the non-potable water demands associated with the initial phases of the Proposed Project.

Determination of Water Supply Sufficiency

Water Code section 10910 states:

> *10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in the *Tracy Costco Depot Project Water Supply Assessment*, the total projected water supplies determined to be available for the proposed Project during normal, single-dry, and multiple-dry water years during a 20-year projection will meet the projected water demand associated with the proposed Project, in addition to existing and planned future uses.

Table 3.14-8 shows the City's existing and planned future potable water supplies and the City's projected water demands in normal, single dry and multiple dry years under the Buildout time frame, which is expected to occur after 2045.

TABLE 3.14-8: SUMMARY OF BUILDOUT POTABLE WATER DEMAND VERSUS SUPPLY DURING HYDROLOGIC NORMAL, SINGLE DRY, AND MULTIPLE DRY YEARS

HYDROLOGIC CONDITION		*SUPPLY AND DEMAND COMPARISON, AFY*
NORMAL YEAR		
Available Potable Water Supply[a]		40,168
Total Potable Water Demand (with proposed project)		39,379
Potential Surplus (Deficit)		**789**
Supply Shortfall, Percent of Demand		--
SINGLE DRY YEAR		
Available Potable and Raw Water Supply[a]		30,259
Total Water Demand (with proposed project)[b]		39,379
Potential Surplus (Deficit)		**(9,120)**
Supply Shortfall, Percent of Demand		23%
MULTIPLE DRY YEAR		
Multiple-Dry Year 1	Available Potable and Raw Water Supply[a]	35,292
	Total Water Demand (with proposed project)[b]	39,379
	Potential Surplus (Deficit)	**(4,087)**
	Supply Shortfall, Percent of Demand	10.4%
Multiple-Dry Year 2	Available Potable and Raw Water Supply[a]	37,014
	Total Water Demand (with proposed project)[b]	39,379
	Potential Surplus (Deficit)	**(2,365)**
	Supply Shortfall, Percent of Demand	6.0%
Multiple-Dry Year 3	Available Potable and Raw Water Supply[a]	32,071
	Total Water Demand (with proposed project)[b]	39,379
	Potential Surplus (Deficit)	**(7,308)**
	Supply Shortfall, Percent of Demand	18.6%
Multiple-Dry Year 4	Available Potable and Raw Water Supply[a]	32,071
	Total Water Demand (with proposed project)[b]	39,379
	Potential Surplus (Deficit)	**(7,308)**
	Supply Shortfall, Percent of Demand	18.6%
Multiple-Dry Year 5	Available Potable and Raw Water Supply[a]	37,014
	Total Water Demand (with proposed project)[b]	39,379
	Potential Surplus (Deficit)	**(2,365)**
	Supply Shortfall, Percent of Demand	6.0%

[a] *WATER DEMANDS ARE FROM TABLE 5-2 OF THE WSA.*

[b] *NORMAL YEAR SUPPLIES ARE FROM TABLE 6-6 OF THE WSA.*

[c] *SINGLE DRY YEAR SUPPLIES ARE FROM TABLE 6-7 OF THE WSA AND ASSUME A 10 PERCENT DEMAND REDUCTION IN DRY YEARS.*

MULTIPLE DRY YEAR SUPPLIES ARE FROM TABLE 6-8 OF THE WSA AND ASSUME A 10 PERCENT DEMAND REDUCTION IN DRY YEARS.

SOURCE: TRACY COSTCO DEPOT WATER SUPPLY ASSESSMENT (WEST YOST ASSOCIATES, 2021).

To be conservative, water demands were assumed to be at normal levels. With future planned projects implemented, the results of the assessment show that water supply is sufficient during normal years. However, during a single dry year or a multiple dry year period, the City must depend more heavily on conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. As described in this WSA and the City's 2020 UWMP, these findings are primarily due to projected reduced reliability of the City's CVP supplies and SSJID supplies in dry years. To close the gap between supply and demand during dry

years, the City will need to implement its Water Shortage Contingency Plan to reduce water demands. However, the City has shown that it can achieve its water conservation goals. During the 2012-2016 statewide drought, the City exceeded its water conservation goals of 25 percent. Further, the City must fully implement its proposed future water supply projects, including the Recycled Water Distribution Network and Exchange Program and expansion of the ASR Program. Investments in wet year water supplies will also be needed to refill storage in Semitropic and expand the City's ASR program. Delays in implementing the proposed future water supply projects could result in greater water supply shortages and the need for additional water conservation to meet demands. Significant water supply shortfalls are currently projected in future single and multiple dry years. These projections include numerous sources of uncertainty as summarized below:

- The Bay-Delta Plan Amendment implementation is under negotiation. The SSJID and others are continuing negotiations with the SWRCB on implementation of the Bay-Delta Plan Amendment for water supply cutbacks, particularly during droughts. This is a dynamic situation and the projected drought cutback allocations may need to be revised before the next (i.e., 2025) UWMP depending on the outcome of ongoing negotiations. The City has considered a conservative estimate of the potential impacts of the Bay-Delta Plan Amendment on the SCWSP (and therefore the City), which is provided in Appendix G of its 2020 UWMP.

- The supply yield of the City's development of additional ASR and recycled water supplies are accounted for in current supply projections. However, implementation of these projects will require significant investment by the City. Similarly, investments in wet years supplies will be needed to refill storage in Semitropic and expand the City's ASR program.

- The City continues to work closely with the USBR and SSJID on their rationing policies to ensure that M&I needs can be met. Rationing policies may potentially be revised.

- The City's projected water demands are subject to change in the future based on water conservation policies and regulations for current and future development, and the pace and extent of development.

- Frequency and duration of cutbacks and, therefore, the shortfalls are also uncertain. In addition to the supply volumes, the above listed uncertainties would also impact the projected frequency and duration of shortfalls.

Recycled water is planned to augment non-potable demands that would otherwise be supplied with potable water. Buildout potable water demands could be less than the current projections and therefore the resultant supply shortage will likely be smaller.

The City continues to evaluate the expansion of its existing supply and to obtain new supply sources, including the ASR Program and Recycled Water Distribution Network and Exchange Program. Other potential supply options, such as direct potable reuse of recycled water, are also being considered.

The City has an active water conservation program and continues to implement the demand management measures described in Section 9 of its 2020 UWMP. Further, in response to the anticipated future shortfalls, the City has developed a robust Water Shortage Contingency Plan (WSCP) that systematically identifies ways in which the City can reduce water demands. The WSCP is included in Section 8 of its 2020 UWMP.

The City is currently exploring other policy-based water efficiency tools that other supply-constrained agencies across California have implemented. These policy-based tools are often bundled together and referred to as Water Demand Offset (WDO) or Water Neutrality policies. Through these policies, project developers are generally required to offset the new demand anticipated by the development through some combination of demand mitigation options, such as:

- On-site retrofits. Project developer with existing property reduces total projected water demand by retrofitting existing property with efficient water fixtures. If projected water demand is reduced below baseline for existing property, no off-site WDOs are required. If not, offsite WDOs are required.

- Off-site retrofits. Project developer coordinates and pays for installation of water efficient fixtures at other properties or converts existing irrigation systems to recycled water for other off- site properties, typically those owned by other entities.

- On-site reuse. Larger scale developments are required to implement on-site reuse of water, including rainwater, greywater, stormwater, and blackwater, as has recently been implemented by the cities of San Francisco and Menlo Park.

- Supply augmentation. Project developer secures its own water supply to serve the development, either through direct provision of water to the development or through an agreement to transfer rights to the water supplier.

- WDO fees. Project developer pays fees to implementing entity based on the amount of water offset, and the agency uses the fees to fund water conservation programs. Such conservation programs could include system water loss mitigation projects (e.g., capital improvement, Advanced Metering Infrastructure [AMI] meters, etc.), purchase of water efficient equipment (e.g., NO-DES hydrant flushing machine to recycle water used to flush mains), and recycled water system infrastructure, as well as fixture rebate or retrofit and education-based conservation programs.

Such policies could be designed as a “net neutral” policy wherein the new development is required to offset all new demands associated with the development project and minimize the overall supply reliability impacts for the existing customers.

Pursuant to Water Code section 10910(c)(4), and based on the technical analyses described in the WSA, the WSA demonstrates that the City’s existing and additional planned future water supplies are sufficient to meet the City’s existing water demands, including those future water demands associated with the Proposed Project, to the year 2045 under all hydrologic conditions (including

Normal Years, Single Dry Years, and Multiple Dry Years), and through Buildout of the General Plan with full development of the proposed Recycled Water Exchange Program. However, during a single dry year or a multiple dry year period, the City may experience a water supply shortfall. To close the gap between supply and demand, the City will need to implement its Water Shortage Contingency Plan to reduce water demands and rely more heavily on groundwater and proposed future supply projects.

Water demand within the City's water service area is not expected to exceed the City's supplies at Buildout under normal hydrologic conditions if the City is able to fully implement its future planned projects, which include Aquifer Storage and Recovery Program Expansion, Recycled Water Distribution Network and Exchange Program for additional Central Valley Project water supplies, and recycled water distribution for non-potable use. During a single dry year or a multiple dry year period, the City must depend more heavily on water conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. Investments in wet year water supplies will also be needed to refill storage in Semitropic and expand the City's ASR program. Delays in implementing the proposed future water supply projects could result in greater water supply shortages and the need for additional water conservation to meet demands.

The dry year shortfalls are based on water supply and demand projections with numerous uncertainties and the situation is dynamic as discussed in 2020 UWMP and the WSA for the Project. The City continues to work on strategies and actions to address the projected water supply shortfall. The City's strategies and actions include the implementation of demand management measures as part of its water conservation program, consideration of net neutral policies to improve water use efficiency community-wide, and implementation of the future water supply projects.

CONCLUSION

The water demands for buildout of the Proposed Project are included in the projected water demands. Therefore, the City is able to serve the Proposed Project in addition to existing and planned developments with the existing and planned future water supplies including minor reliance on demand reductions or the Recycled Water Exchange Program in Single Dry Years. Depending upon the pace of other developments and timing of development of the Proposed Project, construction of additional infrastructure and acquisition of future water supplies identified in the water Master Plan may be triggered. As identified above, the proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. Therefore, the proposed Project would result in a ***less than significant*** impact to water supplies.

3.14.3 STORM WATER

ENVIRONMENTAL SETTING

Existing City Facilities

The following information was provided in the City of Tracy Citywide Storm Drainage Master Plan (2012). The City of Tracy provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

In general, new development projects will be required to provide site-specific or project-specific storm drainage solutions that are consistent with the overall infrastructure approach presented in the City's Storm Drain Master Plan (SDMP). The City may allow for a reasonable degree of flexibility to be incorporated into specific design approaches as a part of achieving effective solutions, including adjustments to alignments of linear storm drainage conveyance facilities and adjustments to configurations of detention facilities. Modifications and refinement to the storm drainage facilities master plan may be considered by the City during the Specific Plan and development review process for new development. However, any significant modifications to the elements of the SDMP must be approved by the City and will require that a formal "Supplement" be adopted by the City Council.

The City's Public Works Department manages Tracy's storm drainage system. Stormwater drains through open channels, storm drains, and closed conduits that are owned, operated, and maintained by the City and the West Side Irrigation District. The system includes three outfalls: the West Side Irrigation District (WSID) Main Drain; the Westside Channel Outfall System; and the Sugar Cut Outfall. These outfalls carry and discharge storm runoff into the Old River and utilize pump stations to move water over grades; however, the majority of the system is gravity operated.

Future Storm Drain Master Plan Improvements

The City of Tracy completed the Citywide Storm Drainage Master Plan Mitigated Negative Declaration in November 2012[3]. The Master Plan identified new storm drainage infrastructure needed to serve new development included in the City's General Plan as well as to correct existing deficiencies. The City's General Plan includes future service areas within its sphere of influence.

The City comprises a number of watersheds. The Project site lies within the Lammers Watershed which includes the WSID upper main channel, several large diameter pipes, and a number of detention basins.

[3] City of Tracy, 2012. City of Tracy Citywide Water System Master Plan/Tracy Wastewater Master Plan Initial Study, November 2017.

REGULATORY SETTING

Clean Water Act

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for "any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters." Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits "for the discharge of dredged or fill material into the navigable waters at specified disposal sites": subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if "the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas": subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The SWRCB and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the Tracy Planning Area. In the Tracy Planning Area the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the Tracy Planning Area were established by the RWQCB and are listed in its Basin Plan.

National Pollutant Discharge Elimination System (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm

sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.).

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

A Phase II Small Municipal Separate Storm Sewer (MS4) General Permit was adopted by the SWRCB on December 8, 2017 and became effective February 1, 2018. The Permit has numerous components and the City is required to implement these components in stages over the five-year period of the Permit. The Cities of Lathrop, Lodi, Manteca, Patterson, Tracy and San Joaquin County (Partners) collaborated to develop a Multi-Agency Post-Construction Standards Manual to meet the MS4 permit requirement. The SWRCB adopted Order No. 2017-0113-DWQ in 2018, which requires that agencies regulate post-construction development through a number of different program elements. In response to this order, five cities, including Tracy, and San Joaquin County collaborated together to develop a "Multi Agency Post-Construction Stormwater Standards Manual."

Federal Emergency Management Agency

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources (DWR) to insure the proper implementation of FEMA floodplain management regulations.

Department of Water Resources

DWR's major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

> (a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:
>
> > (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
> >
> > (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.

(3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

Water Quality Control Plan for the Central Valley Region

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region's ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

200-Year Flood Protection in Central Valley

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development. The new law restricts approval of development after 2015 if "adequate progress" towards achieving this standard is not met. Urban and urbanizing areas protected by State-Federal project levees cannot use "adequate progress" as a condition to approve development after 2025.

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to stormwater and drainage. General Plan policies applicable to the Project are identified below:

POLICIES

- PF-6.1-P1. The City shall promote water conservation by implementing the Best Management Practices contained in the Urban Water Management Plan.
- PF-6.1-P2. The City shall continue to acquire additional sources of water supplies to meet the City's future demands.
- PF-6.1-P3. The extent feasible, the City shall use surface water supplies to meet daily water needs and reduce reliance on groundwater supplies.
- PF-6.1-P4. The City shall establish water demand reduction standards for new development and redevelopment to reduce per capita and total demand for water.
- PF-6.2-P1. The City shall maintain water storage, conveyance and treatment infrastructure in good working condition in order to supply domestic water to all users with adequate quantities, flows and pressures.
- PF-6.2-P2. Storage reservoirs should be buried or partially buried depending on local groundwater conditions to allow for joint use of the site with parks or recreational facilities, unless reservoirs are elevated to provide a gravity flow system, in which case the reservoirs shall be screened by landscaping and/or earthen berms.
- PF-6.3-P1. Structures with plumbing that are located within the City limits shall connect to the City water supply system.
- PF-6.3-P2. New developments shall dedicate land for utility infrastructure such as treatment facilities, tanks, pump stations and wells as needed to support the development of their project.
- PF-6.3-P3. The City shall be responsible for constructing new transmission water lines, as needed to meet future needs. Individual development projects shall be responsible for the construction of all water transmission means.
- PF-6.3-P4. All new water facilities shall be designed to accommodate expected capacity for buildout of areas served by these facilities but may be constructed in phases to reduce initial and overall costs.
- PF-6.3-P5. The availability of sufficient, reliable water shall be taken into account when considering the approval of new development.
- PF-6.3-P6. Costs for water service expansion shall be distributed among new water users fairly and equitably.
- PF-6.4-P1. Groundwater supplies should be reserved for emergency use during water treatment shutdowns, short-term shortages of surface water supplies or during droughts.
- PF-6.4-P2: Backup emergency power systems shall be provided at all essential water facilities that rely on electric power.
- PF-6.4-P3. Storage reservoir facilities should be located at naturally high topographic locations to capitalize on gravity flow, whenever possible.
- PF-6.4-P4. Future water systems and facilities shall be designed to minimize the likelihood of damage from vandalism or terrorist activity.
- PF-6.5-P1. The City shall maintain wastewater conveyance, treatment and disposal infrastructure in good working condition in order to supply municipal sewer service to the City's residents and businesses.

- PF-6.5-P2. The City shall expand the existing wastewater treatment plant to the extent possible or pursue a single new west side facility instead of building new facilities at multiple locations to meet future needs.
- PF-6.5-P3. New habitable structures located within the City limits shall connect to the public wastewater collection system.
- PF-7.1-P1. Areas used for the land application of treated effluent may also be used for agriculture.
- PF-7.2-P1. Wastewater collection and treatment facilities shall be designed to serve expected buildout of the areas served by these facilities but constructed in phases to reduce initial and overall costs.
- PF-7.2-P2. The City shall construct new wastewater trunk lines as needed. Individual development projects shall be responsible for construction of all collection lines other than trunk lines.
- PF-7.2-P3. The approval of new development shall be conditioned on the availability of sufficient capacity in the wastewater collection and treatment system to serve the project.
- PF-7.2-P4. "Package" treatment plants shall not be allowed in the City.
- PF-7.2-P5: New development shall fully fund the cost of new wastewater treatment and disposal facilities.
- PF-7.2-P6. Prior to any development approvals within an Urban Reserve, the City shall complete new wastewater master planning and wastewater and disposal studies, particularly for the west side of the city. These studies are to be funded by proponents of new development and must show how adequate wastewater treatment will be provided to the Urban Reserve in question.
- PF-7.3-P1. New wastewater treatment plants should be located to allow for distribution of recycled water to application areas by gravity flow where feasible.
- PF-7.3-P2. The City shall integrate public facilities and wastewater reclamation sites with agricultural and open space preservation programs where feasible.
- PF-7.3-P3. Biosolid disposal shall be managed so as to minimize impacts to the environment and public health.
- PF-7.3-P4. The City shall establish wastewater treatment demand reduction standards for new development and redevelopment to reduce per capita and total demand for wastewater treatment.
- PF-8.1-P1. Stormwater infrastructure shall be maintained in good condition.
- PF-8.1-P2. Stormwater infrastructure shall minimize local flooding by attaining capacity that conforms with the Storm Drainage Master Plan and City Design Standards.
- PF-8.1-P3. New permanent stormwater infrastructure shall be designed to serve dual purposes to the extent possible. This includes the following: - Drainage facilities integrated into recreation corridors with bike paths, sidewalks and landscaping. - Drainage channels integrated with transportation and environmental corridors. - Storm water detention basins shall incorporate active and passive recreation areas where feasible. These areas shall not count towards parks dedication requirements.

- PF-8.1-P4. When temporary retention or detention facilities are no longer needed after an outfall system is constructed, the sites shall be backfilled and disconnected from the storm drainage system.
- PF-8.1-P5. The City shall ensure a fair and equitable distribution of costs for stormwater system upgrades, expansion and maintenance.
- PF-8.1-P6. Design of storm drainage facilities shall be consistent with State and federal requirements, including NPDES requirements.
- PF-8.1-P7. Planning for stormwater facilities should consider possible future retrofitting needs associated with changing regulations pertaining to storm water quality, including NPDES requirements.
- PF-8.2-P1. To the extent feasible, new development projects shall incorporate methods of reducing storm runoff within the project to reduce the requirements for downstream storm drainage infrastructure and improve stormwater quality.
- PF-8.2-P2. New storm drainage facilities shall meet adopted City standards, including the standards and policies contained in the Storm Water Management Plan, the Storm Drainage Master Plan and the Parkways Design Manual.
- PF-8.2-P3. New development projects shall only be approved if necessary, stormwater infrastructure is planned and is in compliance with environmental regulations.
- PF-8.2-P4. If sufficient downstream stormwater infrastructure has not yet been constructed, new development projects shall be required to implement temporary on-site retention facilities in conformance with City standards.

City of Tracy Municipal Code

The following chapters of the Tracy Municipal Code relate to stormwater and drainage.

CHAPTER 9.52 FLOODPLAIN REGULATIONS

This chapter addresses floodplain regulations and requirements for new development and construction within Flood Hazard Areas delineated by Flood Insurance Rate Maps published by FEMA.

CHAPTER 11.28 WATER MANAGEMENT

This chapter addresses the prevention of waste and unreasonable water use and to promote water conservation as an effective means to manage the local water supply.

CHAPTER 11.32 STORM AND SURFACE WATER MANAGEMENT ENTERPRISE AND UTILITY

This chapter addresses the need to provide effective management of the City's storm drainage facilities.

CHAPTER 11.34 STORMWATER MANAGEMENT AND DISCHARGE CONTROL

This chapter addresses City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system,

eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, reducing pollutants in urban stormwater discharges to the maximum extent practicable.

CHAPTER 11.30 - RECYCLED AND NON-POTABLE WATER

This chapter addresses the use of recycled water within the city for non-potable uses. Specifically, this chapter requires new developments in the city to include recycled water distribution systems.

SECTION 11.34.210 DESIGN STANDARDS

According to section 11.34.210 Design Standards of the City's Municipal Code, all construction of public stormwater conveyance system infrastructure shall conform to design criteria, standard plans and specifications and the inspection and testing procedures set forth in the applicable City public improvement design standards.

Utility Master Plans

The City of Tracy maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *Urban Water Management Plan* (2015), *Citywide Water System Master Plan* (2012), *Citywide Storm Drain Master Plan* (2021) *Wastewater Master Plan* (2012), and the *Citywide Public Facilities Master Plan (2012)*.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

1. Require or result in the relocation or construction of new or expanded storm water drainage facilities, the construction of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-6: The proposed Project has the potential to require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant with Mitigation)

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater. The Project site is not located within the 100 or 200-year floodplain as delineated on the most recent flood plain maps for Tracy.

Because the proposed project increases impervious surface area from an existing undeveloped and predominately previous site, the Project site could increase runoff significantly, Project impacts to stormwater are considered potentially significant. Onsite storm drainage would be installed to

serve the proposed Project. Development of the proposed Project would include construction of a new storm drainage system, including a drainage collection system, and detention basins. All on-site storm drainage runoff will be collected through drain inlets and catch basins along the streets, and conveyed via surface swales and underground trunk lines to detention and water quality basins. The storm water drainage detention basins will be constructed to meet the City of Tracy Standards. Discharge from the basins will be conveyed through controlled flow pumping facilities to existing City of Tracy and main storm drain laterals. It is anticipated that the detention basin identified as LW-11 located on the adjacent City land east of the Project site as planned in the Storm Drain Master Plan would also be utilized in the future.

Pursuant to section 11.34.210 Design Standards of the City's Municipal Code, installation of the Project's storm drain system would be required to conform to the design criteria, standard plans and specifications and the inspection and testing procedures set forth in the applicable City public improvement design standards. Thus, the proposed storm drainage collection and detention system will be subject to the SWRCB and City of Tracy regulations, including: Tracy Municipal Code, Tracy Storm Drain Master Plan, 2012; Phase II, NPDES Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

The following mitigation measure requires the Project applicant to install a drainage system that meets this performance standard and, prior to issuance of grading permits, provide a drainage plan and report to the City of Tracy for review and approval. The proposed Project would participate in the implementation of the storm drainage Master Plan through the payment of fees and/or the construction of Master Plan facilities with corresponding credits. With the implementation of the following mitigation measure, drainage impacts would be reduced to ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.14-1*: Prior to the issuance of a building or grading permit, the Project applicant shall submit a drainage plan to the City of Tracy for review and approval. The plan shall include an engineered storm drainage plan that demonstrates attainment of pre-Project runoff requirements prior to release at the outlet canal and describes the volume reduction measures and treatment controls used to reach attainment consistent with the Tracy Storm Drain Master Plan.*

3.14.4 SOLID WASTE

ENVIRONMENTAL SETTING

The City of Tracy contracts with Tracy Disposal Service, a private company, for solid waste collection and disposal. Solid waste is taken to the Tracy Material Recovery Facility (MRF) and Transfer Station on South MacArthur Drive before being sent to the Foothill Sanitary Landfill on Shelton Road. The MRF, which is operated by Tracy Material Recovery and Solid Waste Transfer, Inc., has a daily intake capacity of 1,800 tons and on average takes in 580 tons per day from Tracy. The transfer station site is approximately 80 acres.

Presently, the permitted capacity of the Foothill Landfill is 102 million cubic yards. The remaining capacity of the facility is approximately 95 million cubic yards. Current permits indicate a closure in 2054. There are no plans to expand the Foothill Landfill or build a new one to accommodate Tracy's waste since the Foothill Landfill is expected to meet the City's needs for the foreseeable future.

According to the California Department of Resources Recycling and Recovery (CalRecycle), in 2019, Tracy disposed of approximately 103,647 tons of solid waste. CalRecycle provides an average per-capita solid waste disposal rate for residents and business. In Tracy, CalRecycle identified solid waste disposal rates of 6.1 tons per resident per year and 18.0 tons per employee per year in 2019 (CalRecycle Jurisdiction Diversion/Disposal Rate Summary, 2019).

The City of Tracy, in coordination with Tracy Disposal Service, also provides recycling services to city residents and businesses. The City provides curbside residential collection of recyclable materials. Acceptable materials include glass containers, all plastics, tin and aluminum cans, plastic milk cartons, newsprint, boxboard, corrugated cardboard, bond paper and magazines. Residents may also recycle some materials at buy-back centers. Special recycling programs include an electronics waste program; a tire recycling program, which collects about 60 tons of tires per year; and a twice-per-year residential cleanup program on large items and debris. There are also opportunities to recycle construction and demolition waste.

The California Integrated Waste Management Act (CIWMA) of 1989, also commonly known as Assembly Bill (AB) 939, requires local agencies to implement source reduction, recycling, and composting (see discussion under "Regulatory Setting" below). To comply with the CIWMA, the City adopted Ordinance Article IV Chapter 74, the Business and Multi-family, commercial and industrial recycling programs in May 2003. The program requires businesses and multifamily residential properties to keep recyclable materials separate from all other solid waste, to provide signs and labeled containers for the storage and collection of recyclable materials, and to either self-haul or enter into a written service agreement with a franchise hauler (Tracy Disposal Service) for the collection and subsequent delivery of recyclable materials to an authorized recycling facility. Businesses and multifamily residential property owners and operators must prepare a recycling plan that provides information on the types of on-site recyclable materials and verifies that labeled containers, signs, and a disposal service are available to ensure compliance with the ordinance.

REGULATORY SETTING

California's Integrated Waste Management Act of 1989 (AB 939)

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling and composting. In order to achieve this goal, AB 939 requires that each City and County prepare and submit a Source Reduction and Recycling Element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 939 also established requirements for cities and counties to develop and implement plans for the safe management of household hazardous wastes. In order to achieve this goal, AB 939 requires that each city and county prepare and submit a Household Hazardous Waste Element.

75 Percent Solid Waste Diversion

AB 341 requires CalRecycle to issue a report to the Legislature that includes strategies and recommendations that would enable the state to recycle 75 percent of the solid waste generated in the state by January 1, 2020, requires businesses that meet specified thresholds in the bill to arrange for recycling services by July 1, 2012, and also streamlines various regulatory processes.

Construction and Demolition Waste Materials Diversion

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the California Integrated Waste Management Board (CIWMB, which is now CalRecycle) to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

California Green Building Standards Code (CALGreen)

CALGreen requires the diversion of at least 50 percent of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects (CALGreen Section 5.713).

California Organic Waste Regulations (SB 1383)

SB 1383 was adopted to reduce organics waste landfill disposal by 75% (from 2014 levels) by 2025. This means diverting more than 20 million tons from landfills. The legislation aims to slow climate change by diverting organic materials from landfills, recovering 20% of edible food and redirecting it to food-insecure Californians.

Beginning January 1, 2022, residences and businesses are required to sort and separately collect food scraps, yard debris and food-soiled paper from trash and recycling and subscribe to an organic waste collection service.

City of Tracy General Plan

The City of Tracy General Plan includes several policies that are relevant to solid waste. General Plan policies applicable to the Project are identified below:

POLICIES: PUBLIC FACILITIES ELEMENT

- PF-5.1-P1. Promote redesign, reuse, composting and shared producer responsibility of discarded materials.
- PF-5.1-P2. The City shall strive to meet or exceed the State's goal of diverting 50 percent of all solid waste from landfills.
- PF-5.1-P3. The City shall encourage local businesses to expand their recycling efforts and to reduce packaging of products manufactured in the city.
- PF-5.1-P4. Public buildings shall be designed or improved with onsite storage facilities for recycled materials.
- PF-5.1-P5. Salvage and reuse of construction and demolition materials and debris is encouraged at all construction projects in the city.
- PF-5.1-P6. City buildings shall be rehabilitated and reused when feasible.
- PF-5.1-P7. The City shall encourage the use of post-consumer recycled paper and other recycled materials in all City operations.
- PF-5.1-P8. Residential, industrial, commercial and retail buildings should be designed or improved to accommodate an increase in the amount and type of recycled materials.

City of Tracy Municipal Code, Chapter 5.20

Chapter 5.20 of the Municipal Code regulates the collection, transportation, and disposal of refuse and solid waste of all kinds, and the collection, transfer and recovery of recyclable and organic waste material in order to promote community welfare, convenience, health, and safety.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on the environment associated with Utilities if it will:

1. 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; and/or.
2. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-7: The landfills that would serve the proposed Project have sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and the proposed Project will comply with federal, State, and local statutes and regulations related to solid waste (Less than Significant)

The City of Tracy contracts with Tracy Disposal Service, a private company, for solid waste collection and disposal. Based on the waste generation factors provided by CalRecycle, the proposed Project is expected to generate approximately 5,584 pounds per day of solid waste upon full buildout, which is equivalent to 2.8 tons per day; refer to Table 3.14-9.

TABLE 3.14-9: ESTIMATED SOLID WASTE GENERATION

LAND USE	*GENERATION FACTOR[(1)]*	*PROJECT*	*ESTIMATED SOLID WASTE (LBS/DAY)*
Supermarket	3.12 lb./1,000 s.f./day	1,745,052 s.f.	5,584

[(1)] CalRecycle 2019

Currently, the permitted capacity of the Foothill Landfill is 102 million cubic yards. The remaining capacity of the facility is approximately 95 million cubic yards. As noted previously, the remaining capacity of the facility is approximately 95 million cubic yards. Current permits indicate a closure in 2054. There are no plans to expand the Foothill Landfill or build a new one to accommodate Tracy's waste since the Foothill Landfill is expected to meet the City's needs for the foreseeable future. The addition of the volume of solid waste associated with the proposed Project to the Foothill Landfill would not exceed the landfill's remaining capacity.

CONCLUSION

The proposed Project would be required to comply with applicable State and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. The City would coordinate development of the proposed project with Tracy Disposal Service. Furthermore, the addition of the volume of solid waste associated with the proposed Project, approximately 2.8 tons per day, would increase the total tons of solid waste to the MRF to approximately 357 tons per day; however, this increase would not cause an exceedance of the landfill's remaining capacity. Therefore, the proposed Project would not generate solid waste in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals, or exceed any State or local standards associated with solid waste. This is a ***less than significant*** impact.

The California Environmental Quality Act (CEQA) requires an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, and significant and unavoidable impacts associated with the proposed Project.

4.1 CUMULATIVE CONTEXT IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" means that the incremental effects of an individual 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 (as defined by Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

> *…the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.*

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

1) Either:

(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,

(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency.

2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and

3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

The cumulative context uses growth projections listed in various planning documents and Department of Finance statistics. Table 4.0-1 shows growth projections.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	*ESTIMATED POPULATION (TRACY)*	*ESTIMATED POPULATION (SAN JOAQUIN COUNTY)*	*ESTIMATED POPULATION (CALIFORNIA)*
2020	95,040	775,819	40,619,346
2025	102,236	829,426	42,373,301
2030	109,492	883,484	44,085,600
2035	118,130	947,835	45,747,645
2040	127,933	1,020,862	47,233,240

SOURCES: CALIFORNIA DEPARTMENT OF FINANCE (2020), SJCOG 2018 RTP/SCS (2018).

In addition to those cumulative growth projections listed above, this EIR uses a list of past, present, and probable future projects within the City of Tracy to determine cumulative growth in the area. The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that are planned to occur within the City of Tracy. The approved and/or pending projects are listed in the City's Project Pipelines Reports (August 2022)[1].

CUMULATIVE EFFECTS OF THE PROJECT

The geographic context is identified under each cumulative impact analysis. The geographic context varies among topical impact areas because the geographic area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise. Cumulative Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. CEQA Guidelines Section 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the

[1] Available at: https://www.cityoftracy.org/our-city/departments/planning

environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. As noted previously, this EIR uses a list of past, present, and probable future projects within the City of Tracy to determine cumulative growth in the area. The list of past, present, and probable future projects used for this cumulative analysis is restricted to those projects that are planned to occur within the City of Tracy. The approved and/or pending projects are listed in the City's Project Pipelines Reports (August 2022).

Project Assumptions

The proposed Project's contribution to environmental impacts under cumulative conditions is based on development of the Project site consistent with the development assumptions identified in Chapter 2.0, Project Description. See Chapter 2.0, Project Description, for a complete description of the proposed Project.

Cumulative Impacts

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general, qualitative terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, utilities, noise and air quality (the latter two of which are associated with traffic volumes and operations associated with the proposed land uses), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

The geographic context for aesthetics is the City of Tracy and surrounding areas of San Joaquin County.

Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway (Less than Significant)

As described in Section 3.1, Aesthetics and Visual Resources, one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 to Interstate 205. This route traverses the edge of the Coast Range to the west and Central Valley to the east. This Designated Scenic Highway is located approximately 0.65 miles southwest of the Project site. The views from I-580 to the Project site are limited because of small hills, commercial buildings along I-580, and high speeds of travel.

However, new development proposed by the Project in the viewsheds would have the potential to adversely affect a State-designated route.

Cumulative development in the city would not impact a State Scenic Highway. As such, impacts relative to scenic resources -would be a ***less than significant***.

Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region (Significant and Unavoidable and Cumulatively Considerable)

Project implementation would introduce industrial uses, as well as supporting infrastructure into an area that is currently undeveloped and is primarily occupied by agricultural uses. The proposed Project would include visual components that would assist in enhancing the appearance of the site following site development. Landscaping improvements, such as new street trees and other vegetation landscaping, would be provided throughout the Project site, including along the site boundary. The landscape design and plant palette would complement the existing street and building/development landscape character established by Prologis and the International Park of Commerce providing visual relief from the proposed improvements. Additionally, the proposed Project would also include landscaping buffer zones, pursuant to General Plan Policy OSC-2.2-P1, at the interface of urban development and farmland in order to minimize conflicts between the uses and provide a visual shield. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

There would be two significant unavoidable visual quality impacts under the proposed General Plan for the Tracy Planning Area and under cumulative conditions in the region as a whole. Despite policies in the General Plan to preserve open space and agricultural lands and community character, policies in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and the City's Agricultural Mitigation Fee Ordinance, development occurring within the City and its Sphere of Influence would result in a change in visual character from an agricultural appearance to a more urban appearance.

Under cumulative conditions, buildout of the General Plans for Tracy and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Tracy through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. It is noted that although the Project site is undeveloped and was previously used for agricultural uses, the General Plan designates the site for Industrial uses. Additionally, the surrounding areas to the north, east, south, and west are designated for urban uses (including mainly Industrial uses) by the General Plan. As such, the General Plan and associated EIR anticipated development of the Project area for similar uses as proposed by the Project.

Development within the City would be required to be consistent with the General Plan policies and City Municipal Code, both of which cover aesthetics and visual characteristics. Further, the Municipal Code contains development standards that address the visual character of a development project, such as building height, massing, setbacks, lighting, and landscaping. Although implementation of these requirements would reduce the impacts associated with development, the impacts would

remain significant and unavoidable. As such, this is a ***significant and unavoidable*** impact, and the Project's contribution to this impact would be ***cumulatively considerable***.

Impact 4.3: Cumulative Impact on Light and Glare (Less than Significant)

Implementation of the proposed Project would introduce new sources of light and glare into the vacant Project site. Compliance with the lighting plan required by Mitigation Measure 3.1-1 would ensure that the Project's proposed lighting is reviewed by the Tracy Public Works Department for compliance with street light and light illumination standards to ensure the Project is properly shielding and protecting against light spillover onto adjacent properties. Adherence to City of Tracy Standard Plan #140 and Section 10.08.400of the Municipal Code of the City Municipal Code would ensure that excessively reflective building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare.

Future projects within Tracy, Lathrop, and San Joaquin County would be subject to the light and glare standards established by the individual jurisdictions. These regulations are designed to minimize potential light and glare impacts of new development. Implementation of these regulations would ensure that future projects minimize their potential light and glare impacts resulting in a ***less than significant*** cumulative impact relative to this environmental topic.

AGRICULTURAL RESOURCES

The geographic context for agriculture and forest resources is all of San Joaquin County. According to the Department of Conservation, the County had 784,800 acres of crop land in 2018, the majority of which is identified as Prime Farmland. The remaining agricultural land is comprised of Farmland of Statewide Importance (11 percent), Unique Farmland (11 percent), Farmland of Local Importance (9 percent), and Grazing Land (18 percent).

Impact 4.4: Cumulative Impact on Agricultural Resources (Significant and Unavoidable and Cumulatively Considerable)

As described in Section 3.2, Agricultural Resources, development of the proposed Project would result in a permanent conversion of 101.78 acres of Prime Farmland to non-agricultural use. The loss of Important Farmland as classified under the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP) is considered a potentially significant environmental impact.

Tracy Municipal Code Chapter 13.28 establishes the City's Agricultural Mitigation Fee Program, which authorizes the collection of development impact fees to offset costs associated with the loss of productive agricultural lands converted for private urban uses. In addition to the City's agricultural mitigation fee program, the SJMSCP requires development to pay fees on a per-acre basis for impacts to agricultural lands that function as habitat for biological resources. SJCOG will then use these funds to purchase the conservation easements on agricultural and habitat lands in the Project vicinity. The compensation results in the purchase of conservation easements that are placed over agricultural land. As such, the Project fees paid to SJCOG as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

The purchase of conservation easements and/or deed restrictions through the City's agricultural mitigation fee program and the SJMSCP allows the landowners to retain ownership of the land and continue agricultural operations, and preserves such lands in perpetuity. Future projects would be subject to the City's agricultural mitigation fee program and the SJMSCP.

While the proposed Project, as well as future projects in the City and County, will contribute fees toward the purchase of conservation easements on agricultural lands, as required by Mitigation Measure 3.2-1, those fees and conservation easements would not result in the creation of new farmland to offset the loss that would occur with Project implementation. As such, the loss of Important Farmland would be a ***significant and unavoidable*** impact. The Project's contribution to this significant impact would be ***cumulatively considerable***.

AIR QUALITY

The geographic context for air quality impacts is the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties, stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south.

Impact 4.5: Cumulative Impact on the Region's Air Quality (Significant and Unavoidable and Cumulatively Considerable)

Under buildout conditions in the San Joaquin County, the SJVAB would continue to experience increases in criteria pollutants and efforts to improve air quality throughout the basin would be hindered. As described in Section 3.3, San Joaquin County has a state designation of Nonattainment for ozone, PM_{10} and $PM_{2.5}$. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, the proposed Project is in conformance with the AQAP, based on these criteria, as follows:

- *Determination that an AQAP is being implemented in the area where the project is being proposed.*

The SJVAPCD has implemented the current, modified 2016 8-hour AQAP as approved by CARB and approved by USEPA for the 2008 8-hour O_3 standard.

- *The proposed project must be consistent with the growth assumptions of the applicable AQAP.*

The SJCOG RTP/SCS growth projections provide for future employment/population factors. The development of the SJVAPCD AQAP is based in part on the land use general plan projections of the various cities and counties that constitute the Air Basin. The City of Tracy General Plan Land Use Element designates the Project site as Industrial, which is intended to accommodate flex/office space, manufacturing, warehousing and distribution, and ancillary uses for workers' needs. Therefore, the proposed Project, which involves the development of light industrial, warehouse and distribution and related uses, is considered consistent with the site's General Plan land use

designation and its traffic would be included in volumes projected for analysis of the General Plan. The SJVAPCD AQP is based on the growth assumptions of the City of Tracy General Plan and SJCOG RTP/SCS. Since the Project is consistent with the SJCOG RTP/SCS, and SJCOG RTP/SCS projections are incorporated into the SIP, the Project is also consistent with the SIP.

- *The project must contain in its design all reasonably available and feasible air quality control measures.*

The Project incorporates various policy and rule-required implementation measures that would reduce related emissions, including all of the current Air District rules and regulations.[2] For example, the proposed Project would be required to implement Air District Rule 9510, which ensures that the Project would fulfill the Air District's emissions reduction commitments in the relevant PM_{10} and Ozone Attainment plans. In addition, the Project would comply with all applicable stationary source permitting rules implemented by SJVAPCD, which further confirms the Project would not cause or contribute to any ambient air quality standard exceedances.

As discussed in Impact 3.3-2, the proposed Project, without mitigation, would not exceed the SJVAPCD thresholds of significance for construction criteria pollutants. Additionally, as shown in Table 3.3-9, the proposed Project would not exceed the daily mass screening criteria thresholds during Project construction. Additionally, under the unmitigated scenario, the proposed Project's operational emissions would not exceed any of the daily mass screening criteria thresholds. Proposed Project mitigated operational emissions are shown in Table 3.3-12 based on implementation of SJVAPCD Rule 9510. While compliance with SJVAPCD Rule 9510 is regulatorily required, the rule itself is an indirect source rule designed to achieve emission reductions from development projects. Thus, it is included here to represent the SJVAPCD regulatory requirement to mitigate the operational emissions.[3] The proposed Project would also be required to implement Mitigation Measure 3.3-1, as provided under Impact 3.3-1. However, due to the difficulty in modeling the emissions (i.e. NOx emissions) reductions that would occur due to implementation of Mitigation Measure 3.3-1, and for the sake of a conservative analysis, the emissions reductions associated with Mitigation Measure 3.3-1 were not modeled. There are no further mitigation measures identified and thus Table 3.3-12 provides a conservative estimate of the operational emissions results for the proposed Project. Therefore, this impact would be significant and unavoidable.

Additionally, as discussed in Impact 3.3-3 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of TACs for this type of Project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-10 in Section 3.3, the proposed Project, in and of itself, would not result in a

[2] See here for further detail: https://www.valleyair.org/rules/1ruleslist.htm

[3] The NOx emissions were adjusted to reflect the 33.3% reduction required, per compliance with Air District Rule 9510.

significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

The increase in industrial and commercial/office square footage anticipated with buildout of the Project is generally consistent with growth projections assumed in the Tracy General Plan for the same time horizon. While the proposed Project, as well as future projects in the City and County, will be subject to the requirements of the SJVAPCD, even with the application of the mitigation measures included in Section 3.3, emissions levels would remain above the defined threshold of significance for NOx, since Mitigation Measure 3.3-1 may not be feasible to implement in full. As such, cumulative impacts on the region's air quality would be a ***significant and unavoidable*** impact. The Project's contribution to this significant impact would be ***cumulatively considerable***.

BIOLOGICAL RESOURCES

The geographic context for biological resources includes the Project site and the greater San Joaquin County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in San Joaquin County, including the Project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout. Additionally, local land use authorities in San Joaquin County require development to participate in the SJMSCP, which is a habitat conservation plan and natural community conservation plan for San Joaquin County that provides a mechanism for compensatory mitigation for habitat and species loss in accordance with federal and State laws.

Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species (Less than Significant)

Under cumulative conditions, buildout of the General Plan(s) within San Joaquin County will result in impacts to biological resources associated with new development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible and the SJMSCP has been established to provide a mechanism for compensatory mitigation and standardized avoidance and minimization measures as needed.

As described in Section 3.4 Biological Resources, construction in the Project site has the potential to result in impacts to special-status species in the region. The California Natural Diversity Database (CNDDB) currently contains records for California red-legged frog, San Joaquin kit fox, big tarplant, caper-fruited tropidocarpum, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species, including those discussed in Section 3.4.

Mitigation Measure 3.4-1 requires participation with the SJMSCP, which includes the payment of fees that will be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted and addresses both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the

SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the SJCOG through the authorization of SJMSCP coverage.

The ongoing operational phase of the proposed Project requires discharge of stormwater into the City storm drainage system, which ultimately discharges into the Delta. The discharge of stormwater could result in indirect impacts to special status fish and wildlife if stormwater was not appropriately treated through BMPs prior to its discharge to the Delta. The Project is subject to the requirements of Chapter 11.34 of the Tracy Municipal Code – Stormwater Management and Discharge Control. This chapter is intended to assist in the protection and enhancement of the water quality of watercourses, water bodies, and wetlands in a manner pursuant to and consistent with the Federal Water Pollution Control Act (Clean Water Act, 33 USC Section 1251 et seq.), Porter- Cologne Water Quality Control Act (California Water Code Section 13000 et seq.) and National Pollutant Discharge Elimination System ("NPDES") Permit No. CAS000004, as such permit is amended and/or renewed. The management of water quality through BMPs is intended to ensure that water quality does not degrade to levels that would interfere or impede fish or wildlife.

The Project would result in impacts to biological resources including habitats and special status species. The City has evaluated urban development in the Project area through the General Plan process, and subsequently determined that urban development in this location is appropriate. The proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts. Implementation of the regulations contained in the SJMPSCP and the various General Plans within San Joaquin County would ensure that future projects minimize their potential biological resources. For these reasons, cumulative impacts on the loss of biological resources are ***less than significant***.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural resources impacts can be defined by region, by political subdivision or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The geographic context for cultural resources includes all of the San Joaquin County. There are extensive cultural sites located in the region.

Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources (Less than Significant)

Cumulative development anticipated in the City of Tracy, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.5, Cultural and Tribal Resources, the Project site does not contain buildings or structures. A California Historic Resources Information System (CHRIS) search was requested from the Central California Information Center (CCIC), which included the Project area and a one-half mile radius (CCIC File #11244L). The results of the CCIC records search indicated that the Project site does not contain any recorded buildings or structures listed on the State Office of Historic Preservation Historic Property Directory (which includes listings of the California Register of Historic Resources, California State Historical Landmarks, California State Points of Historical Interest, and the NRHP).

The records search also noted that the General Land Office Survey Plat does not reference any historic features in the Project area.

Any previously unknown cultural resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to their respective General Plans (i.e., City of Tracy, City of Lathrop, and San Joaquin County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition, all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA. As such, impacts related to cultural resources would result in a ***less than significant***.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Tracy and vicinity.

Impact 4.8: Cumulative Impact on Geologic and Soils Resources (Less than Significant)

As discussed in Section 3.6, Geology and Soils, a Geotechnical Review was prepared to review readily-available geotechnical and geologic information in order to identify potential geotechnical-related risks associated with the Project site. According to the Geotechnical Review, the proposed Project is geotechnically feasible and concerns related to ground rupture, ground shaking, liquefication, or landslides were not identified; refer to the discussion below regarding expansive soils. However, mitigation measures provided in Section 3.6 ensure impacts related to soil hazards will be less than significant.

Additionally, the nearest earthquake fault zoned as active by the CGS is the Black Butte Fault, located approximately 1.1 miles to the south of the Project site. However, this fault is not considered an active fault that would trigger evaluation under the Alquist-Priolo Earthquake Fault Zoning Act. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the Project would be required to comply with Mitigation Measure 3.6-1, which requires a final geotechnical evaluation be prepared and design recommendations identified to address any soil conditions within the Project site. Design in accordance with the

Building Code and final geotechnical evaluation would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and Project-specific. With the mitigation measure presented in Section 3.6, implementation of the proposed Project would not result in increased risks or hazards related to geologic conditions in the cumulative area, nor would it result in any off-site or indirect impacts. Overall, impacts related to geologic and soil resources would result in a ***less than significant***.

GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

As the California Supreme Court has reasoned, "because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself. The challenge for CEQA purposes is to determine whether the impact of the project's emissions of greenhouse gases is cumulatively considerable, in the sense that 'the incremental effects of [the] individual 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.'" (*Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 219.) "'With respect to climate change, an individual project's emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the project's incremental addition of greenhouse gases is "cumulatively considerable" in light of the global problem, and thus significant.'" (*Ibid*.)

The geographic context for greenhouse gas (GHG) emissions and climate change impacts for this analysis is San Joaquin County, which is the boundary for the California Air Resources Board's (CARB) regional greenhouse gas emissions reduction targets.

Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions (Less than Significant)

GHG emissions from a single Project will not cause global climate change; however, GHG emission from multiple projects throughout a region or state could result in a cumulative impact with respect to global climate change.

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile State Executive Orders issued by the last two

Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger's 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Jerry Brown issued Executive Order, B-30-15, which created a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that "[t]he Legislature finds and declares [that] … [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification." Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must "direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050."

As presented in Table 3.7-1 in Section 3.7, short-term construction emissions of GHGs are estimated to be 3,206 metric tons of carbon dioxide equivalents ($MTCO_2e$) per year. As shown in Table 3.7-2, the annual GHG emissions associated with the proposed Project would be approximately 12,273 MT CO_2e. The proposed Project would be consistent with all relevant plans, policies, and regulations associated with GHGs, including the SB 32 2017 Scoping Plan Update, and the SJCOG's 2018 RTP/SCS.

Taking into account the proposed Project's emissions, and the progress being made by the State toward reducing emissions in key sectors such as transportation, industry, and electricity, the Project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Therefore, a ***less than significant*** cumulative impact relative to this environmental topic would result.

HAZARDS AND HAZARDOUS MATERIALS

The geographic context for the analysis of cumulative hazards and human health impacts is San Joaquin County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e., Stockton, Lathrop, and San Joaquin County). As discussed in Section 3.8, Hazards and Hazardous Materials, implementation of the proposed Project would not result in any significant impacts related to this environmental topic with the implementation of the mitigation measures provided in Section 3.8.

Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant)

The Project is not proposing the use of any hazardous materials. In the event that hazardous materials are discovered during construction, a Soils Management Plan (SMP) will need to be submitted and approved by the San Joaquin County Department of Environmental Health, as required by Mitigation Measure 3.8-1. Any operations that involve the use of hazardous materials would be required to have the hazardous material transported, stored, used, and disposed of in compliance with local, state, and federal regulations. To further ensure the safety of employees, and reduce the potential for accidental release of hazardous materials into the environment, the applicant must submit a HMBP to San Joaquin County Department of Environmental Health (CUPA) for review and approval prior to bringing hazardous materials onsite, as required by Mitigation Measure 3.8-2.

As part of the Phase I ESA (see Appendix D), a limited Phase II ESA was conducted to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. Soil samples were collected pursuant to the Department of Toxic Substances Control (DTSC) Interim Guidance for Sampling Agricultural Properties (Third Revision) and were analyzed for organochlorine pesticides (OCPs) using US Environmental Protection Agency (EPA) Method 8081A and arsenic using US EPA Method 6010B. The soil sample analytical results indicated that OCPs were not present above laboratory detection limits in shallow soils at the site and arsenic concentrations ranged from 2.3 milligrams per kilogram (mg/kg) to 4.3 mg/kg. Arsenic concentrations did not exceed the arsenic California Code of Regulations (CCR) Title 22 Total Threshold Limit Concentration of 500 mg/kg, 10 times the arsenic CCR Title 22 Soluble Threshold Limit Concentration value of 5 milligrams per liter (mg/L) (50 mg/kg), or 20 times the arsenic Federal Toxicity Characteristic Leaching Procedure threshold of 5 mg/L (100 mg/kg). Therefore, arsenic concentrations at the Site do not exceed thresholds that would classify soils as Federal or California hazardous wastes.

Additionally, Crimson Oil operates a crude oil pipeline beneath the Project site and PG&E operates two natural gas pipelines, which both run across the northeastern portion of the Project site. While the *Phase I ESA* notes no incidental/accidental releases in the Project vicinity have been reported along the pipelines to date, the presence of natural gas pipelines and the potential for undocumented leaks to occur from the crude oil pipeline represents a Recognized Environmental Condition (REC). Undocumented leaks that could occur on-site would result in the release of hazardous materials into the environment contaminating the site and potentially exposing employees and the public to hazardous materials. The *Phase I ESA* notes that Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak) would be responsible for subsurface contamination as a result of leaks from this pipeline; therefore, the site cleanup from the subsurface contamination would be the responsibility of Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak). Mitigation Measure 3.8-3 would require the Project applicant to notify the San Joaquin County Department of Environmental Health in the event that contaminates are found on the Site, who would facilitate the site cleanup.

The proposed Project, in conjunction with cumulative development in the region, would include areas designated for a variety of urban, agricultural, and open space uses as defined by the City's General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would inevitably increase the use of hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

Implementation of the proposed Project, in combination with and past, present, and probable future projects, would not result in significant increased risks of hazards in the cumulative area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. For these reasons, cumulative impacts associated with hazards and hazardous materials would be ***less than significant***.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the geographic context is based on San Joaquin County which is located in the San Joaquin River Hydrological Region. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the San Joaquin River Hydrologic Region. The City of Tracy and much of the surrounding area is located in the San Joaquin

Valley Groundwater Basin. This groundwater subbasin covers approximately 345,000 acres in San Joaquin and Alameda counties, primarily between the eastern extent of the Coast Ranges on the south and the San Joaquin River on the east. Any matter that may affect water quality draining from the Project site will eventually end up in the Delta or within the groundwater basin.

Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project site (Less than Significant)

Implementation of the proposed Project would increase the amount of impervious surfaces in the Project site, which could increase peak stormwater runoff rates and volumes on and downstream of the Project site. However, the proposed Project includes an extensive system of on-site stormwater collection facilities to accommodate the increased stormwater flows that would originate in the Project site.

The Project site includes seven drainage areas: Area 1 (12.07 acres located along the western boundary of the site), Area 2 (36.50 acres located in the center of the site), Area 3 (2.46 acres located along the northwestern boundary of the site), Area 4 (2.00 acres located along the northern boundary of the site) Area 5 (34.26 acres located in the eastern portion of the site), Area 6 (1.64 acres located along the northern boundary of the site), and Area 7 (5.68 acres located along the eastern boundary of the site). Stormwater runoff from each of the seven drainage areas would be routed to a series of stormwater treatment/detention basins and stormwater bioretention treatment planters, located throughout the Project site, mainly in the proposed landscaped areas and along West Schulte Road.

The overall design of the drainage infrastructure, including the proposed detention basins, will be required to comply with the Multi-Agency Post Construction Stormwater Standards Manual, which includes existing and enhanced program control measures for controlling the discharge of pollutants to the municipal storm drain system to the maximum extent practicable (MEP). Additionally, the Multi-Agency Post Construction Stormwater Standards Manual requires new development to employ low impact development (LID) approaches that conserve natural areas and reduce impervious areas. The term LID means a storm water management and land development strategy that emphasizes conservation and the use of on-site natural features integrated with engineered, small-scale hydrologic controls to more closely reflect predevelopment hydrologic functions. The Project would be required to integrate LID measures throughout the Project site to provide stormwater quality treatment. As such, BMPs would be applied to the proposed development to limit the concentrations of constituents in any site runoff to acceptable levels. Stormwater flows from the Project site would be directed to the proposed stormwater treatment basins, treatment planters, and bioretention areas by a new stormwater conveyance system on the Project site. Stormwater runoff would not be allowed to discharge directly to the existing storm drains in West Schulte Road without first discharging to the bioretention areas. The landscaping plan includes stormwater treatment plantings in the treatment/detention basins. Additionally, erosion and sediment control measures would be implemented during construction.

According to the Multi-Agency Post Construction Stormwater Standards Manual, the Project is considered a Hydromodification Management Project as it would result in the development of one acre or more of impervious surface. Hydromodification Management Projects are required to

prepare and submit a Project Stormwater Quality Control Plan that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. In particular, the Project Stormwater Quality Control Plan will need to specify BMPs the Project will use and design specifications for selected BMPs. The Project Stormwater Quality Control Plan must be submitted for review and approval by the City of Tracy, as required by Mitigation Measure 3.9-2. Implementation of Mitigation Measure 3.9-2 would require the Project to be consistent with regulatory requirements.

The same is true of other foreseeable development in the City, which would similarly be bound to comply with strict federal, state, and local laws and regulations. For example, present and probable future development projects in the City would be required to comply with the City's stormwater runoff regulations, including but not limited to those found in the Multi-Agency Post Construction Stormwater Standards Manual and Municipal Code.

With the design and construction of flood control improvements, the proposed Project would not increase peak stormwater runoff. Overall, a ***less than significant*** cumulative impact relative to this environmental topic would occur.

Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant)

The proposed Project, along with several of the related projects within the City of Tracy, would ultimately discharge stormwater runoff to the nearby Delta waterways. This would potentially degrade the water quality of the system.

Construction of the proposed Project would contribute to a cumulative increase in urban pollutant loading, which could adversely affect water quality. Cumulative development in the Tracy area, including the proposed Project, would also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution include: runoff from roadways and parking lots; runoff from landscaping areas; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides.

The proposed Project will be required to comply with Mitigation Measure 3.9-1 which requires the development and approval of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include Best Management Practices (BMPs) to regulate stormwater quality for the Project site which will be designed in accordance with the City of Tracy's NPDES issued by the Regional Water Quality Control Board (RWQCB).

While there are no assurances that other projects in the County would incorporate the same degree or methods of treatment as the proposed Project, several of the projects within the City of Tracy would phase out existing agricultural runoff discharges from their respective sites and, similar to the proposed Project, could provide some level of water quality improvement. Also, each related Project

that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the RWQCB, which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality. Therefore, while a greater quantity of urban runoff may be discharged to the Delta system with implementation of the related projects, because of an increase in impervious surfaces, the associated surface water quality impacts would be expected to be less than significant because of improved or similar quality of runoff compared to existing conditions.

Compliance with City and County water quality protection regulations, approval from the RWQCB, and Mitigation Measure 3.9-1 would ensure that the proposed Project minimizes impacts to surface water quality. Overall, a ***less than significant*** cumulative impact relative to this environmental topic would occur.

Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

As previously stated, the Project site is located in the Lower Aquifer of the Tracy Subbasin and the Tracy Subbasin is not designated as a critically overdrafted basin. Much of the groundwater recharge sources within the Lower Aquifer are limited to precipitation and perennial streams. Precipitation in the region is 13.81 inches, most of which falls between November through April. However, only a small portion of this annual rainfall infiltrates the soil and groundwater basin because of the Corcoran Clay underlaying the majority of the Lower Aquifer area. While the proposed Project would reduce the amount of pervious surfaces within the Project site, the Project site is not located within a known recharge area for the Lower Aquifer due to the presence of Corcoran clay under the Project site[4]. Therefore, development of the Project site would not substantially interfere with groundwater recharge.

Six Groundwater Sustainability Agencies (GSAs) have formed in the Tracy Subbasin to collaboratively develop one Groundwater Sustainability Plan (GSP) for the Subbasin, including the Banta-Carbona Irrigation District, Byron-Bethany Irrigation District, San Joaquin County, City of Lathrop, City of Tracy, and Stewart Tract. The Tracy Subbasin GSP is required to be provided to the State by January 31, 2022. A draft Groundwater Sustainability Plan was made available for public review from August 9 to September 9, 2021. The Plan was then revised to address public comments provided during the public comment period. The City of Tracy City Council adopted the Final GSP at a public hearing held on November 16, 2021. All six GSAs must adopt the Final GSP before it can be submitted to the California Department of Water Resources (DWR) for review. The Final GSP must be submitted to

[4] Tracy Subbasin GSAs. June 2020. Draft Tracy Subbasin Groundwater Sustainability Plan: Chapter 4 [Figure 4-33].

DWR no later than January 31, 2022. After the GSP is submitted, the GSAs will submit annual reports to DWR and update the GSP every five years.

Additionally, Mitigation Measure 3.9-1 requires the preparation of a SWPPP, and structural BMPs. The SWPPP would require the application of BMPs to effectively reduce pollutants from stormwater leaving the site, which would ensure that stormwater runoff does not adversely increase pollutant levels, and would reduce the potential for disturbed soils and ground surfaces to result in erosion and sediment discharge into adjacent surface waters during construction and operational phases of the Project. Additionally, as described under Impact 3.9-1, the Project will be required to submit a Project Stormwater Quality Control Plan (see Mitigation Measure 3.9-2) that demonstrates the Project incorporates site design measures, landscape features, and engineered treatment facilities (typically bioretention facilities) that will minimize imperviousness, retain or detain stormwater, slow runoff rates, and reduce pollutants in post-development runoff. The Project will be required to comply with Chapter 11.34 of the Tracy Municipal Code, Stormwater Management and Discharge Control, which outlines the City requirements for stormwater management and discharge control, including controlling non-stormwater discharges to the stormwater conveyance system, eliminating discharges to the stormwater conveyance system from spills, dumping or disposal of materials other than stormwater, and reducing pollutants in urban stormwater discharges to the maximum extent practicable.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** impact relative to this topic.

LAND USE

The geographic context for land use impacts is the City of Tracy.

Impact 4.14: Cumulative Impact on Communities and Local Land Uses (Less than Significant)

Cumulative land use impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and Project-specific. The land uses, as proposed, are consistent with the General Plan.

The Project site is currently within the jurisdiction of San Joaquin County. The Project site is designated as Agriculture by the County's General Plan Land Use Map and is zoned as AG-40 Agriculture by the County. The site currently has a City General Plan land use designation of Industrial (I).

Additionally, the San Joaquin County Local Agency Formation Commission (LAFCO) will require the Project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The City's pre-zoning will include the Light Industrial (M-1) zoning designation for Project site. The pre-zoning would go into effect upon annexation into the City of Tracy. Additionally, the Project is

requesting a Conditional Use Permit to allow for food processing and canning in the proposed M-1 zoning district. The proposed pre-zoning for the Project site is shown on Figure 2.0-6 in Chapter 2.0.

This proposed zone change would ensure that zoning would be consistent with the General Plan land use designation within the Project site. The zoning ordinance establishes permitted uses, development densities and intensities, and development standards for each zone to ensure that public health, safety, and general welfare are protected, consistent with the purpose of the Zoning Code. All existing City development standards and zoning requirements for the proposed zoning are applicable to the proposed activities on the Project site. The City reviews all plans (improvement plans, building plans, site plans, etc.) that are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Approval of the prezoning by the City would ensure that the proposed Project would be consistent with the Zoning Code.

Further, the proposed Project is consistent with LAFCo policies adopted to address environmental impacts, with the exception of impacts to agricultural lands. Section 3.2, Agricultural Resources, addresses impacts related to conversion of agricultural land.

Lastly, the proposed Project does not conflict with the implementation of the SJMSCP and has appropriate measures to ensure compliance with payment of mitigation fees.

The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Overall, the proposed Project, in combination with and past, present, and probable future projects, will have a ***less than significant*** impact relative to this topic.

NOISE

The geographic context for noise impacts consists of the existing and future noise sources that could affect the Project site or surrounding uses.

Impact 4.15: Cumulative Exposure of Existing Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development (Significant and Unavoidable and Cumulatively Considerable)

Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. The total noise impact of the proposed Project would be fairly small and would not be a substantial increase to the existing future noise environment. Thus, the proposed Project would result in a less-than-significant cumulative impact.

Operational Noise: Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways and on-site activities resulting from operation of the proposed Project. The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks. Table 3.11-9 in Section 3.11, Noise, shows cumulative traffic noise levels with and without the proposed Project. Additionally, operational noise levels at the existing residential receptors to the west of the site resulting from the proposed Project are

quantified and shown in Figures 3.11-2 and 3.11-3. Figure 3.11-2 shows the average (L_{eq}) Project noise contours and Figure 3.11-3 shows the maximum (L_{max}) Project noise contours.

As discussed in Section 3.11, based upon Figure 3.11-3, the proposed Project is predicted to generate maximum noise levels of approximately 68 dBA L_{max} at the property line of the residential uses to the west of the Project site. This would comply with the San Joaquin County maximum noise level limits of 70 dBA L_{max} during daytime hours but would exceed the County's 65 dBA L_{max} standard during nighttime hours. In order to reduce project-related noise levels, Saxelby Acoustics used the Sound PLAN noise model to evaluate the use of noise barriers for reducing project-related noise levels at the adjacent residential uses. Figure 3.11-4 shows the exterior noise levels in terms of the peak hour average (L_{eq}) noise level, with a 20-foot-tall acoustically absorbent screen wall located along the western boundary of the Project site. The resulting noise levels of up to 50 dBA L_{eq} would comply with the County's 50 dBA L_{eq} daytime standard but would still exceed the County's 45 dBA L_{eq} nighttime noise standard. As such, a sound wall would not result in noise levels at or below the County's nighttime noise standard. Therefore, the County's exterior noise standards would still be exceeded. Because the County's exterior noise standards would still be exceeded as a result of operational noise at the Project site, the proposed Project would have a ***significant and unavoidable*** cumulative impact relative to this environmental topic. As such, impacts related to cumulative operational noise would result a ***cumulatively considerable contribution***.

Construction Noise: Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. Compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in Mitigation Measure 3.11-1), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors.

The proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within the County), would not be expected to cause any significant cumulative construction noise impacts. The proposed Project would not have cumulatively considerable impacts associated with construction noise. Implementation of the proposed project would have a ***less than significant cumulative impact*** and ***less than cumulatively considerable*** incremental contribution to cumulative impacts on construction noise

Cumulative Conclusion: The operational noise from the proposed Project is expected to produce noise levels that would exceed County standards. Consequently, the total noise impact of the proposed Project would be a substantial increase to the future noise environment. Consequently, the proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within the County), would be expected to cause ***significant and unavoidable*** cumulative impacts. The proposed project would have ***cumulatively considerable*** impacts associated with noise.

PUBLIC SERVICES

The geographic context includes all areas covered by the service areas of the South San Joaquin County Fire Authority (SSJCFA), Tracy Police Department (TPD), the Lammersville Elementary School District, and any other relevant public services.

Impact 4.16: Cumulative Impact on Public Services (Less than Significant)

Implementation of the proposed Project, in combination with and past, present, and probable future projects, would contribute toward an increased demand for public services and facilities within the City of Tracy. It has been determined that the project-level impacts to the police, fire, schools, and other public services would be less-than-significant. The proposed Project would be subject to all fees that are paid toward the enhancement of public services within the region. Payment of the applicable development fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project, would assist in maintaining existing fire, police, schools, and other services.

Under cumulative conditions, past, present, and probably future projects would result in increased demand for public services and recreational facilities. The impact fees developed and reviewed by the City will recover future development's proportionate share of City-related capital asset costs. Fees, as applied only to new development, represent future development's proportionate share of public services and facilities capital costs. It is important to note that impact fees may not be used to correct existing deficiencies, but may be used to pay for increased demand for public facilities or increased demand upon existing capital facilities provided that those facilities are needed to serve additional development and have the capacity to do so, given relevant level-of-service standards. The construction of public facilities to serve past, present, and probably future projects may be required, which could cause substantial adverse physical environmental impacts. The construction and operation of future public facilities required to serve cumulative development could potentially cause cumulatively significant impacts, but such physical impacts cannot be fully defined at this time because the exact facilities are not proposed or known. Any future public facility would undergo its own environmental review to determine physical environmental impacts once it is contemplated, and proposed for construction.

Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** cumulative impact relative to this environmental topic.

TRANSPORTATION AND CIRCULATION

The geographic context for this analysis includes the City of Tracy Sphere of Influence (SOI) and nearby areas of San Joaquin County. The analysis models the overall change in vehicle-miles-traveled (VMT) in Tracy as a result of forecast development, with the addition of the proposed Project. The intent is to understand how the proposed Project will influence travel behavior in light of future conditions, and to identify possible significant future impacts.

Impact 4.17: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Significant and Unavoidable and Cumulatively Considerable)

The proposed Project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.2 VMT per employee. The City's VMT Calculator estimates that the Project would generate 24.8 VMT per employee, and the Project exceeds the threshold by 164 percent. Because the Project exceeds the City threshold by 164 percent, a reduction below the City's VMT threshold is not feasible.

Mitigation Measure 3.13-1, which requires travel demand management (TDM) strategies, would be required. Implementation of Mitigation Measure 3.13-1 is feasible because it is within the applicant's purview to implement and has been found effective in previous academic studies. However, the precise effectiveness of specific TDM strategies can be difficult to accurately measure due to a number of external factors such as types of tenants, employee responses to strategies, and changes to technology.

In order for a specific project to have a less than significant impact related to VMT, the project must demonstrate that per capita VMT would be 15 percent below the regional average. Because future development would likely be equal to the regional average, or above average (or less than average but not fully 15 percent less than average), impacts relate to VMT would be ***significant and unavoidable***. Exceptions to this would be infill projects, or small projects which include VMT reducing strategies. Due to the size of the Project and the fact that the Project exceeds the City threshold by 164 percent, the incremental contribution to this cumulative VMT impact would be ***cumulatively considerable***.

Impact 4.18: Under Cumulative conditions, the proposed Project would not adversely affect pedestrian, bicycle, or transit facilities (Less than Significant)

Implementation of the proposed Project would not result in a conflict with an existing or planned pedestrian facility, bicycle facility, or transit service/facility. In addition, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator.

The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within Stanislaus County), would not be expected to cause any significant cumulative pedestrian or bicycle facilities impacts. The proposed Project would not have cumulatively considerable impacts associated with pedestrian or bicycle facilities. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** impact relative to this topic.

UTILITIES AND SERVICE SYSTEMS

The geographic context includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services.

Under General Plan buildout conditions, the City would see an increased demand for water service, sewer service, solid waste disposal services, and stormwater infrastructure needs.

Impact 4.19: Cumulative Impact on Wastewater Utilities (Less than Significant)

The City of Tracy's wastewater collection system consists of gravity sewer lines, pump stations and the Wastewater Treatment Plant (WWTP). The NPDES permit for the Tracy WWTP was adopted in May 2007 with proposed amendments initiated in 2008 and 2010. Treated wastewater from the Tracy WWTP is discharged to Old River under Order No. R5-2007-0036 (NPDES No. CA0079154). Because, in the opinion of the Water Board, there is a potential impact to groundwater at the facility, the Tracy WWTP's industrial pretreatment ponds, industrial holding ponds, sludge drying beds, and biosolids storage areas of the facility are regulated by separate waste discharge requirements as defined in Order No. R5-2007-0038. The NPDES permit CA 0079154 allows for discharge of 10.8 million gallons per day (mgd) and up to 16 mgd if applicable treatment facilities are constructed. The WWTP provides disinfected tertiary level treatment meeting Title 22 requirements of the Code of Regulations from the State Water Resource Control Board. The WWTP includes primary clarifiers, activated sludge, secondary clarifiers, flocculation, tertiary filtration, and disinfection.

The City of Tracy's wastewater treatment system is currently in compliance with the WDR requirements of Order No. R5-2007-0036 NPDES NO. CA0079154. The wastewater treatment system options covered under this Order include: City of Tracy WWTP including the collection system, basin/disposal fields, discharge to the Old River, and recycling conveyance and irrigation system. The development of the proposed Project under this permitted option would not exceed the wastewater discharge requirements in this Order as described under Impact 3.14-1 in Section 3.14.

The overall collection sewer strategy for the City of Tracy, including the proposed Project, consists of a combination trunk sewer gravity collection system with pump or lift stations located along the collection system to convey wastewater to an influent pump station located at the City WWTP.

New wastewater collection and conveyance infrastructure needed for the proposed Project would require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. All onsite wastewater utility improvements would be within existing agricultural lands or land currently developed with roadways (i.e., Schulte Road), the impacts of which are discussed in Section 3.2 Agricultural Resources and throughout this EIR.

According to the City's 2012 Wastewater Master Plan, Industrial uses are estimated to generate 1,500 gallons per gross acre per day. The Project site includes 103 acres of Industrial uses. Using this rate, the proposed Industrial uses would generate approximately 154,500 gallons per day (gpd) of wastewater. The proposed Project would increase the amount of wastewater requiring treatment. The wastewater would be treated at the WWTP, which has an ADWF design capacity of 10.8 mgd. Therefore, the project would allocate approximately 1.4 percent of available wastewater capacity of the WWTP to serve the project. Occupancy of the proposed Project would be prohibited without sewer allocation

The Project by itself does not exceed the existing capacity of the wastewater treatment plant. The Project and any future cumulative projects would be required to secure adequate wastewater treatment capacity/allocation prior to occupancy of any building which would require wastewater treatment services. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** impact relative to this topic.

Impact 4.20: Cumulative Impact on Water Utilities (Less than Significant)

The provision of public services and the construction of onsite infrastructure improvements will be required to accommodate the development of the proposed Project. Water distribution will be by an underground distribution system to be installed as per the City of Tracy standards and specifications. The proposed Project would require extension of offsite water conveyance infrastructure to the Project site for potable water and irrigation water. All offsite water utility improvements will be in or adjacent to existing roadways along the perimeter of the Project site, thereby limiting any potential impact to areas that were not already disturbed.

Projected water demands for buildout of the Proposed Project total approximately 156 acre-feet per year (AFY) of which about approximately 114 AFY is industrial demand, approximately 29 AFY is irrigation demand, and approximately 15 AFY is unaccounted-for water. The Water Supply Assessment completed for the proposed Project demonstrates that the City's existing and available potable water supplies are sufficient to meet the City's existing and projected future potable water demands to the year 2040 under all hydrologic conditions. Implementation of the proposed Project would have a ***less than significant*** and ***less than cumulatively considerable*** impact relative to this topic.

Impact 4.21: Cumulative Impact on Stormwater Facilities (Less than Significant)

Because the proposed project increases impervious surface area from an existing undeveloped and predominately previous site, the Project site could increase runoff significantly, Project impacts to stormwater are considered potentially significant. Onsite storm drainage would be installed to serve the proposed Project. Development of the proposed Project would include construction of a new storm drainage system, including a drainage collection system, and detention basins. All on-site storm drainage runoff will be collected through drain inlets and catch basins along the streets, and conveyed via surface swales and underground trunk lines to detention and water quality basins. The storm water drainage detention basins will be constructed to meet the City of Tracy Standards. Discharge from the basins will be conveyed through controlled flow pumping facilities to existing City of Tracy and main storm drain laterals.

Installation of the Project's storm drainage system will be subject to current City of Tracy Design Specifications and Standards. The proposed storm drainage collection and detention system will be subject to the SWRCB and City of Tracy regulations, including: Tracy Storm Drain Master Plan, 2012; Phase II, NPDES Permit Requirements; NPDES-MS4 Permit Requirements; and LID Guidelines.

The potential environmental effects resulting from construction of the storm drainage system are analyzed throughout this Draft EIR, and in some cases, there are potentially significant impacts associated with construction of this infrastructure. Where impacts are identified for each environmental topic, mitigation measures are developed to avoid, minimize, or compensate for the

impact to the extent practicable. All mitigation measures presented throughout this EIR will be implemented to reduce impacts to the extent practicable. There will not be any significant impacts beyond what is disclosed in the other chapters of this document. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** impact relative to this topic.

Impact 4.22: Cumulative Impact on Solid Waste Facilities (Less than Significant)
Currently, the permitted capacity of the Foothill Landfill is 102 million cubic yards. The remaining capacity of the facility is approximately 95 million cubic yards. The addition of the volume of solid waste associated with the Project to the landfill would not exceed the landfill's remaining capacity.

Based on the waste generation factors provided by CalRecycle, the proposed project is expected to generate approximately 5,584 pounds per day of solid waste upon full buildout, which is equivalent to 2.8 tons per day. The proposed project would be required to comply with applicable State and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. The City would coordinate development of the proposed project with Tracy Disposal Service. Furthermore, the addition of the volume of solid waste associated with the proposed project, approximately 2.8 tons per day, would increase the total tons of solid waste to the MRF to approximately 357 tons per day; however, this increase would not cause an exceedance of the landfill's remaining capacity.

According to the City's General Plan Draft EIR, growth within San Joaquin County would contribute to the need for adequate solid waste disposal facilities. The Foothill landfill has capacity until at least 2054. The cumulative population growth within the County was considered when evaluating the lifespan of the facility and planning for future expansions. As a result, it can be concluded that there would be adequate capacity to support regional increases in population, and a significant cumulative impact would not occur.

The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. In conclusion, implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** cumulative impact relative to this environmental topic.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

CEQA Section 15126.2(c) and Public Resources Code Sections 21100(b)(2) and 21100.1(a), require that the EIR include a discussion of significant irreversible environmental changes which would be involved in the proposed action should it be implemented. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);

- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the proposed Project would result in the conversion of the approximately 103.0-acre Development Area, which is comprised of vacant land previously used for agricultural purposes and a small portion of land used as an overflow outlet for the Delta-Mendota Canal for the development of industrial uses. Development of the proposed Project would constitute a long-term commitment to these uses. It is unlikely that circumstances would arise that would justify the return of the land to its previous condition as agricultural or vacant rural land.

A variety of resources, including land, energy, water, construction materials, and human resources would be irretrievably committed for the initial construction, infrastructure installation and connection to existing utilities, and its continued maintenance. Construction of the proposed Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the proposed Project. The introduction of industrial uses to the Project site will result in an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the proposed Project will increase consumption of available supplies, including gasoline and diesel. These energy resource demands relate to initial Project construction, Project operation and site maintenance and the transport of people and goods to and from the Project site.

4.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed Project are discussed in Sections 3.1 through 3.14 and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

- Impact 3.1-1: Project implementation may result in substantial adverse effects on scenic vistas and resources
- Impact 3.2-1: The proposed Project has the potential to result in the conversion of Farmlands, including Prime Farmland and Farmland of Statewide Importance, as shown on

the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural uses

- Impact 3.3-1: Project operation would result in a cumulatively considerable net increase of a criteria pollutant for which the Project region is in non-attainment, or conflict or obstruct implementation of the District's air quality plan.
- Impact 3.3-2: The proposed Project would result in a cumulatively considerable net increase of a criteria pollutant for which the region is in nonattainment under an applicable federal or State ambient air quality standard.
- Impact 3.11-1: The proposed Project has the potential to generate 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
- Impact 3.13-1: Project implementation would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)
- Impact 4.2: Cumulative Degradation of the Existing Visual Character of the Region
- Impact 4.4: Cumulative Impact on Agricultural Resources
- Impact 4.5: Cumulative Impact on the Region's Air Quality
- Impact 4.15: Cumulative Exposure of Existing Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development
- Impact 4.17: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)

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5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that meet most or all project objectives while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

PROJECT OBJECTIVES

The principal objective of the proposed Project is the approval and subsequent construction and operation of the Costco depot annex and Direct Delivery Center warehouse facility. The Project identifies the following objectives:

- Construct and operate a new state-of-the-art Costco depot annex and Direct Delivery Center warehouse facility with two separate buildings containing ground-level shipping and receiving truck loading docks along the eastern and western sides that is of sufficient size to efficiently ship, receive, store and distribute regional merchandise and food products.
- Annex the property into the City Limits and develop the site with light industrial uses that the City's General Plan already designates the site for.
- Locate an industrial Project in an area with nearby access to a regional roadway network.
- Create approximately 150 to 250 full time jobs along with approximately 400 construction jobs during Project buildout within the City of Tracy, thus improving the local jobs/housing balance.
- Ensure that the industrial area along West Schulte Road continues to be developed in a visually pleasing manner.
- Increase contributions to the City's tax base.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and Federal code requirements.
- Locate needed Costco facilities on a site which can be purchased (rather than leased) in order to protect Costco's substantial investment of time, money and goodwill in the proposed location.
- Locate the facilities in close proximity to Costco's existing distribution operations (i.e., Costco Depot located at 25501 Gateway Blvd, Tracy, CA) and centrally located to service Costco's retail warehouse locations within northern California.
- Provide site ingress access for trucks from West Schulte at one gated access point to manage security of the site. Provide site egress for trucks to West Schulte at two access points to allow for efficient on-site circulation.
- Improve services to Costco members, including by making appliances and big/bulky products more readily available.
- Complete the Project on schedule and within budget.

ALTERNATIVES NOT SELECTED FOR FURTHER ANALYSIS

A Notice of Preparation (NOP) was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed Project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed Project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

The City of Tracy considered alternative locations early in the public scoping process. The City's key considerations in identifying an alternative location were as follows:

- Is there an alternative location where significant effects of the Project would be avoided or substantially lessened?
- Is there a site available with the appropriate size and characteristics such that it would meet the basic Project objectives?

The City's consideration of alternative locations for the Project included a review of lands in the west part of Tracy that are located within the Sphere of Influence and are otherwise suitable for development. The City has found that there are no feasible alternative locations that exist within the City's Sphere of Influence with the appropriate size and characteristics that would meet the basic Project objectives and avoid or substantially lessen a significant effect. The City has determined that alternative locations outside the Sphere of Influence would not be feasible because an expansion of the Sphere of Influence would induce unplanned growth and cause impacts greater than development on the Project site. In addition, any potentially feasible alternate location would need to be sited near the existing Costco Depot in order to satisfy project objectives, to operate in efficient concert with the existing Costco Depot and to minimize extra truck travel time. No sites of adequate size and availability near the Costco Depot have been identified, nor would any such sites be expected to minimize environmental impacts. For these reasons, the City of Tracy determined that there are no feasible alternative locations.

In addition, as discussed in *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553 (Goleta II), where a project is consistent with an approved general plan, no off-site alternative need be analyzed in the EIR. The EIR "is not ordinarily an occasion for the reconsideration or overhaul of fundamental land-use policy." (Goleta II, supra, 52 Cal.3d at p. 573.) In approving a general plan, the local agency has already identified and analyzed suitable alternative sites for particular types of development and has selected a feasible land use plan. "Informed and enlightened regional planning does not demand a project EIR dedicated to defining alternative sites without regard to feasibility. Such ad hoc reconsideration of basic planning policy is not only unnecessary, but would be in contravention of the legislative goal of long-term, comprehensive planning." (Goleta II, supra, 52 Cal.3d at pp. 572-573.) Here, the proposed Project is generally consistent with the types of uses considered in the Tracy General Plan and associated EIR, and thus, in addition to the reasons discussed above, an off-site alternative need not be further discussed in this EIR.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Three alternatives to the proposed Project were developed based on input from City staff and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following three alternatives in addition to the proposed Project.

- **No Project (No Build) Alternative**: Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition and not be annexed into the City.
- **Reduced Project Alternative:** Under this alternative, the proposed Project would be developed with the same types of industrial uses as described in the Project Description, but the industrial square footage would decrease by 25 percent and the amount of developed land would decrease by 25 percent.
- **Agriculture Protection Alternative:** Under this alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition and not be annexed into the City. The Project site is currently comprised of vacant land previously used for agricultural purposes. It is noted that the No Project (No Build) Alternative would fail to meet the Project objectives identified by the Project applicant.

REDUCED PROJECT ALTERNATIVE

Under the Reduced Project Alternative, the proposed Project would be developed with the same types of industrial uses as described in the Project Description, but the industrial square footage would decrease by 25 percent and the amount of developed land would decrease by 25 percent. Under the Reduced Project Alternative, the total Development Area would decrease from approximately 103.0 acres under the proposed Project to approximately 75 acres. The remaining 25 acres outside of the Reduced Project Alternative area would remain in their current condition (vacant land). The 25 acres, which would not be included in the development area for this alternative, would be located in the western and southern portions of the site in order to preserve the urban fringe.

The amount of industrial uses would decrease from 1,745,052 square feet (sf) to 1,308,788.25 sf. Because the amount of urban development would decrease, the size of the parking areas and storm basins would also decrease. The areas developed with urban uses would be located in the eastern portion of the Project site.

AGRICULTURE PROTECTION ALTERNATIVE

Under the Agriculture Protection Alternative, the proposed Project would be developed in such a way to protect some of the on-site Important Farmland by reducing the overall footprint of the developed areas to a greater extent than the Reduced Project Alternative. The reasoning behind this alternative is to present an alternative to protect some of the agricultural land on the Project site. Development of the proposed Project would result in the permanent conversion of approximately 101.78 acres of Prime Farmland, which is a significant and unavoidable impact.

Under this alternative, the proposed Project would be developed with the same components as described in the Project Description, but the size of the footprint of the industrial development area would be reduced resulting in an increase of undeveloped land beyond the Reduced Project Alternative. The industrial use would be contained within one two-story building in order to reduce the developed area footprint by approximately 50 percent while providing the same square footage as the Project. The 103.0-acre Development Area would be reduced to 50 acres. The total acreage dedicated to the proposed Project would be reduced by approximately 50 percent. The total acreage developed would be 50 acres, with 50 acres remaining in its current state. The 50 acres which would not be included in the Development Area for this alternative would be located in the western portion of the site in order to preserve the urban fringe.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-1 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Aesthetics and Visual Resources

As described in Section 3.1, the visual character of the Project site would be significantly altered as a result of Project implementation. Consistency with the General Plan, Tracy Zoning Ordinance, and development standards would ensure that impacts are reduced to the greatest extent possible. Nevertheless, impacts related to degradation of the visual character of the site would be significant and unavoidable.

Implementation of the lighting plan required by Mitigation Measure 3.1-1 would ensure that lighting features do not result in light spillage onto adjacent properties and do not significantly impact views of the night sky. Adherence to the mitigation measure would ensure that excessively reflective building materials are not used, and that the proposed Project would not result in significant impacts related to daytime glare. As such, impacts related to nighttime lighting and daytime glare would be less than significant with mitigation.

The No Project (No Build) Alternative would leave the Project site in its existing state and would not result in increases in daytime glare or nighttime lighting. The visual character of the Project site would not change under this alternative compared to existing conditions.

The No Project (No Build) Alternative would avoid the light, glare, and visual character impacts resulting from the Project altogether. As such, this impact would be reduced when compared to the proposed Project.

Agricultural Resources

Currently, the majority of the Project site is vacant; however, the site was previously used for agricultural purposes. Development of the proposed Project would result in the permanent conversion of 101.78 acres of Prime Farmland, which is a significant and unavoidable impact. The No Project (No Build) Alternative would result in no development on the Project site. As such, this alternative would have no impact on agricultural land, no potential for conflicts with existing agricultural resources, and no potential for conflict with regulations and plans intended to protect those resources. As such, this impact would be reduced when compared to the proposed Project.

Air Quality

As discussed under Impact 3.3-1 in Section 3.3, the proposed Project is in conformance with the AQAP, based on these criteria, as follows:

- *Determination that an AQAP is being implemented in the area where the project is being proposed.*

The SJVAPCD has implemented the current, modified 2016 8-hour AQAP as approved by CARB and approved by USEPA for the 2008 8-hour O_3 standard.

- *The proposed project must be consistent with the growth assumptions of the applicable AQAP.*

The SJCOG RTP/SCS growth projections provide for future employment/population factors. The development of the SJVAPCD AQAP is based in part on the land use general plan projections of the various cities and counties that constitute the Air Basin. The City of Tracy General Plan Land Use Element designates the Project site as Industrial, which is intended to accommodate flex/office space, manufacturing, warehousing and distribution, and ancillary uses for workers' needs. Therefore, the proposed Project, which involves the development of light industrial, warehouse and distribution and related uses, is considered consistent with the site's General Plan land use designation and its traffic would be included in volumes projected for analysis of the General Plan. The SJVAPCD AQP is based on the growth assumptions of the City of Tracy General Plan and SJCOG RTP/SCS. Since the Project is consistent with the SJCOG RTP/SCS, and SJCOG RTP/SCS projections are incorporated into the SIP, the Project is also consistent with the SIP.

- *The project must contain in its design all reasonably available and feasible air quality control measures.*

The Project incorporates various policy and rule-required implementation measures that would reduce related emissions, including all of the current Air District rules and regulations.[1] For example, the proposed Project would be required to implement Air District Rule 9510, which ensures that the Project would fulfill the Air District's emissions reduction commitments in the relevant PM_{10} and Ozone Attainment plans. In addition, the Project would comply with all applicable stationary source permitting rules implemented by SJVAPCD, which further confirms the Project would not cause or contribute to any ambient air quality standard exceedances.

Impacts related to exposure of sensitive receptors to substantial pollutant concentrations as a result of the Project were determined to be less than significant. Additionally, as discussed in Impact 3.3-4 of Section 3.3, a health impact analysis has been prepared for the proposed Project to analyze the potential health risks associated with increased trucks to the Project site and surrounding roadways associated with the development and operation of the proposed industrial and commercial uses. The source of toxic air contaminants (TACs) for this type of Project can be attributed to diesel exhaust from the trucks (including from truck refrigeration units, or TRUs). As shown in Table 3.3-9 in Section 3.3, the proposed Project, in and of itself, would not result in a significant increased exposure of receptors to localized concentrations of TACs. Risk of residential cancer risk, workplace cancer risk, and chronic and acute non-cancer risks are below the applicable SJVAPCD thresholds.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Biological Resources

As described in Section 3.4 Biological Resources, construction on the Project site has the potential to result in impacts to special-status species in the region. The California Natural Diversity Database (CNDDB) currently contains records for California red-legged frog, San Joaquin kit fox, big tarplant, caper-fruited tropidocarpum, burrowing owl, and tricolored blackbird in the vicinity of the Project site. The Project site provides potential habitat for several species. Mitigation Measure 3.4-1 requires participation with the San Joaquin Multi-Species Habitat Conservation and Open Space Plan (SJMSCP), which includes fees that would be used to purchase conservation lands for a variety of special status species. The SJMSCP was created and adopted to address both the Project and cumulative impacts to biological resources, including special status species. The proposed Project will participate in the SJMSCP, including payment of fees and implementation of all Incidental Take Minimization Measures required by the San Joaquin Council of Governments (SJCOG) through the authorization of SJMSCP coverage. Through the implementation of various mitigation measures found in Section 3.4, implementation of the proposed Project will have a less than significant impact on biological resources.

[1] See here for further detail: https://www.valleyair.org/rules/1ruleslist.htm

Under the No Project (No Build) Alternative, the proposed Project would not be constructed, no habitat would be removed, and no ground disturbing activities would occur. As such, this impact would be reduced when compared to the proposed Project.

Cultural and Tribal Resources

As discussed in Section 3.5, Cultural and Tribal Resources, the Project site does not contain buildings or structures. A California Historic Resources Information System (CHRIS) search was requested from the Central California Information Center (CCIC), which included the Project area and a one-half mile radius (CCIC File #11244L). The results of the CCIC records search indicated that the Project site does not contain any recorded buildings or structures listed on the State Office of Historic Preservation Historic Property Directory (which includes listings of the CRHR, California State Historical Landmarks, California State Points of Historical Interest, and the NRHP). The records search also noted that the General Land Office Survey Plat does not reference any historic features in the Project area.

Any previously unknown cultural resources that may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of the mitigation measures provided in Section 3.5, the proposed Project would not considerably contribute to a significant reduction in cultural resources in the region.

The No Project (No Build) Alternative would result in no ground disturbing activities related to the proposed Project and would not have the potential to disturb or destroy cultural, historic, and archaeological resources, or paleontological resources. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural resources as the entire Project site would continue to be available for agriculture production. As such, this impact would be reduced when compared to the proposed Project.

Geology and Soils

As described in Section 3.6, implementation of the proposed Project would result in the construction of new structures on the Project site. The new structures would be subject to seismic, geologic, and soils hazards for the life of the Project. According to the Geotechnical Review, the proposed Project is geotechnically feasible and concerns related to ground rupture, ground shaking, liquefication, or landslides were not identified. However, mitigation measures provided in Section 3.6 ensure impacts related to soil hazards and paleontological resources will be less than significant.

The No Project (No Build) Alternative would result in the Project site remaining in its existing condition. There are no structures on the Project site that are subject to seismic or geologic risks. The No Project (No Build) Alternative would not involve new construction that could be subject to seismic, geologic or soils hazards; thus, this alternative would have no potential for impact. As such, this impact would be reduced when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Short-term construction greenhouse gas (GHG) emissions are a one-time release of GHGs and are not expected to significantly contribute to global climate change over the lifetime of the proposed Project. As presented in Table 3.7-2 in Section 3.7, the annual GHG emissions associated with the proposed Project would be approximately 12,273 metric tons of carbon dioxide equivalents ($MTCO_2e$). The proposed Project would be consistent with all relevant plans, policies, and regulations associated with GHGs, including the SB 32 2017 Scoping Plan Update, and the SJCOG's 2018 RTP/SCS. Taking into account the proposed Project's emissions, and the progress being made by the State toward reducing emissions in key sectors such as transportation, industry, and electricity, the Project would be consistent with State GHG Plans and would further the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050, and does not obstruct their attainment. Both GHG related impacts associated with the proposed Project were determined to be less than significant.

Under the No Project (No Build) Alternative, the Project site would not be developed, and there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to GHG reductions. As such, this impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

As part of the Phase I ESA (see Appendix D), a limited Phase II ESA was conducted to determine if chemicals of potential concern associated with the historical agricultural uses at the Project site are present in shallow soil at concentrations that would pose a threat to human health. Soil samples were collected pursuant to the Department of Toxic Substances Control (DTSC) Interim Guidance for Sampling Agricultural Properties (Third Revision) and were analyzed for organochlorine pesticides (OCPs) using US Environmental Protection Agency (EPA) Method 8081A and arsenic using US EPA Method 6010B. The soil sample analytical results indicated that OCPs were not present above laboratory detection limits in shallow soils at the site and arsenic concentrations ranged from 2.3 milligrams per kilogram (mg/kg) to 4.3 mg/kg. Arsenic concentrations did not exceed the arsenic California Code of Regulations (CCR) Title 22 Total Threshold Limit Concentration of 500 mg/kg, 10 times the arsenic CCR Title 22 Soluble Threshold Limit Concentration value of 5 milligrams per liter (mg/L) (50 mg/kg), or 20 times the arsenic Federal Toxicity Characteristic Leaching Procedure threshold of 5 mg/L (100 mg/kg). Therefore, arsenic concentrations at the Site do not exceed thresholds that would classify soils as Federal or California hazardous wastes.

Additionally, Crimson Oil operates a crude oil pipeline beneath the Project site and PG&E operates two natural gas pipelines, which both run across the northeastern portion of the Project site. While the Phase I ESA notes no incidental/accidental releases in the Project vicinity have been reported along the pipelines to date, the presence of natural gas pipelines and the potential for undocumented leaks to occur from the crude oil pipeline represents a Recognized Environmental Condition (REC). Undocumented leaks that could occur on-site would result in the release of hazardous materials into the environment contaminating the site and potentially exposing employees and the public to hazardous materials. The Phase I ESA notes that Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak) would be responsible for subsurface contamination as a result of leaks from this pipeline; therefore, the site cleanup from the subsurface contamination would be the responsibility of Crimson Pipeline, L.P. (or the current pipeline operator at the time of the leak). Mitigation Measure 3.8-3 would require the Project applicant to notify the San Joaquin County Department of Environmental Health, who would facilitate the site cleanup. Impacts associated with creation of a significant hazard through the routine transport, use, or disposal of hazardous materials or through the reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment associated with the Project were determined to be less than significant.

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site, and the potential for hazardous material release on the Project site would be eliminated. As such, this impact would be reduced when compared to the proposed Project.

Hydrology and Water Quality

As described in Section 3.9, implementation of the proposed Project has the potential to result in the violation of water quality standards and the discharge of pollutants into surface waters during both construction and long-term operations. Construction activities could result in temporary increases in runoff, erosion, sedimentation, soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas. The long-term operation of the proposed Project could result in long-term impacts to surface water quality from urban stormwater runoff. Mitigation measures provided in Section 3.9 would reduce potential water quality impacts to a less than significant level. The proposed Project would not significantly impact groundwater recharge or place persons or structures in a flood hazard zone.

Under the No Project (No Build) Alternative, potential water quality impacts from construction and operation of the proposed Project would be eliminated. While groundwater recharge is not considered a significant impact under the proposed Project, under this alternative, the land will be kept in its present state (vacant land previously used for agricultural uses). The No Project (No Build) Alternative will have a greater chance of groundwater recharge because it does not introduce large areas of impervious surfaces as would the proposed Project. As such, potential impacts related to hydrology and water quality would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

Land Use

The Project site is currently within the jurisdiction of San Joaquin County. The Project site is designated as Agriculture by the County's General Plan Land Use Map and is zoned as AG-40 Agriculture by the County. The site currently has a City General Plan land use designation of Industrial (I). Figure 2.0-5 in Chapter 2.0 illustrates the current and proposed Tracy General Plan land use within the Project site. The proposed Project is substantially consistent with the Tracy General Plan land use requirements.

The No Project (No Build) Alternative would result in no changes to land use and would include no development. The No Project (No Build) Alternative would be consistent with the County General Plan and zoning designations for the site because the vacant land which was previously used for agricultural uses would continue on the site under this alternative. Overall, the impacts related to land use under this alternative would be reduced compared to the proposed Project.

Noise

The primary noise sources associated with the proposed Project are on-site parking lot circulation and the loading docks, as well as vehicular traffic. Mitigation measures provided in Section 3.12 would reduce some potential impacts to a less than significant level. However, a sound wall would not result in noise levels at or below the County's nighttime noise standard. Therefore, the County's exterior noise standards would still be exceeded.

Under the No Project (No Build) Alternative, the Project site would not be developed and there would be no potential for new noise sources. As such, this impact would be reduced when compared to the proposed Project.

Public Services

Development of the proposed Project will require payment of all applicable fees and assessments required to fund its fair share of public services. This funding would assist in the development of facilities in order to meet the City's standards. The proposed Project would have a less than significant impact to fire, police, schools, and recreational facilities.

Under the No Project (No Build) Alternative, the Project site would remain undeveloped and there would be no increased demand for public services or recreation. The No Project (No Build) Alternative would have a reduced impact when compared to the proposed Project because demand on public services would be reduced when compared to the proposed Project.

Transportation and Circulation

The No Project (No Build) Alternative would not introduce additional vehicle trips onto the area roadways. It was determined that the proposed Project would cause an increase in vehicle miles traveled (VMT) for home-based work trips per employee. Mitigation was identified to alleviate long term impacts; however, impacts related to VMT were deemed to be significant and unavoidable. All other transportation related impacts were determined to be less than significant.

Under the No Project (No Build) Alternative, these potential impacts would be avoided, and the No Project (No Build) Alternative would have a reduced traffic impact when compared to the proposed Project.

Utilities

Implementation of the proposed Project would result in increased flows to the public wastewater system. The wastewater system is capable of handling the increased flows with the existing NPDES permit and infrastructure.

Implementation of the proposed Project would result in increased demand for potable water. The City has adequate water supply to handle the increased demand with their existing supply and infrastructure.

Implementation of the proposed Project would result in increased storm drainage from new impervious surfaces. The proposed Project includes a storm drainage collection system to handle the increased storm drainage.

Implementation of the proposed Project would result in increased generation of solid waste. However, the landfill has adequate capacity to dispose the solid waste. All utilities related impacts associated with the Project were determined to be less than significant.

Under the No Project (No Build) Alternative the Project site would not increase the demand for any utilities, including wastewater services, potable water supplies, or solid waste disposal. There would be no need to construct stormwater drainage infrastructure. Overall, the demand for utilities would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

REDUCED PROJECT ALTERNATIVE

Aesthetics and Visual Resources

The aesthetics-related impacts would be similar with the Reduced Project Alternative as this alternative is located on the same site and would have similar uses as the proposed Project. However, due to the reduction in developed area and square footage compared to the Project, the changes to the visual character of the site would be less pronounced. The impacts of light and glare would still occur and could be mitigated to a less than significant level. Nevertheless, due to the decreased developed area and square footage, the Reduced Project Alternative would have a slightly reduced impact on visual resources when compared to the proposed Project. The significant and unavoidable impact would not be avoided by this alternative.

Agricultural Resources

While this alternative would decrease the amount of developed area by 25 percent compared to the Project, 75 acres would still be converted from agricultural use. While this alternative would reduce the impacts to agricultural lands when compared to the proposed Project, the loss of the agricultural land, including prime farmland, would be a significant and unavoidable impact under both the Reduced Project Alternative and the proposed Project. Overall, the Reduced Project Alternative

would have slightly reduced impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under the Reduced Project Alternative, the Project site would be developed with the same type of industrial use as described in the Project Description, but the industrial square footage would decrease by 25 percent. Trip generation is based on various factors, one of which being building size. Therefore, the amount of vehicle trips generated from the Reduced Project Alternative would be reduced by 25 percent under this alternative. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the reduced trip volume would result in a reduced amount of mobile source emissions. Additionally, the area source emissions would be reduced when compared to the Project.

Uses in the Reduced Project Alternative would be required to adhere to the same mitigation measures as the proposed Project. The Reduced Project Alternative would result in reduced impacts related to air quality when compared to the proposed Project; however, it is likely that the significant and unavoidable air quality impact would remain under this alternative. The remaining air quality impacts would be less than significant under the proposed Project and the Reduced Project Alternative.

Biological Resources

The Reduced Project Alternative would result in development of roughly 75 acres of the Project site. Under this alternative, the 25 acres that would not be included in the development area would be located in the western and southern portions of the site in order to preserve the urban fringe. The preservation of 25 acres of the 103-acre Development Area would provide greater biological benefits even though the remainder of the Project site would be developed. As such, the Reduced Project Alternative would result in slightly reduced impacts to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

The Reduced Project Alternative would result in development of 75 percent of the Project site. The 25 acres that would not be included in the development area for this alternative would be located in the western and southern portions of the site in order to preserve the urban fringe. This would result in a reduced potential to disturb or destroy cultural, historic, and archaeological resources, or paleontological resources. The same mitigation measures required for the proposed Project would be required for this alternative. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the Reduced Project Alternative would result in a slightly reduced potential for impacts to cultural resources.

Geology and Soils

Under the Reduced Project Alternative, the amount of developed area would be reduced by 25 percent compared to the Project, and the size of structures that would be subject to hazardous geological conditions would be reduced by 25 percent. While the proposed Project is not anticipated

to result in significant impacts from geology and soils with mitigation, the Reduced Project Alternative would result in a slightly reduced potential for impacts when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Under the Reduced Project Alternative, the Project site would be developed with the same type of use and structures as the proposed Project, but the amount of building area and developed area would be decreased by 25 percent. The reduced amount of development would result in a corresponding reduced level of GHG emissions when compared to the proposed Project. As such, the GHG emissions impact would be reduced with this Alternative when compared to the proposed Project; however, the less than significant GHG impact would remain under this alternative.

Hazards and Hazardous Materials

Under the Reduced Project Alternative, the type of urban use would not change when compared to the proposed Project, but the amount of development would be reduced by 25 percent. This alternative would still use the hazardous materials identified under the proposed Project. However, due to the reduction in square footage, the amount of hazardous materials brought onto the site during construction and operation would be reduced. As such, this alternative would result in slightly reduced impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

Under the Reduced Project Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be reduced equivalent to the amount of land area that remains undeveloped under this alternative. The increased amount of undeveloped land under this alternative would remain pervious to precipitation, which would facilitate groundwater recharge and the natural biofiltration of stormwater. This alternative would still include stormwater detention/basins, and provide natural best management practices (BMPs) to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be slightly reduced under the Reduced Project Alternative when compared to the proposed Project.

Land Use

Similar to the Project, pre-zoning and annexation would be required for the Reduced Project Alternative. Approval of these entitlements would ensure the Project is consistent with the General Plan and zoning. Overall, the impacts related to land use under this alternative would be similar to the proposed Project.

Noise

The Reduced Project Alternative would result in a reduced amount of industrial uses compared to the Project; therefore, the noise impacts associated with vehicular and operational activities of the proposed Project would be reduced under this alternative. Because the western portion of the site would not be developed, an increased buffer between the industrial uses and the noise receptor

west of the site would result. It is possible that the increased distance would decrease operational noise below the County's threshold. Therefore, under this alternative, noise impacts would be reduced when compared to the proposed Project and could be less than significant with mitigation.

Public Services

Under the Reduced Project Alternative, the proposed Project would be developed with the same type of industrial use as described in the Project Description, but the industrial square footage would decrease by 25 percent. Both the proposed Project and the Reduced Project Alternative would result in less-than-significant impacts to public services. As such, impacts to public services under this alternative would be comparable to the proposed Project.

Transportation and Circulation

Under the Reduced Project Alternative, the Project site would be developed with the same components as described in the Project Description, but the amount of square footage and developed area would decrease by 25 percent. The reduced amount of industrial uses would result in a reduced amount of vehicle trips generated by the Reduced Project Alternative. It is noted, however, that the need for Costco warehouse facilities would not diminish and more such facilities may need to be located further from the existing Costco Depot and/or at locations that would increase VMT.

Uses in the Reduced Project Alternative would be required to adhere to the same mitigation measures as the proposed Project. It is likely that the significant and unavoidable VMT impact would remain under this alternative. Overall, the Reduced Project Alternative would result in reduced traffic related impacts when compared to the proposed Project.

Utilities

Under the Reduced Project Alterative, the Project site would be developed with the same components as described in the Project Description, but the amount of square footage and developed area would decrease by 25 percent. Because generation of wastewater and solid waste, and demand for water, directly correlate to building size, his would result in a reduced amount of wastewater, water demand, and solid waste generated from the Project site. The development area would decrease from 103 acres to 75 acres. The remaining 25 acres outside of the Reduced Project Alternative area would remain in their current condition (vacant land previously used for agricultural uses). This alternative would increase the amount of pervious soils, thereby increasing opportunities for stormwater retention at the Project site. However, uses in the Reduced Project Alterative would be required to adhere to submit a storm drainage plan to the City, similar to the Project. The Reduced Project Alternative would result in reduced demand on utility systems when compared to the proposed Project.

Overall, this alternative would have reduced wastewater treatment demand, reduced water demand, reduced solid waste generated, and reduced storm water runoff when compared to the proposed Project. As such, this alternative would have reduced utilities impacts when compared to the proposed Project.

AGRICULTURE PROTECTION ALTERNATIVE

Aesthetics and Visual Resources

Under the Agriculture Protection Alternative, the proposed Project would be developed with the same components as described in the Project Description, but the size of the development footprint of the industrial area would be reduced resulting in an increase of undeveloped land beyond the Reduced Project Alternative. The industrial use would be two-story in order to reduce the developed area footprint while providing the same square footage as the Project. Although the developed area would be reduced by 50 percent compared to the Project, the impacts to the existing visual quality would be similar to the proposed Project as 50 acres of the site would be developed with the same uses as under the proposed Project, just at a higher intensity. As such, there would still be an impact to the visual character under this alternative. The impact associated with increased light and glare in the developed area would be mitigated under both the proposed Project and the Agriculture Protection Alternative. Under this alternative, due to the increased building height, the changes to the existing visual quality would be increased compared to the proposed Project in the areas that are developed, but would be significantly less in the areas that are not developed. Overall, this alternative would have an increased impact to aesthetics when compared to the proposed Project.

Agricultural Resources

While this alternative would decrease the amount of developed area by 50 percent compared to the Project, 50 acres would still be converted from agricultural use. While this alternative would reduce the impacts to agricultural lands when compared to the proposed Project, the loss of the agricultural land, including prime farmland, would be a significant and unavoidable impact under both this Alternative and the proposed Project. Overall, the Agriculture Protection Alternative would have reduced impacts on agricultural resources when compared to the proposed Project.

Air Quality

Implementation of the proposed Project would cause an increase in traffic, which is the dominant source of operational air emissions associated with the proposed Project. Under the Agriculture Protection Alternative, the same type and amount of industrial uses as described in the Project Description would be developed, but the amount of developed land would decrease by 50 percent. Because the type and amount of trip-generating uses would be equal to the Project, the amount of traffic generated from the Agriculture Protection Alternative would be expected to be equal to the proposed Project. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the comparable trip volume would result in an equal amount of the mobile source emissions. Additionally, the area source emissions would be equal when compared to the Project.

Uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measures as the proposed Project. The Agriculture Protection Alternative would result in similar impacts related to air quality when compared to the proposed Project and the significant and unavoidable air quality impact would remain under this alternative.

Biological Resources

The Agriculture Protection Alternative would result in development of 50 acres of the Project site. Under this alternative, the 50 acres which would not be included in the development area for this alternative would be located in the western portion of the site in order to preserve the urban fringe. The preservation of 50 acres of the 103-acre Development Area would provide biological benefits even though the remainder of the site would be developed. As such, the Agriculture Protection Alternative would result in less impact to biological resources when compared to the proposed Project. The resulting level of significance under both the proposed Project and the Agriculture Protection Alternative would be less than significant with implementation of mitigation.

Cultural and Tribal Resources

The Agriculture Protection Alternative would result in development of 50 percent of the Project site. The 50 acres which would not be included in the development area for this alternative would be located in the western portion of the site in order to preserve the urban fringe. This would result in a reduced potential to disturb or destroy cultural, historic, and archaeological resources, as well as paleontological resources. The same mitigation measures required for the proposed Project would be required for this alternative. While the proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation, the Agriculture Protection Alternative would result in a reduced potential for impacts to cultural resources.

Geology and Soils

Under the Agriculture Protection Alternative, the amount of developed area would be reduced by 50 percent compared to the Project, but the structural square footage that would be subject to hazardous geological conditions would be equal to the Project. Both the proposed Project and the Agriculture Protection Alternative would not result in significant impacts from geology and soils with mitigation. As such, the Agriculture Protection Alternative would result in similar geology and soils impacts when compared to the proposed Project.

Greenhouse Gases, Climate Change and Energy

Under the Agriculture Protection Alternative, the Project site would be developed with the same types and amounts of commercial and industrial development as the proposed Project, but the amount of developed area would be decreased by 50 percent. All uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measure as the proposed Project. The equal amount of development would result in a corresponding equal level of GHG emissions when compared to the proposed Project. As such, the GHG emissions impact would be similar to the proposed Project and the less than significant GHG impact would remain under this alternative.

Hazards and Hazardous Materials

Under the Agriculture Protection Alternative, the type of urban uses would not change when compared to the proposed Project, but the amount of developed area would be reduced by 50 percent. This alternative would use the same types and quantities of hazardous materials identified under the proposed Project. As such, this alternative would have equal impacts from hazards and

hazardous materials impacts when compared to the proposed Project. Both the proposed Project and this alternative would require mitigation to reduce this impact to a less than significant level.

Hydrology and Water Quality

Under the Agriculture Protection Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be reduced equivalent to the amount of land area that remains undeveloped under this alternative. The increased amount of undeveloped land under this alternative would remain pervious to precipitation, which would facilitate groundwater recharge and the natural biofiltration of stormwater. This alternative would still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be reduced under the Agriculture Protection Alternative when compared to the proposed Project. Both the proposed Project and this alternative would require mitigation to reduce this impact to a less than significant level.

Land Use

Similar to the Project, pre-zoning and annexation would be required for the Agriculture Protection Alternative. Approval of these entitlements would ensure the Project is consistent with the General Plan and zoning. Overall, the impacts related to land use under this alternative would be similar to the proposed Project.

Noise

Under the Agriculture Protection Alternative, the 50 acres which would not be included in the Development Area for this alternative would be located in the western portion of the site in order to preserve the urban fringe. This would result in an increased distance between the warehouse and the nearest sensitive receptor located west of the Project site. The Agriculture Protection Alternative would result in an equal amount of industrial uses compared to the Project; therefore, the noise levels associated with vehicular and operational activities of the proposed Project would be equal under this alternative. Mitigation measures for noise attenuation and best management practices would be required under both the proposed Project and the Agriculture Protection Alternative. Because the distance to the nearest receptor would be increased, the exterior noise levels at the receptor would be reduced and it is possible that the increased distance would decrease operational noise below the County's threshold. Therefore, under this alternative, noise impacts could be less than significant with mitigation. Therefore, under this alternative, noise impacts would be reduced when compared to the proposed Project.

Public Services

Under the Agriculture Protection Alternative, the proposed Project would be developed with the same types and amounts of industrial uses as described in the Project Description, but the amount of developed land would decrease by 50 percent. Both the proposed Project and the Agriculture Protection Alternative would result in less-than-significant impacts to public services. As such, impacts to public services under this alternative would be equal to the proposed Project.

Transportation and Circulation

Under this alternative, the proposed Project would be developed with the same amount of industrial uses. The equal amount of industrial uses would result in an equal amount of traffic generated from the Agriculture Protection Alternative.

Uses in the Agriculture Protection Alternative would be required to adhere to the same mitigation measures as the proposed Project; however, the significant and unavoidable VMT impact would remain under this alternative. Overall, the Agriculture Protection Alternative would result in equal traffic related impacts when compared to the proposed Project.

Utilities

Under this alternative, the same components as described in the Project Description would be developed, but the amount of developed land would be reduced resulting in an increase of undeveloped land when compared to the Project. The commercial and industrial uses would be two-story in order to reduce the developed area footprint while providing the same square footage as the Project. This would result in a comparable amount of wastewater, water demand, and solid waste generated from the Project site. The total Development Area would decrease from 103 acres to 50 acres. The remaining 50 acres outside of the Agriculture Protection Alternative area would remain in their current condition (vacant land). This alternative would increase the amount of pervious soils, thereby increasing opportunities for stormwater retention at the Project site. However, uses in the Agriculture Protection Alterative would be required to submit a storm drainage plan to the City, similar to the Project. The Agriculture Protection Alternative would result in a comparable demand on utility systems when compared to the proposed Project.

Overall, this alternative would have similar wastewater treatment demand, similar water demand, similar solid waste generated, and similar storm water runoff when compared to the proposed Project. As such, this alternative would have similar utilities impacts when compared to the proposed Project.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts.

Table 5.0-1 presents a comparison of the alternative Project impacts with those of the proposed Project.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

ENVIRONMENTAL ISSUE	*NO PROJECT (NO BUILD) ALTERNATIVE*	*REDUCED PROJECT ALTERNATIVE*	*AGRICULTURE PROTECTION ALTERNATIVE*
Aesthetics and Visual Resources	Less (Best)	Slightly Less (2nd Best)	Greater (3rd Best)
Agricultural Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Air Quality	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Biological Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Cultural and Tribal Resources	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Geology and Soils	Less (Best)	Slightly Less (2nd Best)	Equal (3rd Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hazards and Hazardous Materials	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (3rd Best)	Less (2nd Best)
Land Use	Less (Best)	Equal (2nd Best)	Equal (2nd Best)
Noise	Less (Best)	Less (2nd Best)	Slightly Less (3rd Best)
Public Services	Less (Best)	Equal (2nd Best)	Equal (2nd Best)
Transportation and Circulation	Less (Best)	Less (2nd Best)	Equal (3rd Best)
Utilities	Less (Best)	Less (2nd Best)	Equal (3rd Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT
LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT
EQUAL = NO SUBSTANTIAL CHANGE IN IMPACT FROM THAT OF THE PROPOSED PROJECT

As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. Therefore, the Reduced Project Alternative and Agriculture Protection Alternative both rank higher than the proposed Project. The Reduced Project Alternative would have equal impacts in two areas, slightly less impacts in seven areas, and less impacts in six areas. The Agriculture Protection Alternative would have greater impacts in one area, equal impacts in eight areas, slightly less impacts in one area, and less impacts in four areas. Therefore, the Reduced Project Alternative would be the next environmentally superior alternative. It is noted that the Reduced Project Alternative would not fully meet all of the Project objectives. See Section 5.4 below for a comparative evaluation of the objectives for each alternative.

5.4 COMPARATIVE EVALUATION OF THE ALTERNATIVES' ABILITY TO SATISFY PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the Project objectives.

1. *Construct and operate a new state-of-the-art Costco depot annex and Direct Delivery Center warehouse facility with two separate buildings containing ground-level shipping and receiving truck loading docks along the eastern and western sides that is of sufficient size to efficiently ship, receive, store and distribute regional merchandise and food products.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not provide a new state-of-the-art Costco depot annex and Direct Distribution Center warehouse facility with two

separate buildings containing ground-level shipping and receiving truck loading docks along the eastern and western sides. The Reduced Project Alternative would partially meet this objective because this alternative would provide a new state-of-the-art Costco depot annex and Direct Distribution Center; however, because the size of Development Area and the warehouse buildings would be reduced by 25 percent compared to the Project, the warehouses may not be a sufficient size to efficiently store and distribute merchandise and thus may not fully meet this objective. The Agriculture Protection Alternative would partially meet this objective because it would provide a new state-of-the-art Costco depot annex and Direct Distribution Center. However, two buildings would not be constructed, and the ground-level shipping and receiving truck loading docks would be decreased by fifty percent as half of the warehouse would be on the second story and not the ground-level. Further, this alternative would result in one warehouse building along the eastern sides (not western).

2. *Annex the property into the City Limits and develop the site with light industrial uses that the City's General Plan already designates the site for.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would not be annexed into the City or developed with light industrial uses. Both the Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because under both alternatives the property would be annexed into the City Limits and the site would be developed with light industrial uses that the City's General Plan already designates the site for.

3. *Locate an industrial Project in an area with nearby access to a regional roadway network.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not locate an industrial Project in an area with nearby access to a regional roadway network. Both the Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would locate an industrial Project in an area with nearby access to a regional roadway network.

4. *Create approximately 150 to 250 full time jobs along with approximately 400 construction jobs during Project buildout within the City of Tracy, thus improving the local jobs/housing balance.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not create approximately 150 to 250 full time jobs along with approximately 400 construction jobs. The Reduced Project Alternative would partially meet this objective because this alternative would create full time and construction jobs; however, because the warehouse buildings would be reduced by 25 percent compared to the Project, the number of jobs would be less than the Project. The Agriculture Protection Alternative would meet this objective.

5. *Ensure that the industrial area along West Schulte Road continues to be developed in a visually pleasing manner.*

The No Project (No Build) Alternative would not satisfy this objective because under this alternative, the industrial area along West Schulte Road would not be developed in a visually pleasing manner. Both the Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective.

6. *Increase contributions to the City's tax base.*

The No Project (No Build) Alternative would not increase contributions to the City's tax base; as such, the No Project (No Build) Alternative would not meet this objective. The Reduced Project Alternative and the Agriculture Protection Alternative would increase contributions to the City's tax base. However, because the warehouse buildings would be reduced by 25 percent compared to the Project under the Reduced Project Alternative, the amount of tax contributions under the Reduced Project Alternative would be less than the Project or the Agricultural Preservation Alternative.

7. *Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and Federal code requirements.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and Federal code requirements. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would incorporate sustainable design features and systems with enhanced energy efficiencies.

8. *Locate needed Costco facilities on a site which can be purchased (rather than leased) in order to protect Costco's substantial investment of time, money and goodwill in the proposed location.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not include construction of needed Costco facilities on-site. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would locate needed Costco facilities on a site which can be purchased (rather than leased).

9. *Locate the facilities in close proximity to Costco's existing distribution operations (i.e., Costco Depot located at 25501 Gateway Blvd, Tracy, CA) and centrally located to service Costco's retail warehouse locations within northern California.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not locate the facilities in close proximity to Costco's existing distribution operations (i.e., Costco Depot located at 25501 Gateway Blvd, Tracy, CA) and centrally located to service Costco's retail warehouse locations within northern California. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would locate the facilities in close proximity to Costco's existing distribution operations (i.e., Costco Depot located

at 25501 Gateway Blvd, Tracy, CA) and centrally located to service Costco's retail warehouse locations within northern California.

10. *Provide site ingress access for trucks from West Schulte at one gated access point to manage security of the site. Provide site egress for trucks to West Schulte at two access points to allow for efficient on-site circulation.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not provide site ingress access for trucks at one gated access point to manage security of the site or site egress for trucks at two access points to allow for efficient on-site circulation. The Reduced Project Alternative and the Agriculture Protection Alternative would likely meet this objective because both alternatives would provide site ingress access for trucks at one gated access point to manage security of the site or site egress for trucks at two access points to allow for efficient on-site circulation.

11. *Improve services to Costco members, including by making appliances and big/bulky products more readily available.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not include construction of a Costco Direct Delivery Center on-site which would be used to improve services to Costco members, including by making appliances and big/bulky products more readily available. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives would improve services to Costco members, including by making appliances and big/bulky products more readily available.

12. *Complete the Project on schedule and within budget.*

The No Project (No Build) Alternative would not achieve this objective because this alternative would not complete the Project on schedule and within budget. The Reduced Project Alternative and the Agriculture Protection Alternative would meet this objective because both alternatives could complete the Project on schedule and within budget.

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APPENDIX A

Initial Study, Notice of Preparation, and NOP Comments

INITIAL STUDY / NOTICE OF PREPARATION

FOR THE

TRACY COSTCO DEPOT PROJECT

AUGUST 2020

Prepared for:

City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

Prepared by:

De Novo Planning Group
1020 Suncast Lane, Suite 106
El Dorado Hills, CA 95762
(916) 580-9818

De Novo Planning Group

A Land Use Planning, Design, and Environmental Firm

INITIAL STUDY / NOTICE OF PREPARATION

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NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT AND SCOPING MEETING

DATE: August 28, 2020

TO: State Clearinghouse
State Responsible Agencies
State Trustee Agencies
Other Public Agencies
Organizations and Interested Persons

SUBJECT: Notice of Preparation of an Environmental Impact Report and Scoping Meeting for the Tracy Costco Depot Project

LEAD AGENCY: City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

PROJECT PLANNER: Genevieve Federighi, Associate Planner
Genevieve.Federighi@cityoftracy.org
(209) 831-6435

PURPOSE OF NOTICE: This is to notify public agencies and the general public that the City of Tracy, as the Lead Agency, will prepare an Environmental Impact Report (EIR) for the Tracy Costco Depot Project. The City of Tracy is interested in the input and/or comments of public agencies and the public as to the scope and content of the environmental information that is germane to the agencies' statutory responsibilities in connection with the proposed project. Responsible/trustee agencies will need to use the EIR prepared by the City of Tracy when considering applicable permits, or other approvals for the proposed project.

COMMENT PERIOD: Consistent with the time limits mandated by State law, your input, comments or responses must be received in writing and sent at the earliest possible date, but not later than 5:00 PM, September 30, 2020.

Please send your comments/input (including the name for a contact person in your agency) to: Attn: Genevieve Federighi at the City of Tracy, 333 Civic Center Plaza, Tracy, CA 95376; or by e-mail to Genevieve.Federighi@cityoftracy.org.

SCOPING MEETING: On Wednesday, September 9, the City of Tracy will conduct a public scoping meeting during the Planning Commission meeting to solicit input and comments from public agencies and the general public on the proposed project and scope of the EIR. Due to COVID-19, this meeting will be held on-line at 7:00 PM.

This meeting will be held on-line via a Webex, and interested parties may join the Webex scoping meeting to review the proposed project exhibits and submit on-line comments beginning at 7:00 PM. Representatives from the City of Tracy and the EIR consultant team will be available via the Webex scoping meeting to address questions regarding the EIR process and scope. All interested persons may submit statements orally during the meeting by visiting the City's WebEx Event at https://cityoftracyevents.webex.com and using the following Event Number: 126 086 2910 and Event Password: Planning1; or via phone by dialing (209) 831-6010 during the public comment portion of this item. If you have any questions regarding the scoping meeting, contact Genevieve Federighi, Associate Planner, at (209) 831-6435 or Genevieve.Federighi@cityoftracy.org.

PROJECT LOCATION AND SETTING: The Tracy Costco Depot Project site (project site) is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (Figures 1 and 2). The project site is within the Tracy Sphere of Influence (SOI) and is immediately adjacent to the Tracy city limits to the north of the site. The Assessor's Parcel Number (APN) for the project site is 209-230-02. The project site totals approximately 103 acres of undeveloped land previously used for agricultural purposes (Figure 3 of Initial Study). The elevation of the site ranges from approximately 148 feet to 187 feet above mean sea level.

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

PROJECT DESCRIPTION: The project would include the construction and subsequent operation of two Costco warehouse and distribution buildings (1,264,066 square feet [sf] and 536,251 sf) totaling approximately 1,782,317sf on the 103-acre project site (Figure 4 of the Initial Study). The project would also include the required circulation, parking, and utility improvements. The proposed warehouses will be used to support Costco's ongoing distribution and e-commerce facilities in the area. Additionally, the warehouses may include cold storage for Costco's meat processing plant in Tracy, as well as food processing and canning.

For more details regarding the operations, architecture, energy-efficient project components, landscaping, circulation, and utility improvements, please see the Project Description in the attached Initial Study.

PROJECT APPROVALS: The City of Tracy is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050.

If the City Council of the City of Tracy certifies the EIR in accordance with CEQA requirements, the City may use the EIR to support the following actions:

- Pre-zone of the property to the City's M-1 Light Industrial zoning district;
- Annexation of the project site into the City (which requires approval by the San Joaquin County Local Agency Formation Commission [LAFCO]);
- Development review permit for building design, landscaping, and other site features;

- A Conditional Use Permit to allow for food processing and canning in the M-1 Zoning District;
- Building, grading, and other permits as necessary for project construction;
- Adopt a Mitigation Monitoring and Reporting Program (MMRP).

The following agencies may rely on the certified EIR to issue permits or approve certain aspects of the proposed project:

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES);
- RWQCB – The Storm Water Pollution Prevention Plan (SWPPP) would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin LAFCO – Annexation of the project site would be required.
- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Construction activities would be subject to the SJVAPCD codes and requirements.

AREAS OF POTENTIAL IMPACTS: The Draft EIR will examine most of the environmental areas contained in Appendix G of the State CEQA Guidelines. The topics to be addressed in the Draft EIR include: Aesthetics, Agricultural and Forest Resources, Air Quality, Biological Resources, Cultural Resources, Energy, Geology and Soils, Greenhouse Gases and Climate Change, Hazards and Hazardous Materials, Hydrology and Water Quality, Land Use and Planning, Noise, Public Services, Transportation, Tribal Cultural Resources, Utilities, Cumulative Impacts, and Growth Inducing Impacts.

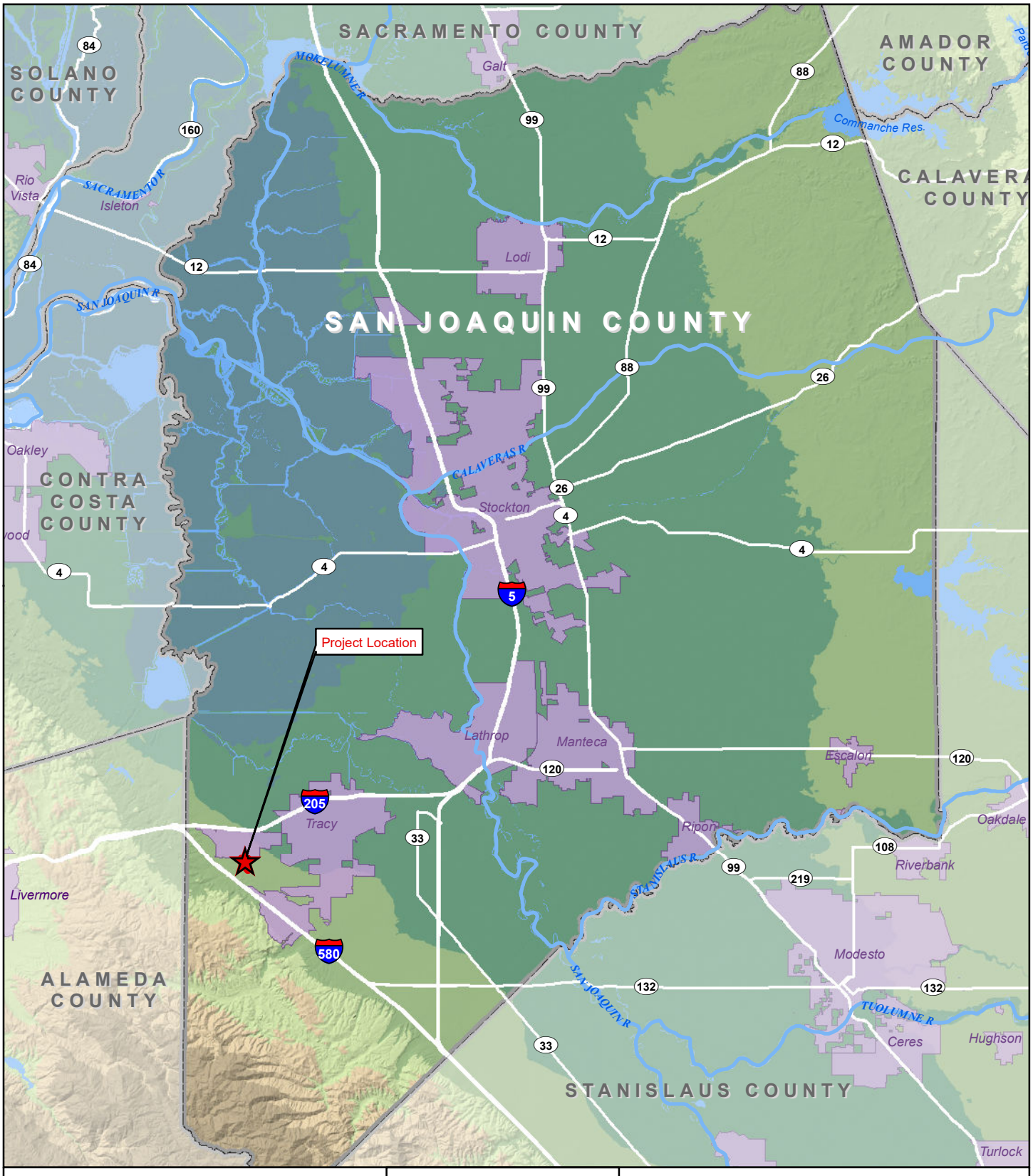
INITIAL STUDY: An Initial Study has been prepared for this project. The Initial Study identifies environmental areas/issues that would result in No Impact or a Less than Significant Impact, and environmental areas/issues that would result in a Potentially Significant Impact. All Potentially Significant Impact areas/issues will be addressed in greater detail in the Draft EIR. Areas/issues that would result in No Impact or a Less than Significant Impact, as identified in the Initial Study, will not be addressed further in the Draft EIR.

ADDITIONAL INFORMATION: A copy of the Initial Study is available on the City's website at: https://www.cityoftracy.org/?navid=595**.**

Signature: _____ Date: 8/26/20

Name/Title: Genevieve Federighi, Associate Planner

Phone/Email: (209)831-6435 Genevieve.Federighi@cityoftracy.org



Legend

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; San Joaquin, Stanislaus, Sacramento, Solano, Contra Costa, and Alameda Counties. Map date: October 22, 2019.

N

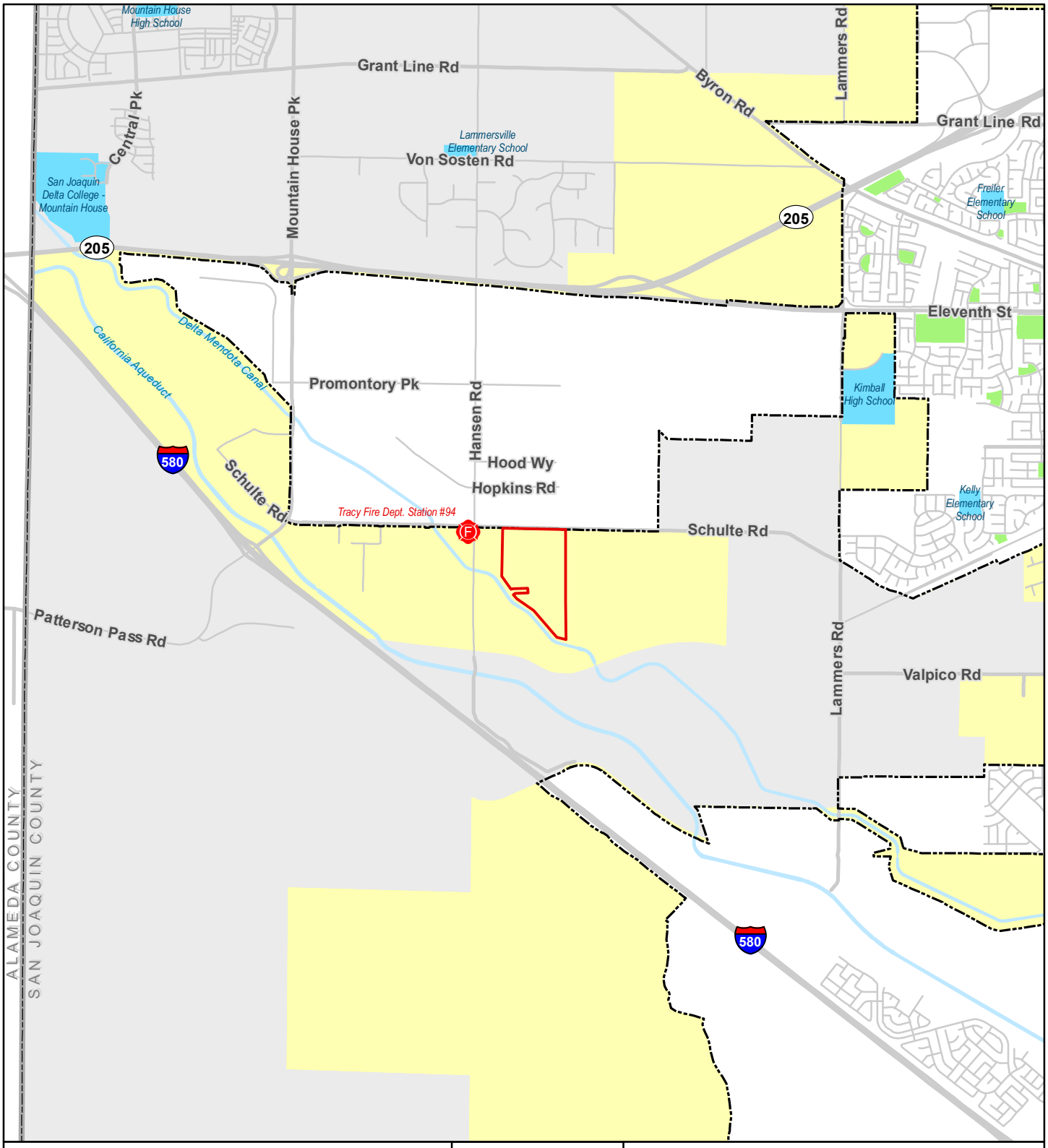
0 2½ 5

Miles

TRACY COSTCO DEPOT PROJECT

Figure 1. Regional Location Map

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



Legend

- Project Boundary
- Tracy City Limits
- Tracy Sphere of Influence
- San Joaquin County
- School
- Park
- Fire Station

N

0 ¼ ½

Miles

1:48,000

Sources: San Joaquin County GIS. Map date: October 25, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 2. Project Vicinity

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm



Legend

Project Boundary

N

0 600 1,200

Feet

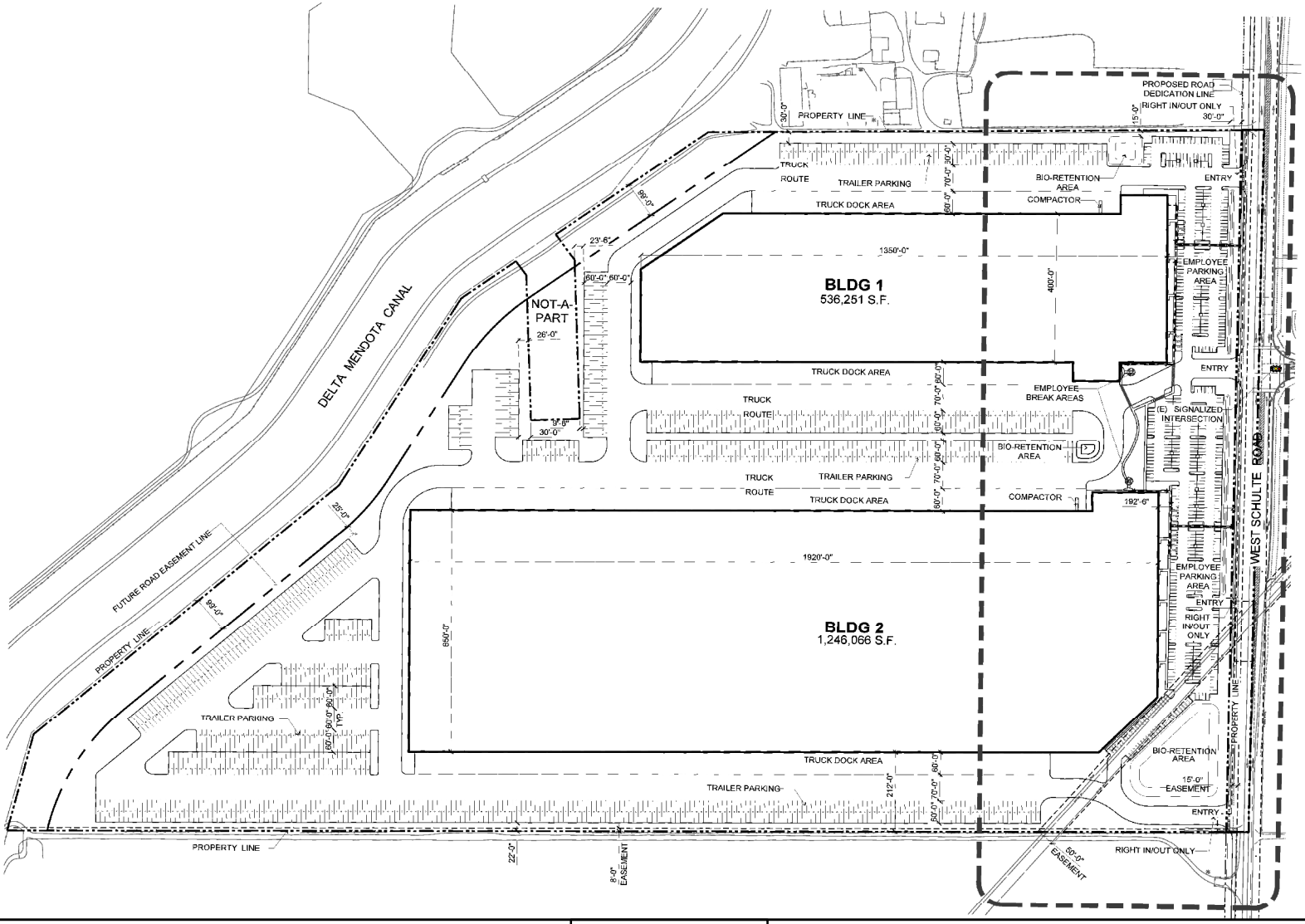
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Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service.
Map date: October 25, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 3. Aerial View of Project Site

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N

0 200 400

Feet

1:5,000

TRACY COSTCO DEPOT PROJECT

Figure 4.Site Plan

Source: David Babcock + Associates, May 15, 2020. Map date: June 2, 2020.

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INITIAL STUDY CHECKLIST

PROJECT TITLE

Tracy Costco Depot Project

LEAD AGENCY NAME AND ADDRESS

City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

CONTACT PERSON AND PHONE NUMBER

Genevieve Federighi, Associate Planner
City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376
Genevieve.Federighi@cityoftracy.org
(209) 831-6435

PROJECT SPONSOR'S NAME AND ADDRESS

Costco Wholesale
999 Lake Drive
Issaquah, WA 98027

PROJECT LOCATION AND SETTING

The Tracy Costco Depot Project site (project site) is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (Figures 1 and 2). The project site is within the Tracy Sphere of Influence (SOI) and is immediately adjacent to the Tracy city limits to the north of the site. The Assessor's Parcel Number (APN) for the project site is 209-230-02. The project site totals approximately 103 acres of undeveloped land previously used for agricultural purposes (Figure 3). The elevation of the site ranges from approximately 148 feet to 187 feet above mean sea level (MSL).

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

PROJECT DESCRIPTION

The project would include the construction and subsequent operation of two Costco warehouse and distribution buildings (approximately 1,264,066 square feet [sf] and 536,251 sf) totaling approximately 1,782,317 sf on the 103-acre project site. The project would also include the required circulation, parking, and utility improvements.

COSTCO OPERATIONS AND EMPLOYMENT

The proposed warehouses will be used to support Costco's ongoing distribution and e-commerce facilities in the area. Additionally, the warehouses may include cold storage for Costco's meat processing plant in Tracy, as well as food processing and canning.

The project would operate 24 hours a day, seven days a week, to provide support to Costco's retail warehouse facilities in northern California. The project applicant anticipates that an average of about 100 trucks and 300 trailers would be parked on site at any given time, with the typical truck size being approximately 70 feet long for double-axle trailers. The parking demand would fluctuate day-to-day. It is anticipated that the project would employ up to approximately 400 full time employees. The parking that would be provided on-site to support the project operations and employment is discussed further below.

WAREHOUSE ARCHITECTURE

The maximum height of the building components would be 53.5 feet (for the pewter cast vertical metal panels), while the majority of the warehouse would be 48 feet. The proposed warehouse design is contemporary and uses a variety of massing and materials for the scale of the building. Architectural metal with varied textures and horizontal and vertical orientations would be used, while varying parapet cap heights would break up the long elevations both horizontally and vertically in order to conceal rooftop-mounted mechanical equipment. The proposed color palette is composed of warm natural earth tones, which would relate to the adjacent Cordes Ranch Specific Plan development to the north of the project site. These techniques of breaking a long elevation into smaller elements with varied materials and colors would create architecturally interesting warehouse buildings while minimizing the visual impact of the large-scale structures.

ENERGY-EFFICIENT PROJECT COMPONENTS

In an effort to reduce energy consumption and promote sustainability, the proposed project would incorporate many energy saving measures when constructing the facility. Below are some of the significant practices that Costco will incorporate into the proposed project and overall operations that help conserve energy and other natural resources, all of which would be incorporated into the proposed facility:

1. Parking lot light standards are designed to provide even light distribution, and utilize less energy compared to a greater number of fixtures at lower heights. LED lamps provide a higher level of perceived brightness with less energy than other lamps such as high-pressure sodium.
2. New and renewable building materials are typically extracted and manufactured within the region. When masonry and concrete are used, the materials purchased are local to the project, minimizing the transportation and impact to road networks.
3. Main building structures are pre-engineered systems that use 100% recycled steel materials and are designed to minimize the amount of material utilized. The use of these pre-manufactured building components, including structural framing and metal panels, helps to minimize waste during construction.
4. Pre-manufactured metal wall panels with insulation are used which meets or exceeds current energy code requirements. Building heat absorption is further reduced by a decrease in the thermal mass of the metal wall when compared to a typical masonry block wall.

5. Roof materials are 100% recycled standing seam metal panel, designed to maximum efficiency for spanning the structure. Reflective cool roof materials are used to produce lower heat absorption and thereby lowering energy requirements during the hot summer months. This roofing material meets the requirements for the U.S. Environmental Protection Agency's (EPA's) Energy Star energy efficiency program. The roof structure is designed to support solar arrays in the event that Costco determines the installation to be practical.
6. A substantial amount of the plant material for new facilities is native and drought tolerant and will use less water than other common species.
7. Irrigation systems for new facilities include the use of deep root watering bubblers for parking lot trees to minimize usage and ensure that water goes directly to the intended planting areas.
8. Storm water management plans are designed to maintain quality control and storm water discharge rates based on the City's requirements.
9. High-efficiency restroom fixtures are used, which achieve a 40% decrease and water savings over U.S. standards.
10. Mechanical systems are site specifically commissioned and designed and field tested to ensure that the HVAC systems are performing to the high efficiency standards.
11. HVAC comfort systems are controlled by a computerized building management system to maximize efficiency. Costco's HVAC units are high efficiency direct ducted units. HVAC units have phased out the use of hydrochlorofluorocarbons completely, long before the Montreal Protocol timeline.
12. Energy efficient Transformers (i.e., Square D Type EE transformers) are used.
13. Variable speed motors are used on make-up air units and booster pumps.
14. Gas water heaters are direct vent and 94% efficient or greater.
15. Reclaim tanks are used to capture heat released by refrigeration equipment to heat domestic water in lieu of venting heat to the outside.
16. Construction waste is recycled whenever possible.
17. Lighting systems are designed with employee controllability in mind. Lighting is controlled by timers but over-ride switches are provided for employee use.
18. Carbon dioxide (CO_2) levels are monitored throughout warehouses.
19. Extensive recycling/reuse programs are implemented for warehouse and office space, including tires, cardboard, grease, plastics and electronic waste.
20. Suppliers are required to reduce packaging and consider alternative packaging solutions.
21. The expansion by this project to the existing Tracy Depot distribution facilities would allow for increased capacity and storage of products to minimize miles traveled for delivery.
22. Deliveries are made in full trucks whenever feasible.
23. All Costco trucks are equipped with an engine idle shut off timers.

LANDSCAPE PLAN

The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees would be used throughout the parking field and along the project perimeter that are appropriate for the climate in Tracy. The landscape design and plant palette will complement the existing development and streetscape planting established by the International Park of Commerce within the Cordes Ranch Specific Plan Area to the north. The general pattern of landscape islands in the parking field would be one island per five lineal parking spaces in order to meet shading requirements for the parking lot. Three treatment planters are shown on the site plan located on the northeast and northwest portion of the site to provide for detention and water

quality treatment of the storm water runoff generated by the project. The perimeter of the site, including office break areas, will be landscaped with a variety of grasses and oak trees per the preliminary landscape plan.

PROJECT CONSTRUCTION

Construction will be completed in two separate phases with a portion of the project site developed and made operational prior to the remaining portion. Initial construction may include the cold storage for Costco's meat processing plant in Tracy. Additional warehouse space will be constructed to complement and support Costco's ongoing distribution and e-commerce facilities in the area. Phase 1 is anticipated to be completed within two years after building permits are received and will include construction of the 536,251-sf warehouse in the western half of the site, as well as the associated parking areas and stormwater features along West Schulte Road. Phase 2 construction will commence shortly thereafter, depending on business conditions and business needs, and will include construction of the 1,246,066-sf warehouse building and remaining parking areas. Phase 2 is anticipated to be completed approximately five years later.

Table 1 shows the anticipated off-road construction equipment that will be utilized for the proposed project.

Table 1: Construction Equipment List

Equipment Type	*Unit Amount*	*Hours/Day*	*Horsepower*	*Load Factor*
Site Preparation Phase				
Rubber Tired Dozers	2	8	247	0.40
Tractors/Loaders/Backhoes	6	8	97	0.37
Grading Phase				
Excavators	2	8	158	0.38
Graders	2	8	187	0.41
Rubber Tired Dozers	1	8	247	0.40
Scrapers	4	8	367	0.48
Tractors/Loaders/Backhoes	4	8	97	0.37
Building Construction Phase				
Cranes	1	7	231	0.29
Forklifts	3	8	89	0.20
Generator Sets	1	8	84	0.74
Tractors/Loaders/Backhoes	3	7	97	0.37
Welders	1	8	46	0.45
Paving Phase				
Pavers	2	8	130	0.42
Paving Equipment	2	8	132	0.36
Rollers	4	8	80	0.38
Architectural Coating Phase				
Air Compressors	1	6	78	0.48

SOURCE: DAVIS BABCOCK + ASSOCIATES, JUNE 2020.

A construction staging area will be provided on-site, and the entire project site would be graded as part of the proposed project construction. The project would be constructed in two phases, and both phases would be individually graded before construction of each phase begins. Additionally, Phase 1 would cut approximately 164,000 cubic yards and would fill approximately 6,000 cubic yards. Phase 2 would cut approximately 95,000 cubic yards and would fill approximately 184,000 cubic yards. Therefore, approximately 6,000 cubic yards of material would be cut during overall project construction (as a result of Phase 2 grading). The excess dirt

anticipated to be cut as a result of Phase 1 will be stockpiled on-site for use during Phase 2. The anticipated excess dirt from Phase 2 would be off-hauled in one-way trips or used for landscaped berms.

The construction-related worker and vendor trips are shown in Table 2. These trips would be spread out over the entire construction period for the project.

Table 2: Construction Worker and Vendor Trips

Phase Name	*# of Worker Trips/Day*	*# of Vendor Trips/Day*	*TOTAL Construction (Worker and Vendor) Trips*
Site Preparation	18	0	*18*
Grading	20	0	*20*
Building Construction	749	292	*1,041*
Paving	15	0	*15*
Architectural Coating	150	0	*150*

SOURCE: DAVIS BABCOCK + ASSOCIATES, JUNE 2020.

CIRCULATION, TRANSPORTATION, AND PARKING

The two proposed warehouse buildings would be sited to place administrative and office uses at the north side of the site, along West Schulte Road, with the warehousing, food processing and canning uses, and truck dock doors located at the rear of the building. Entries to the office and administrative uses would be oriented towards the north to provide security for the uses further south on the site, and to also focus the main architectural design elements along the main street (West Schulte Road) frontage.

The parking lot design along West Schulte has incorporated a 30-foot landscape buffer consistent with the Cordes Ranch Specific Plan Area, which abuts the project site to the north. A 20-foot landscape setback has been incorporated around the remainder of the perimeter of the project site to provide screening of the buildings and dock doors by landscaping.

Access to the warehouse and depot would be via three access points along West Schulte Road. The main entry would be located at the center of the site, at the signalized intersection and Bud Lyons Way. This main driveway access would allow for full turning movements in and out of the project. The two remaining access points at the west and east property boundaries would be right in/out and would be mainly for truck access. An Americans with Disabilities Act (ADA)-compliant pedestrian pathway would extend from the new warehouse buildings to the northern property boundary, where it would connect with West Schulte Road.

Additionally, 534 parking stalls would be provided throughout the site, which exceeds the required City of Tracy parking requirement of 434 stalls. The project would provide standard parking stalls of 9-feet by 18-feet that meet the City of Tracy standards. Trailer parking would also be provided at the perimeter of the project site to provide for storage of 837 empty trailers on site. The trailer parking stalls would be 12-feet by 60-feet.

The parking lot and truck and trailer parking areas would be illuminated with standard downward pointing lights, each containing two LED fixtures affixed to a 38-foot light pole. The lighting fixtures would be of a “shoe-box” style. Parking lot light standards would be designed to provide even light distribution for vehicle and pedestrian safety as well as security for the warehouse. Lighting fixtures also would be located on the building approximately every 40 feet around the exterior of the building to provide safety and security. The proposed building lighting fixtures will be downward-focused and will use LED fixtures.

Further, the proposed site plan includes a 99-foot-wide easement for a future roadway along the southern boundary of the site, south of the proposed project and north of the Delta Mendota Canal.

UTILITIES

The proposed project would connect to existing City infrastructure to provide water, sewer, and storm drainage utilities. Existing storm drain, sewer, water, and gas lines/pipes are currently located along West Schulte Road.

The project would be served by the following existing service providers:

1. City of Tracy for water;
2. City of Tracy for wastewater collection and treatment;
3. City of Tracy for stormwater collection;
4. Pacific Gas and Electric Company for gas and electricity.

Utility extensions would be installed to provide services to the project. Utility lines within the project site and adjacent roadways would be extended throughout the project site. Wastewater, water, and storm drainage lines would be connected via existing lines along West Schulte Road. Eight-inch sanitary sewer lines are currently located along West Schulte Road. Additionally, 2-inch water lines are currently located along West Schulte Road. Further, storm drainage lines ranging in size from 12 to 24 inches and a six-inch gas line are currently located along West Schulte Road.

Stormwater treatment/detention basins and stormwater bioretention treatment planters would be located throughout the project site, mainly in the proposed landscaped areas and along West Schulte Road. The project site includes four drainage areas: Area 1 (12.67 acres located along the western boundary of the site) Area 2 (77.70 acres which take up the majority of the site), Area 3 (2.38 acres located along the northwestern boundary of the site), and Area 4 (2.60 acres located along the northern central boundary of the site). Stormwater runoff from each of the four drainage areas would be routed to a series of on-site stormwater bioretention treatment planters and treatment/detention basins.

Best management practices (BMPs) will be applied to the proposed development to limit the concentrations of constituents in any site runoff to acceptable levels. Stormwater flows from the project site would be directed to the proposed stormwater treatment basins, treatment planters, and bioretention areas by a new stormwater conveyance system on the project site. Stormwater runoff would not be allowed to discharge directly to the existing storm drains in West Schulte Road without first discharging to the bioretention areas. The landscaping plan includes stormwater treatment plantings in the treatment/detention basins. Additionally, erosion and sediment control measures would be implemented during construction.

PROJECT OBJECTIVES

The project has been designed to meet the following project objectives:

- Construct and operate a new state-of-the-art Costco depot and warehouse facility that is centrally located to service Costco's retail warehouse locations within northern California and is of sufficient size to efficiently store and distribute merchandise and food products.
- Annex into the City an area that the City's General Plan already designates for industrial uses and develop that site with permitted and conditionally permitted industrial uses.
- Locate an industrial project in an area with good access to a regional roadway network.

- Create approximately 400 full time jobs within the City of Tracy, thus improving the local jobs/housing balance.
- Ensure that the industrial area along West Schulte Road continues to be developed in a visually pleasing manner.
- Increase contributions to the City's tax base.
- Reduce energy consumption by incorporating sustainable design features and systems with enhanced energy efficiencies meeting State and Federal code requirements.
- Minimize circulation conflicts between pedestrians, automobiles, and truck and trailer traffic, both on-site and off-site.
- Locate a Costco depot warehouse on a site which can be purchased (rather than leased) in order to protect Costco's substantial investment of time, money and goodwill in the proposed location.
- Complete the project on schedule and within budget.

GENERAL PLAN AND ZONING

The project site is designated as Agriculture by the County's General Plan Land Use Map (Figure 5) and is zoned as AG-40 Agriculture (Figure 6) by the County. The site is currently in the City's SOI, but will be annexed into the City limits. The San Joaquin County Local Agency Formation Commission (LAFCO) will require the project site to be pre-zoned by the City of Tracy in conjunction with the proposed annexation. The site currently has a City General Plan land use designation of Industrial and, as part of the project, will be pre-zoned by the City to M-1 Light Industrial. Additionally, the project is requesting a Conditional Use Permit to allow for food processing and canning in the proposed M-1 zoning district.

REQUESTED ENTITLEMENTS AND OTHER APPROVALS

The City of Tracy is the Lead Agency for the proposed project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050.

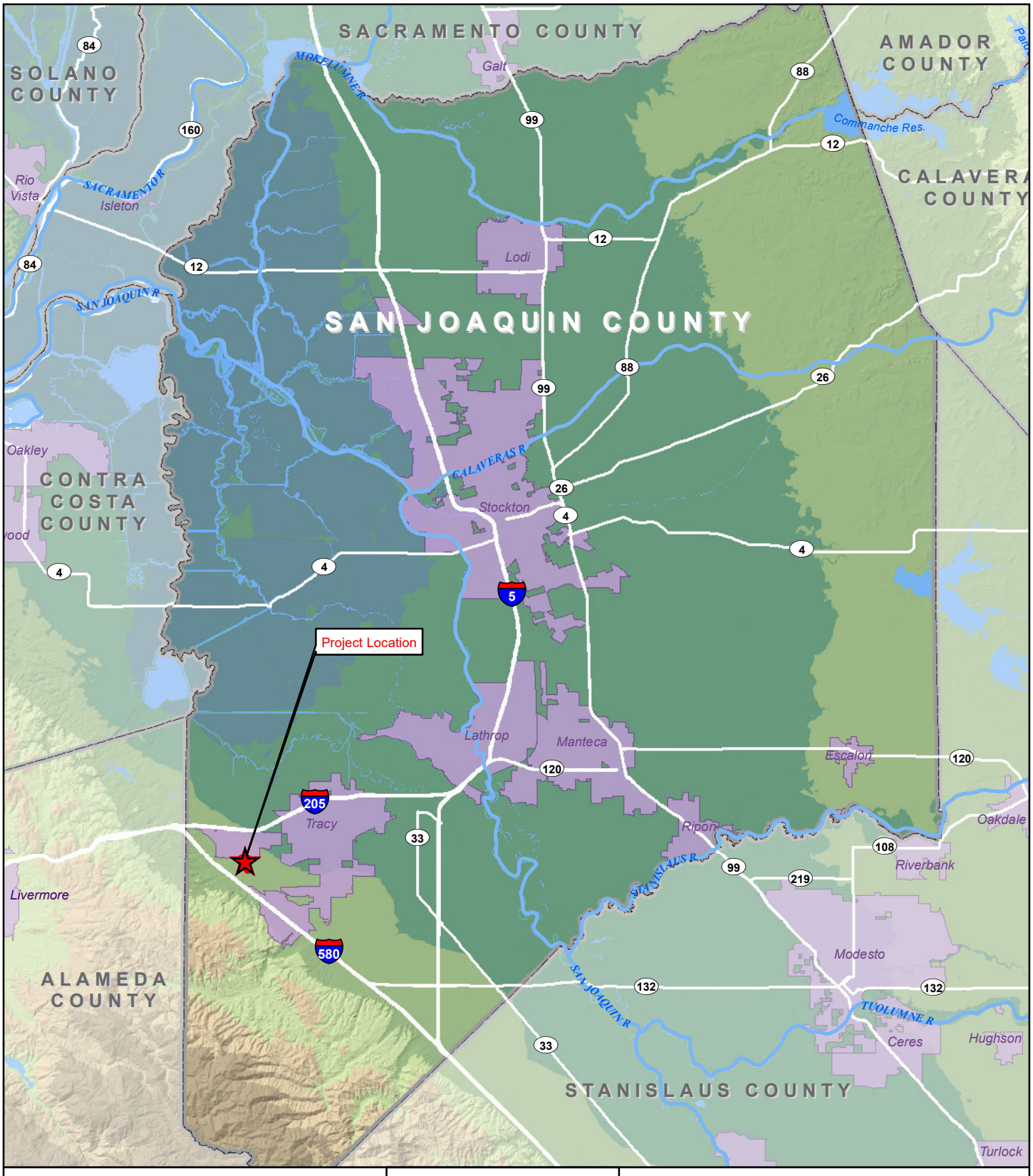
If the City Council certifies the EIR in accordance with CEQA requirements, the City may use the EIR to support the following actions:

- Pre-zone of the property to the City's M-1 zoning district;
- Annexation of the project site into the City (which requires approval by the San Joaquin County LAFCO);
- Development review permit for building design, landscaping, and other site features;
- A Conditional Use Permit to allow for food processing and canning in the M-1 Zoning District;
- Building, grading, and other permits as necessary for project construction;
- Adopting a Mitigation Monitoring and Reporting Program (MMRP).

The following agencies may rely on the certified EIR to issue permits or approve certain aspects of the proposed project:

- Regional Water Quality Control Board (RWQCB) – Construction activities would be required to be covered under the National Pollution Discharge Elimination System (NPDES);
- RWQCB – The Storm Water Pollution Prevention Plan (SWPPP) would be required to be approved prior to construction activities pursuant to the Clean Water Act;
- San Joaquin LAFCO – Annexation of the project site would be required.

- San Joaquin Valley Air Pollution Control District (SJVAPCD) – Construction activities would be subject to the SJVAPCD codes and requirements.



Legend

- Project Location
- County Boundary
- City Area

Sources: CalAtlas; San Joaquin, Stanislaus, Sacramento, Solano, Contra Costa, and Alameda Counties. Map date: October 22, 2019.

N

0 2½ 5

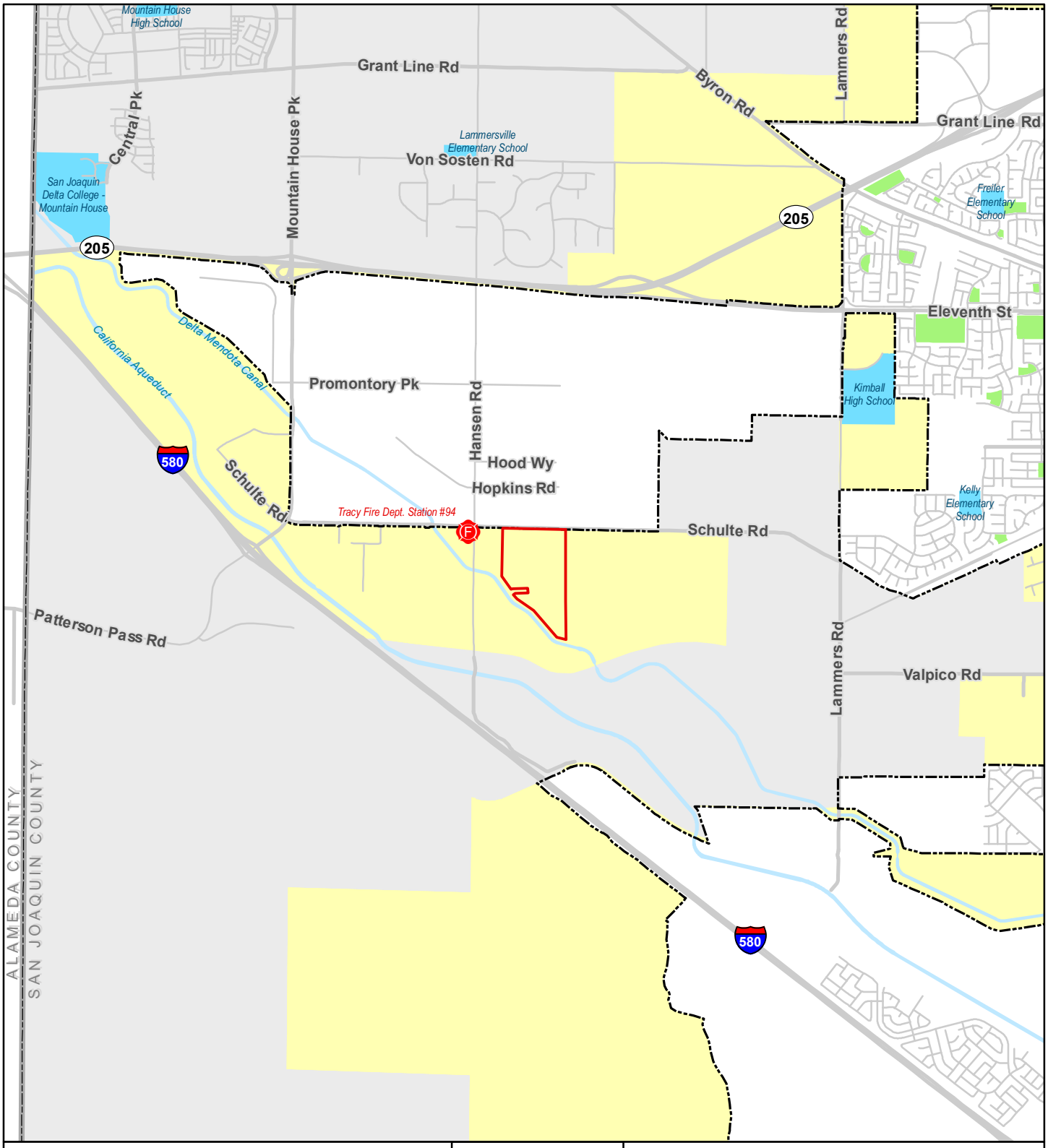
Miles

TRACY COSTCO DEPOT PROJECT

Figure 1. Regional Location Map

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Legend

- Project Boundary
- Tracy City Limits
- Tracy Sphere of Influence
- San Joaquin County
- School
- Park
- Fire Station

N

0 ¼ ½

Miles

1:48,000

Sources: San Joaquin County GIS. Map date: October 25, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 2. Project Vicinity

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Legend

Project Boundary

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Feet

1:18,000

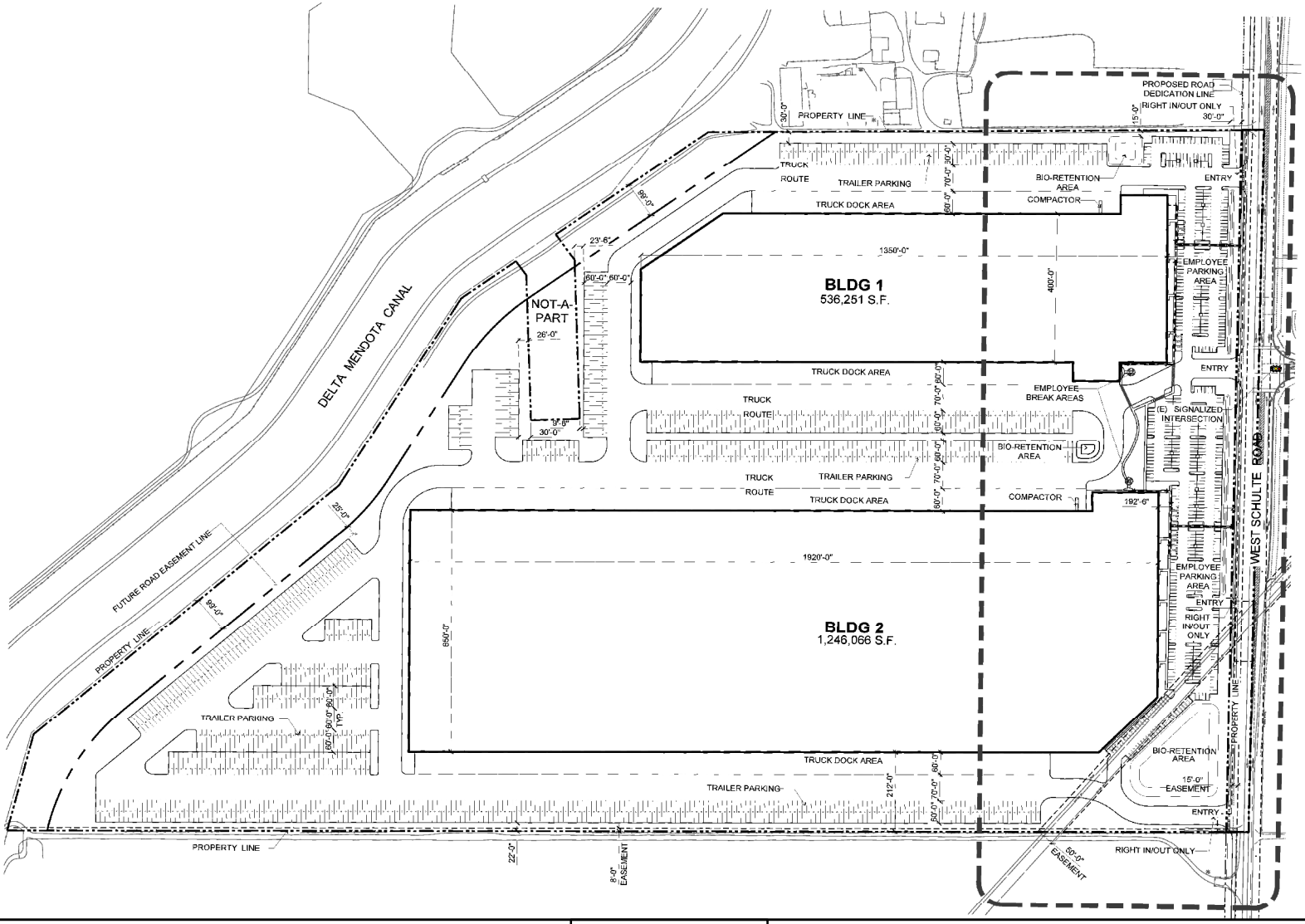
Sources: San Joaquin County GIS; ArcGIS Online World Imagery Map Service.
Map date: October 25, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 3. Aerial View of Project Site

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Feet

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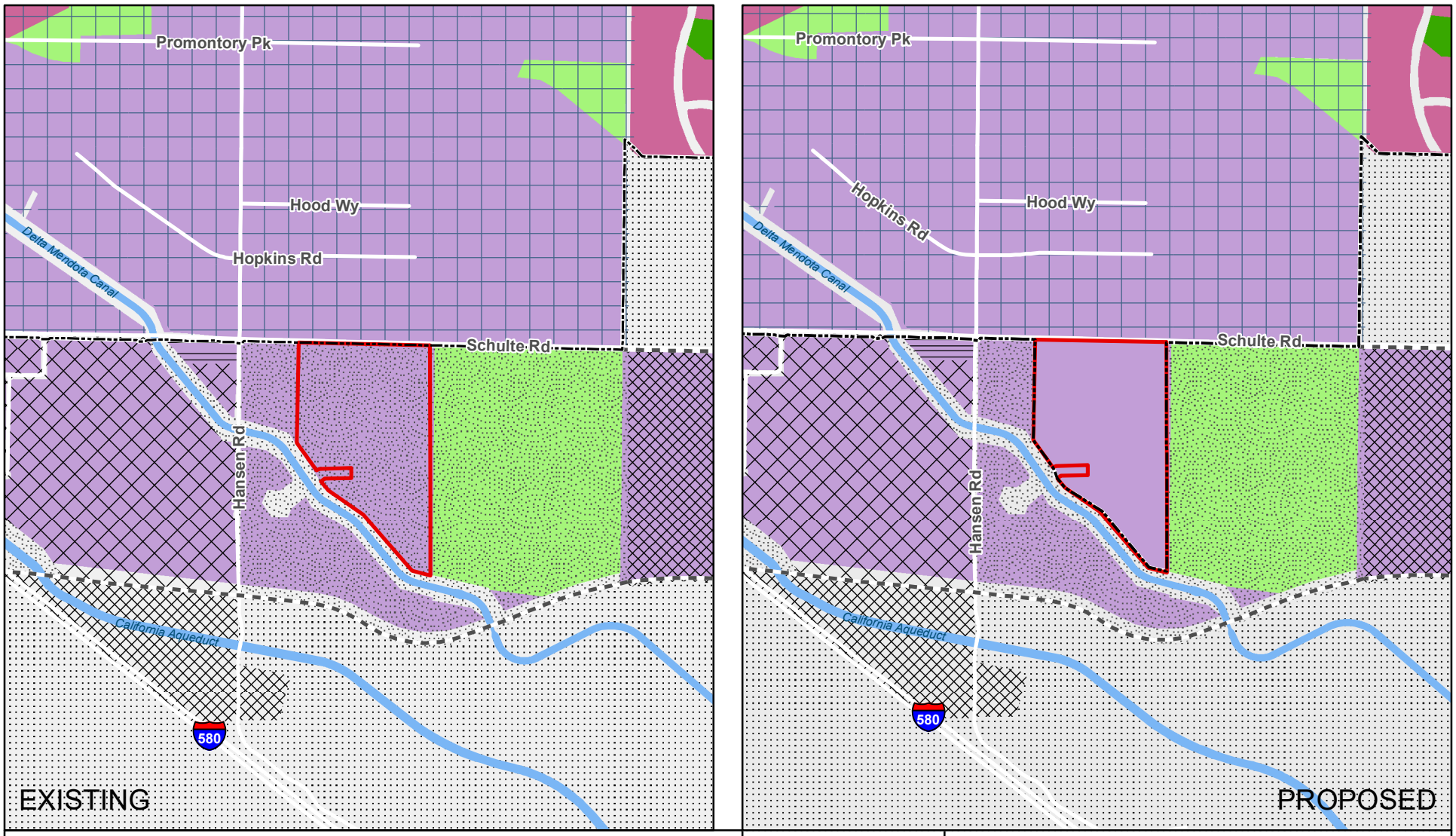
TRACY COSTCO DEPOT PROJECT

Figure 4.Site Plan

Source: David Babcock + Associates, May 15, 2020. Map date: June 2, 2020.

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Legend

- Project Boundary
- Tracy City Limits
- Sphere of Influence

San Joaquin County Land Use

- Agriculture/General
- Agriculture/Urban Reserve
- Industrial/General
- Industrial/Limited
- Public

City of Tracy Land Use

- Industrial
- Office
- Open Space
- Park
- Urban Reserve 6

N

0 1,000 2,000

Feet

1:24,000

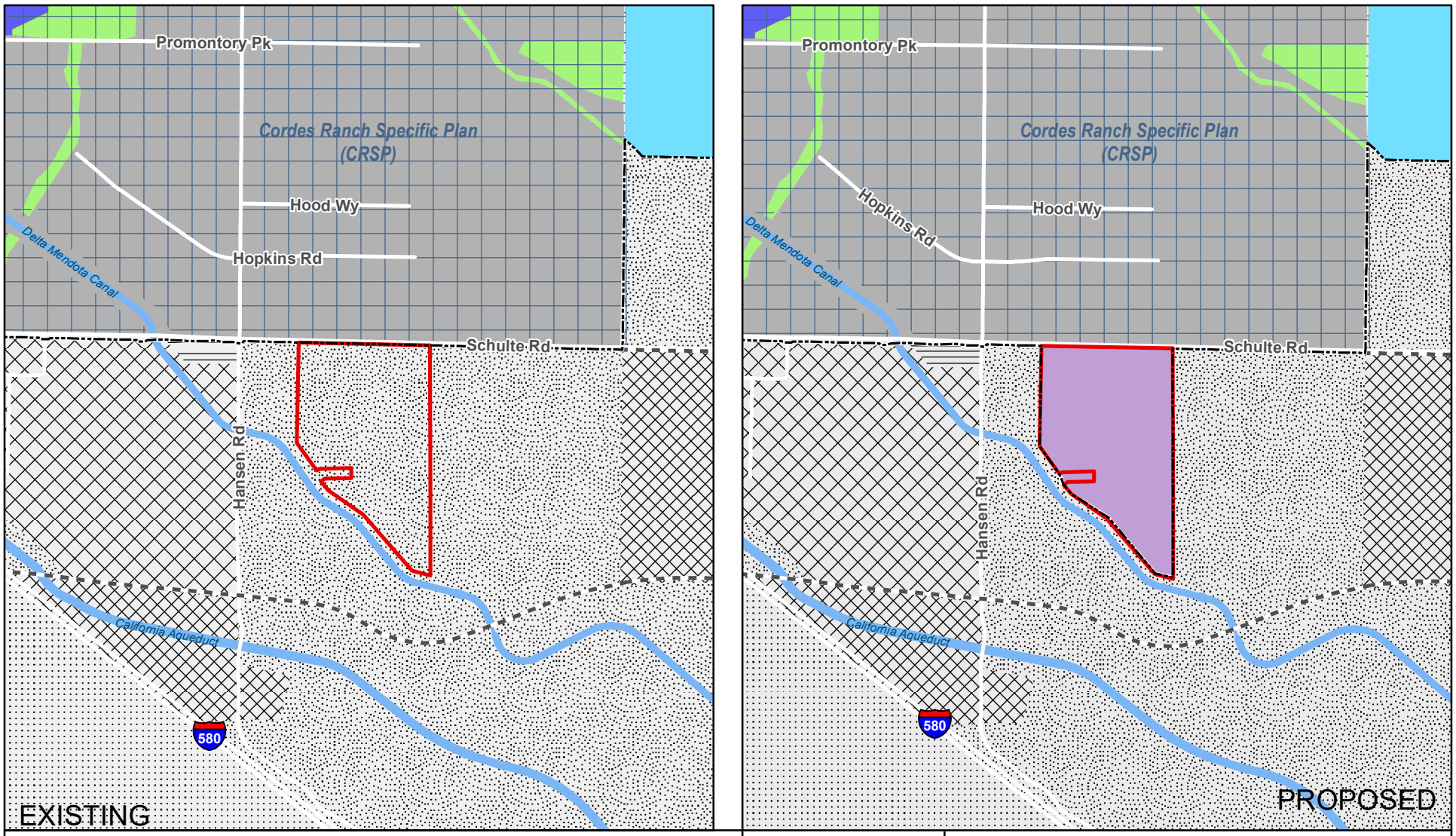
Sources: San Joaquin County GIS; City of Tracy GIS. Map date: November 26, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 5. Existing and Proposed General Plan Land Use Designations

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Legend

- Project Boundary
- Tracy City Limits
- Sphere of Influence

City of Tracy Zoning

- CRSP
- PUD
- M-1 Light Industrial

Cordes Ranch Specific Plan Zoning

- Business Park Industrial
- General Office
- Park

San Joaquin County Zoning

- AG-160
- AG-40
- I-G
- I-L
- P-F

N

0 1,000 2,000

Feet

1:24,000

Sources: San Joaquin County GIS; City of Tracy GIS. Map date: October 25, 2019. Revised: June 2, 2020.

TRACY COSTCO DEPOT PROJECT

Figure 6. Existing and Proposed Zoning Designations

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

X	Aesthetics	X	Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology/Soils	X	Greenhouse Gases	X	Hazards and Hazardous Materials
X	Hydrology/Water Quality	X	Land Use/Planning		Mineral Resources
X	Noise		Population/Housing	X	Public Services
	Recreation	X	Transportation	X	Tribal Cultural Resources
X	Utilities/Service Systems		Wildfire	X	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.
X	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.

Signature Date

EVALUATION INSTRUCTIONS

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 may be 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 Analysis 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.
    c) 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.
6) 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.
7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8) 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.
9) 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 significant.

EVALUATION OF ENVIRONMENTAL IMPACTS

In each area of potential impact listed in this section, there are one or more questions which assess the degree of potential environmental effect. A response is provided to each question using one of the four impact evaluation criteria described below. A discussion of the response is also included.

- Potentially Significant Impact. This response is appropriate when there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries, upon completion of the Initial Study, an EIR is required.
- Less than Significant With Mitigation Incorporated. This response applies when 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.
- Less than Significant Impact. A less than significant impact is one which is deemed to have little or no adverse effect on the environment. Mitigation measures are, therefore, not necessary, although they may be recommended to further reduce a minor impact.
- No Impact. These issues were either identified as having no impact on the environment, or they are not relevant to the project.

ENVIRONMENTAL CHECKLIST

This section of the Initial Study incorporates the most current Appendix "G" Environmental Checklist Form contained in the CEQA Guidelines. Impact questions and responses are included in both tabular and narrative formats for each of the 21 environmental topic areas.

I. AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Have a substantial adverse effect on a scenic vista?	X			
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	X			
c) 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 the applicable zoning and other regulations governing scenic quality?	X			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	X			

Responses to Checklist Questions

Responses a-d) The proposed project includes development of two Costco warehouse and distribution buildings (1,264,066 sf and 536,251 sf) totaling 1,782,317 sf, which would alter the existing condition of the undeveloped land previously used for agricultural purposes and introduce new sources of light and glare to the site. A scenic vista is generally described as a clear, expansive public view of significant regional features possessing visual and aesthetic qualities of value to the community. The City's General Plan EIR lists the City's scenic resources and vistas that are considered to be local assets, noting public views of the expansive agricultural lands within the City's SOI (i.e., the project site) and views of the Diablo Mountain Range. Additionally, portions of the project site may be visible from Interstate 580 (between Interstate 205 and Interstate 5), an Officially Designated State Scenic Highway located approximately 3,500 feet southwest of the project site.

It has been determined that the potential impacts on aesthetics caused by the proposed project will require a detailed analysis in the EIR. Consequently, the lead agency will examine all of the environmental issues listed in the checklist above (a – d) in the EIR and will decide whether the proposed project has the potential to have a significant impact on aesthetics. At this point, a definitive impact conclusion for each of these environmental topics will not be made. Rather, all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a visual analysis that presents the methodology, thresholds of significance, a project-level impact analysis, a cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any potential impacts on aesthetics. The analysis will look at foreground, middleground, and background views from public vantage points along the perimeter of the project site. The analysis will include photographs from public vantage points, architectural elevations of the buildings, an evaluation of the building materials for reflective values/glare, and an evaluation of the lighting and the potential for light pollution offsite. The EIR will also compare the proposed project to applicable zoning and other regulations related to scenic qualities.

II. AGRICULTURE AND FORESTRY RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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?	X			
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	X			
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1222(g)) or timberland (as defined in Public Resources Code section 4526)?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?	X			

Responses to Checklist Questions

Responses a), b), e): According to the California Department of Conservation's Map of the San Joaquin Valley Important Farmland, the project site is designated as Prime Farmland, which will be converted to an industrial use as part of the project. Therefore, it has been determined that the potential impacts on agricultural resources caused by the proposed project will require a more detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project will have a potentially significant impact on agricultural resources. The analysis will include a discussion of potential impacts related to the conversion of the agricultural land to an industrial use, as well as any potential rural-urban agriculture conflicts. At this point, a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will describe the character of the region's agricultural lands, including maps of prime farmlands, other important farmland classifications, and protected farmland (including Williamson Act contracts). The County Agricultural Commissioner's Office and the State Department of Conservation will be consulted and their respective plans, policies, laws, and regulations affecting agricultural lands will be presented within the analysis.

The EIR will include thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to offset the loss of agricultural lands and/or Williamson Act cancellations as a result of project implementation.

Responses c), d): There are no forest resources or zoning for forest lands located on the project site. This CEQA topic is not relevant to the proposed project and does not require further analysis. Therefore, there would be ***no impact*** regarding the loss of forest or timber resources.

III. AIR QUALITY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Conflict with or obstruct implementation of the applicable air quality plan?	X			
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?	X			
c) Expose sensitive receptors to substantial pollutant concentrations?	X			
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	X			

Existing Setting

The project site is located within the SJVAPCD. This agency is responsible for monitoring air pollution levels and ensuring compliance with federal and state air quality regulations within the San Joaquin Valley Air Basin (SJVAB) and has jurisdiction over most air quality matters within its borders.

The SJVAPCD has primary responsibility for compliance with both the federal and state standards and for ensuring that air quality conditions are maintained. They do this through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues.

Activities of the SJVAPCD include the preparation of plans for the attainment of ambient air quality standards, adoption and enforcement of rules and regulations concerning sources of air pollution, issuance of permits for stationary sources of air pollution (i.e., Authority to Construct and Permit to Operate), inspection of stationary sources of air pollution and response to citizen complaints, monitoring of ambient air quality and meteorological conditions, and implementation of programs and regulations required by the Federal Clean Air Act and California Clean Air Act.

The SJVAPCD has prepared the *2007 Ozone Plan* to achieve Federal and State standards for improved air quality in the SJVAB regarding ozone. The *2007 Ozone Plan* provides a comprehensive list of regulatory and incentive-based measures to reduce emissions of ozone and particulate matter precursors throughout the SJVAB. The 2007 Ozone Plan calls for major advancements in pollution control technologies for mobile and stationary sources of air pollution. The *2007 Ozone Plan* calls for a 75-percent reduction in ozone-forming oxides of nitrogen emissions.

The SJVAPCD has also prepared the *2007 PM_{10} Maintenance Plan and Request for Redesignation* (2007 PM_{10} Plan). On April 24, 2006, the SJVAPCD submitted a Request for Determination of PM_{10} Attainment for the Basin to the California Air Resources Board (CARB). CARB concurred with the request and submitted the request to the U.S. EPA on May 8, 2006. On October 30, 2006, the EPA issued a Final Rule determining that the Basin had attained the National Ambient Air Quality Standards (NAAQS) for PM_{10}. However, the EPA noted that the Final Rule did not constitute a

redesignation to attainment until all of the Federal Clean Air Act requirements under Section 107(d)(3) were met.

The SJVAPCD has prepared the *2008 PM.2.5 Plan* to achieve Federal and State standards for improved air quality in the San Joaquin Valley Air Basin. The *2008 PM.2.5 Plan* provides a comprehensive list of regulatory and incentive-based measures to reduce PM2.5.

In addition to the *2007 Ozone Plan, the 2008 $PM_{2.5}$ Plan,* and the *2007 PM_{10} Plan*, the SJVAPCD prepared the *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI). The GAMAQI is an advisory document that provides Lead Agencies, consultants, and project applicants with analysis guidance and uniform procedures for addressing air quality impacts in environmental documents. Local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that SJVAPCD uses when reviewing and commenting on the adequacy of environmental documents. It recommends thresholds for determining whether or not projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. An update of the GAMAQI was approved on March 19, 2015, and is used as a guidance document for this analysis.

The GAMAQI notes that, for CEQA purposes, a sensitive receptor is generically defined as a location where human populations, especially children, seniors, and sick persons are found, and there is reasonable expectation of continuous human exposure according to the averaging period for the Ambient Air Quality Standards (e.g., 24-hour, 8- hour, 1-hour). These typically include residences, hospitals, and schools. Locations of sensitive receptors may or may not correspond with the location of the maximum off-site concentration. The sensitive receptors in the vicinity of the project site include single-family residences located west, south, and southeast of the site. Specifically, one single-family residence is located along W. Schulte Road approximately 880 feet west of the western site boundary, a cluster of single-family residences is located adjacent west of the site, another cluster of single-family residences is located along Hansen Road approximately 2,050 feet (0.39 miles) south of the southern site boundary, and one single-family residence is located approximately 990 feet east of the southeastern corner of the project site.

Responses to Checklist Questions

Responses a-d): Based on the current air quality conditions in the SJVAB, as well as the size of the proposed warehouse buildings, it has been determined that the potential impacts on air quality caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on air quality. At this point, a definitive impact conclusion for each of these environmental topics will not be made. Rather, all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an air quality analysis that presents the methodology, thresholds of significance, a project-level impact analysis, a cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any potential impacts on air quality. The project may result in toxic air contaminants, short-term construction-related emissions, and long-term operational emissions, primarily attributable to emissions from vehicle trips and from energy consumption by the industrial uses. The air quality analysis will include the following:

- A description of regional and local air quality as well as meteorological conditions that could affect air pollutant dispersal or transport in the vicinity of the project site. Applicable air quality regulatory framework, standards, and significance thresholds will be discussed.
- An analysis of the proposed project's potential to conflict with or obstruct implementation of SJVAPCD's 2015 GAMAQI, and any other applicable air quality plans.
- An analysis of the SJVAPCD Rules and Regulations that are applicable to the proposed project.
- Short-term (i.e., construction) increases in regional criteria air pollutants will be quantitatively assessed. The latest version of the CARB-approved California Emissions Estimator Model (CalEEMod) computer model will be used to estimate regional mobile source and particulate matter emissions associated with the construction of the proposed project.
- Long-term (i.e., operational) increases in regional criteria air pollutants will be quantitatively assessed for area source, mobile sources, and stationary sources. The CARB-approved CalEEMod computer model will be used to estimate emissions associated with the proposed project. Modeling will be provided for the worst-case proposed project land use scenario.
- Exposure to odorous or toxic air contaminants during the project's operational phase will be assessed through an air toxics health risk assessment, utilizing AERMOD and HARP-2 risk modeling software, following guidance as provided by the SJVAPCD and the CARB. Incremental cancer risk for residents and workers, and chronic and acute hazards will be assessed.
- Local mobile-source (carbon monoxide) (CO) concentrations will be assessed through a CO screening method as recommended by the SJVAPCD. If the screening method indicates that modeling is necessary, upon review of the traffic analysis, CO concentrations will be modeled using the California Department of Transportation (Caltrans)-approved CALINE4 computer model.
- The potential for the proposed project to generate objectionable odors on neighboring sensitive receptors will be assessed qualitatively following CARB recommendations.

IV. BIOLOGICAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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 Game or U.S. Fish and Wildlife Service?	X			
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 Game or US Fish and Wildlife Service?	X			
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?	X			
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 impede the use of native wildlife nursery sites?	X			
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X			
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?	X			

Responses to Checklist Questions

Responses a-f): Based on the documented special status species, sensitive natural communities, wetlands, and other biological resources in the region, it has been determined that the potential impacts on biological resources caused by the proposed project will require a detailed analysis. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on biological resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will provide a summary of local biological resources, including descriptions and mapping of plant communities, the associated plant and wildlife species, and sensitive biological resources known to occur, or with the potential to occur in the project vicinity. The analysis will conclude with a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented in order to reduce any significant impacts on biological resources.

V. CULTURAL RESOURCES

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Cause a substantial adverse change in the significance of a historical resource pursuant to '15064.5?	X			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	X			
c) Disturb any human remains, including those interred outside of formal cemeteries?	X			

Responses to Checklist Questions

Responses a-c): Based on known historical and archaeological resources in the region, and the potential for undocumented underground cultural resources in the region, it has been determined that the potential impacts on cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface cultural resources to be found in the area, the types of cultural resources that may be expected to be found, a review of existing regulations and policies that protect cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce any significant impacts to cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project. The CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Tracy.

VI. ENERGY

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	X			
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	X			

Responses to Checklist Questions

Responses a-b): Appendix F of the State CEQA Guidelines requires consideration of the potentially significant energy implications of a project. CEQA requires mitigation measures to reduce "wasteful, inefficient and unnecessary" energy usage (Public Resources Code Section 21100, subdivision [b][3]). According to Appendix F of the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed project would be considered "wasteful, inefficient, and unnecessary" if it were to violate state and federal energy standards and/or result in significant adverse impacts related to project energy requirements, energy inefficiencies, energy intensiveness of materials, cause significant impacts on local and regional energy supplies or generate requirements for additional capacity, fail to comply with existing energy standards, otherwise result in significant adverse impacts on energy resources, or conflict or create an inconsistency with applicable plan, policy, or regulation.

The proposed project includes the construction of two Costco warehouse and distribution buildings (1,264,754 sf and 52,000 sf) totaling 1,817,000 sf. The amount of energy used at the project site would directly correlate to the size of the proposed warehouses, the energy consumption of associated technology, machinery, and appliances, and outdoor lighting. Other major sources of proposed project energy consumption include fuel used by vehicle trips generated during project construction and operation, and fuel used by off-road construction vehicles during construction.

Due to the size of the proposed warehouse buildings, the potential impacts on energy caused by the proposed project will require a detailed analysis in the EIR. Consequently, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on energy resources. The EIR will include a discussion and analysis that provides calculated levels of energy use expected for the proposed project, based on commonly used modelling software (i.e. CalEEMod v.2016.3.2 and the CARB's EMFAC2014). At this point, a definitive impact conclusion for each of these environmental topics will not be made. Rather, all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

VII. GEOLOGY AND SOILS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation***	***Less Than Significant Impact***	***No Impact***
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.	X			
ii) Strong seismic ground shaking?	X			
iii) Seismic-related ground failure, including liquefaction?	X			
iv) Landslides?	X			
b) Result in substantial soil erosion or the loss of topsoil?	X			
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?	X			
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?	X			
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	X			

Responses to Checklist Questions

Responses a.i-a.iv, b, c, d, f): It has been determined that the potential impacts from geology and soils will require a detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from geology and soils. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a review of existing geotechnical reports, published documents, aerial photos, geologic maps, and other geological and geotechnical literature pertaining to the site and surrounding area to aid in evaluating geologic resources and geologic hazards that may be present. The EIR will include a description of the applicable regulatory setting, a description of the existing geologic and soils conditions on and around the project site, an evaluation of geologic hazards, a description of the nature and general engineering characteristics of the subsurface conditions within the project site, and the provision of findings and potential mitigation strategies to address any geotechnical concerns or potential hazards.

This section will provide an analysis including thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any significant impacts associated with geology and soils.

Response e): The proposed project would connect to the municipal sewer system for wastewater disposal. Septic tanks or septic systems are not proposed as part of the project. As such, this CEQA topic is not relevant to the proposed project and does not require further analysis. Therefore, there would be ***no impact*** regarding septic tanks or alternative waste water disposal systems.

VIII. GREENHOUSE GAS EMISSIONS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	X			
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gasses?	X			

Responses to Checklist Questions

Responses a), b): Implementation of the proposed project could generate greenhouse gases (GHGs) from a variety of sources, including but not limited to vehicle trips, electricity consumption, water use, and solid waste generation. There could also be additional GHGs generated from stationary sources, such as industrial processes and/or diesel generators. It has been determined that the potential impacts from GHG emissions by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from GHG emissions. At this point, a definitive impact conclusion for each of these environmental topics will not be made. Rather, all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a GHG emissions analysis pursuant to the requirements of the California Governor's Executive Order S-3-05 and The Global Warming Solutions Act of 2006 (AB 32), Senate Bill 375 (SB 375), and Senate Bill 32 (SB 32). The analysis will follow the California Air Pollution Control Officers Association (CAPCOA) white paper methodology and recommendations presented in "Climate Change and CEQA", which was prepared in coordination with the CARB and the Governor's Office of Planning and Research (OPR) as a common platform for public agencies to ensure that GHG emissions are appropriately considered and addressed under CEQA. Also, a GHG emissions analysis using the SJVAPCD's two-tiered approach in assessing significance of the project specific GHG emissions increases will be performed. These analyses will consider a regional approach toward determining whether GHG emissions are significant, and will present mitigation measures to reduce any potential impacts. The discussion and analysis will include quantification of GHGs generated by the project using the CalEEMod computer model as well as a qualitative discussion of the project's consistency with any applicable state and local plans to reduce the impacts of climate change.

IX. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	X			
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?	X			
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located 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?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?			X	

Responses to Checklist Questions

Responses a-b): It has been determined that the potential impacts on hazards and hazardous materials caused by the proposed project will require a detailed analysis in the EIR. Consequently, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on hazards and hazardous materials. At this point, a definitive impact conclusion for each of these environmental topics will not be made. Rather, all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include a hazards and hazardous materials analysis that presents the methodology, thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts on hazards and hazardous materials. The hazards and hazardous materials analysis will include the following:

- A description of the applicable hazards-related federal, state, and local statutes, regulations, and programs that the proposed project would be required to comply with (during project construction and operation).
- An assessment of the existing Recognized Environmental Conditions (RECs) identified for the project site.
- A summary of the past uses of the site.
- The potential for soil contamination or unknown underground facilities (i.e., underground wells, septic systems, etc.) in the project site.
- An analysis of the uses that are proposed on the project site, and what hazardous materials could be used by the proposed project.

Response c): The project site is not located within one-quarter-mile of a school. The nearest school, John C. Kimball High School, is located approximately 1.66 miles northeast of the project site. Therefore, ***no impact*** would occur related to emitting hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response d): The project site is not located on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, ***no impact*** would occur related to Government Code Section 65962.5. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response e): The project is not 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. The closest airport is the Tracy Municipal Airport, located approximately three and a half miles southeast of the project site. The project site is not within the Tracy Airport zone, nor is it within any area identified as impacted by the Tracy Municipal Airport in the San Joaquin County Airport Land Use Compatibility Plan (i.e. it is not within the Airport Influence Area). Therefore, ***no impact*** associated with private airstrips and airport land use plans would occur. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response f): The project site would connect to an existing network of City streets. The project includes a 28-foot-wide fire lane around the perimeter of the proposed warehouse buildings. The appropriate turning radiuses have been planned to accommodate fire trucks on-site. The proposed circulation improvements would allow for greater emergency access relative to existing conditions. Moreover, the proposed project would require building construction to meet the fire code requirements, and would have fire hydrants consistent with the standards of the City; such fire hydrants would assist with fire suppression efforts if a fire was to occur on or near the project site. Therefore, impacts from project implementation would be considered ***less than significant*** relative to adopted emergency response plans or evacuation plans. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response g): The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point.

The proposed project would include two warehouse buildings which would be utilized by Costco employees. The project site is located in an area that is predominately agricultural and industrial,

which is not considered at a significant risk of wildlife. There are no steep slopes on or near the project site. Additionally, the Delta Mendota Canal borders the site to the south, which could function as a firebreak during wildfires. Development of the project would not exacerbate fire risks. Therefore, impacts from project implementation would be considered ***less than significant*** relative to exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. This topic does not warrant additional analysis and will not be addressed further in the EIR.

X. HYDROLOGY AND WATER QUALITY

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	X			
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	X			
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;	X			
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	X			
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems to provide substantial additional sources of polluted runoff; or	X			
(iv) impede or redirect flood flows?	X			
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?				X
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	X			

Responses to Checklist Questions

Responses a-c) and e): Human activities have an effect on water quality when chemicals, heavy metals, hydrocarbons (auto emissions and car crank case oil), and other materials are transported with storm water into drainage systems. Construction activities can increase sediment runoff, including concrete waste and other pollutants.

It has been determined that the potential impacts on hydrology and water quality caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on hydrology and water quality. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

This section of the EIR will provide an analysis including the methodology, thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of

feasible mitigation measures that should be implemented to reduce any potential impacts associated with hydrology and water quality.

The EIR will present the project's hydrology and hydraulic calculations under existing and proposed conditions. Some of the specific items to be reviewed may include: land use classification; acreage calculations; runoff coefficients; time of concentration; and methodology. Calculations will be reviewed for reasonableness and consistency with the site plan and with the City's master plans. This section will describe the surface drainage patterns of the project site and adjoining areas, and identify surface water quality in the project site based on existing and available data. The EIR will also evaluate the potential construction and operational impacts of the proposed project on water quality, including surface water and groundwater. The potential for substantial erosion on-site will be analyzed. The potential for the proposed project to substantially decrease groundwater supplies or interfere with groundwater recharge will also be analyzed. This section will also identify 303(D)-listed impaired water bodies in the vicinity of the project site. Conformity of the proposed project to water quality regulations and the project site's potential to be inundated by seiche or tsunami will also be discussed. Mitigation measures will be developed to incorporate Best Management Practices (BMPs), and any other applicable local, state, and federal requirements to reduce the potential for site runoff.

Response d): Flood hazards can result from intense rain, snowmelt, cloudbursts, or a combination of all three, or from failure of a water impoundment structure, such as a dam. The project site is not located in a flood zone or dam inundation area. The project site is located approximately 36 miles east of the Pacific Ocean and, as such, is not subject to a tsunami or seiche. Therefore, ***no impact*** from project implementation relative to flood hazard, tsunami, or seiche zones would occur. This topic does not warrant additional analysis and will not be addressed further in the EIR.

XI. LAND USE AND PLANNING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Physically divide an established community?				X
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?	X			

Responses to Checklist Questions

Response a): The project site is located in unincorporated San Joaquin County, within the Tracy SOI, immediately adjacent to the Tracy city limits to the north of the site. Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

The project would result in an extension of developed uses within an area of the City that currently has approved development plans within the vicinity of the project site. Development of the project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned development. The project would have ***no impact*** in regards to the physical division of an established community. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response b): It has been determined that the potential impact related to conflicts with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect caused by the proposed project will require a detailed analysis in the EIR. Consequently, the lead agency will analyze this environmental issue in the EIR and will decide whether the proposed project has the potential to conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. At this point, a definitive impact conclusion for this environmental topic will not be made. Rather, this topic is considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

This section will provide an analysis including the thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any identified significant effects.

XII. MINERAL RESOURCES

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?				X
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?				X

Responses to Checklist Questions

Response a-b): As described in the Tracy General Plan EIR, the main mineral resources found in San Joaquin County, and the Tracy Planning Area, are sand and gravel (aggregate), which are primarily used for construction materials such as asphalt and concrete. According to the California Geological Survey (CGS) evaluation of the quality and quantity of these resources, the most marketable aggregate materials in San Joaquin County are found in three main areas:

- In the Corral Hollow alluvial fan deposits south of Tracy;
- Along the channel and floodplain deposits of the Mokelumne River; and
- Along the San Joaquin River near Lathrop.

Figure 4.8-1 of the General Plan EIR identifies Mineral Resource Zones (MRZs) throughout the Tracy Planning Area. The project site is located within an area designated as MRZ-1. The MRZ-1 designation applies to areas where adequate information indicates that no significant mineral deposits are present, or where there is little likelihood for their presence. There are no substantial aggregate materials located within the project site. Therefore, the project would not result in the loss of availability of a known mineral resource or locally-important mineral resources recovery site. Therefore, there is ***no impact*** related to mineral resources.

XIII. NOISE

Would the project result in:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Generation of a 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?	X			
b) Generation of excessive groundborne vibration or groundborne noise levels?	X			
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?				X

Responses to Checklist Questions

Responses a-b): Based on existing and projected noise levels along roadways, and the potential for noise generated during project construction and operational activities, it has been determined that the potential impacts from noise caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of the two potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact from noise. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather both are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will identify sensitive receptors, noise impacts, and attenuation of noise related impacts. The noise study will also include an assessment of construction noise and vibration impacts. The noise analysis will identify the noise level standards contained in the City of Tracy General Plan Noise Element and Municipal Code (Noise Control Ordinance, Chapter 4.12 Article 9), as well as any germane state, and federal standards. Continuous (24-hour) and short-term noise measurements will be performed in the project site and in the project vicinity in order to quantify existing ambient noise levels from existing community noise sources.

The EIR will provide an estimate of existing traffic noise levels adjacent to the project site roadways through application of accepted traffic noise prediction methodologies. Noise sources from the project will be quantified through noise level measurements. Proposed on-site mobile and stationary noise sources will be evaluated. This will include noise generating equipment, such as HVAC systems, generators, etc., as well as mobile noise sources such as truck loading/docking/idling. The EIR will include thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any potential impacts associated with noise.

Response c): The project is not 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. The closest airport is the Tracy Municipal Airport, located approximately three and a half miles southeast of the project site. As such, there is ***no impact*** related to this topic and it will not be addressed further in the EIR.

XIV. POPULATION AND HOUSING

Would the project:	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Responses to Checklist Questions

Response a): According to the 2018 U.S. Census population estimates, the population in Tracy is 91,812 people. The proposed project would result in the construction of two Costco warehouse and distribution buildings that would generate additional employment opportunities. The additional employees may come from Tracy or surrounding communities. The project would not directly introduce new residents to the City as no housing is proposed as part of the project. It is noted, however, that some portion of the proposed project employees would become Tracy residents.

The proposed project would not include upsizing of offsite infrastructure or roadways. The installation and sizing of new infrastructure would be limited to the needs of the proposed use. Additionally, the project site is located in the City of Tracy SOI and has a City land use designation of Industrial; therefore, the employment growth associated with the proposed project was considered as part of the City's General Plan and associated EIR process. The project does not exceed the employment growth estimates for the site under the City's Industrial land use designation. The proposed project would not induce substantial population growth in an area, either directly or indirectly. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response b): The project site is currently undeveloped and does not contain housing. The proposed project would not displace housing or people. Implementation of the proposed project would have ***no impact*** relative to this topic. This topic does not warrant additional analysis and will not be addressed further in the EIR.

XV. PUBLIC SERVICES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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:				
i) Fire protection?	X			
ii) Police protection?	X			
iii) Schools?	X			
iv) Parks?			X	
v) Other public facilities?	X			

Responses to Checklist Questions

Responses a)i, a)ii, a)iii, a)v: The project is located within the Lammersville Unified School District boundary, which is located in San Joaquin County, northwest of Tracy. Development of the project is expected to employ up to 400 full time employees, and is assumed that some portion of these employees would become Tracy residents and have school-aged children attending Tracy Unified School District and/or Lammersville Unified School District schools; therefore, the project has the potential to impact the Lammersville Unified School District and the Tracy Unified School District. Implementation of the proposed project would also result in increased demand for police protection, fire protection, and other public facilities in the area. It has been determined that the potential impacts from increased demands on schools, police protection, fire protection, and other public facilities caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine each of these potentially significant environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on police protection, fire protection, and other public facilities. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

During the preparation of the EIR, the public service providers will be consulted in order to determine existing service levels in the project area. This would include documentation regarding existing staff levels and response times, equipment and facilities, current service capacity, existing service boundaries, and planned service expansions. Master plans from such public service providers and City policies, programs, and standards associated with the provision of public services will be described in the EIR.

The EIR will provide an analysis including the thresholds of significance and associated impact discussions, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with police protection, fire protection, and other public facilities.

Response a)iv: Potential project impacts to parks and recreational facilities are addressed in the following Recreation section of this document.

XVI. RECREATION

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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?			X	
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

Responses to Checklist Questions

Response a): The project would result in the construction of a two industrial warehouse and distribution buildings with no proposed recreational facilities. The project would not directly introduce new residents to the City as no housing is proposed as part of the project; as such, the project would not result in new residents which would utilize nearby neighborhood parks, regional parks, or other recreational facilities. The employees of the warehouse are not anticipated to utilize nearby park areas. The proposed project would not significantly increase the use of existing parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response b): As noted above, the project would not result in new residents which would utilize nearby neighborhood parks, regional parks, or other recreational facilities. The proposed project does not include recreational facilities on-site. According to the City's Parks Master Plan (2013), the City provides 4.1 acres of parkland per 1,000 residents, which meets their target of 4.0 acres per 1,000 residents. Development of the project would not require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Implementation of the proposed project would have a ***less than significant*** impact relative to this topic. This topic does not warrant additional analysis and will not be addressed further in the EIR.

XVII. TRANSPORTATION

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

Responses to Checklist Questions

Response a-d): The proposed project includes the development of uses that will increase traffic on existing and planned roadways. Based on existing and projected traffic volume levels along roadways and potential increases in vehicle miles travelled as a result of the project, it has been determined that traffic impacts will require a detailed analysis in the EIR. As such, the lead agency will examine each of the environmental issues listed in the checklist above in the EIR and will determine whether the proposed project has the potential to have a significant impact from traffic. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is conducted in the EIR.

The EIR will include a Traffic Impact Analysis (TIA) to address the impacts of the proposed project on the surrounding transportation system including the roadways, transit service, pedestrian facilities, and bicycle facilities. The TIA will be conducted to address compliance with the City's General Plan and other requirements under CEQA. It will be prepared following applicable guidelines of the City of Tracy, San Joaquin County, and Caltrans, as applicable. The EIR will analyze total passenger vehicle and heavy-duty truck trips and associated vehicle-miles-traveled (VMT) that are modeled to be generated by the proposed project. Potential impacts associated with site access, on-site circulation, and consistency with CEQA Guidelines section 15064.3, subdivision (b) will also be addressed in the EIR. Significant impacts will be identified in accordance with the established criteria, and mitigation measures will be identified to lessen the significance of any potential impacts.

The EIR will provide an analysis including the thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce any significant impacts associated with transportation.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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 defined 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)?	X			
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 the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.	X			

Responses to Checklist Questions

Responses a-b): Based on known historical, cultural, tribal, and archaeological resources in the region, and the potential for undocumented underground cultural resources in the region, it has been determined that the potential impacts on tribal cultural resources caused by the proposed project will require a detailed analysis in the EIR. As such, the lead agency will examine the environmental issues listed in the checklist above in the EIR and will decide whether the proposed project has the potential to have a significant impact on tribal cultural resources. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will include an overview of the prehistory and history of the area, the potential for surface and subsurface tribal cultural resources to be found in the area, the types of tribal cultural resources that may be expected to be found, a review of existing regulations and policies that protect tribal cultural resources, an impact analysis, and mitigation that should be implemented in order to reduce potential impacts to tribal cultural resources. In addition, the CEQA process will include a request to the Native American Heritage Commission for a list of local Native American groups that should be contacted relative to this project, as per the requirements of AB 52. The CEQA process will also include consultation with any Native American groups that have requested consultation with the City of Tracy.

XIX. UTILITIES AND SERVICE SYSTEMS

Would the project:	***Potentially Significant Impact***	***Less Than Significant with Mitigation Incorporation***	***Less Than Significant Impact***	***No Impact***
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?	X			
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	X			
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 projects projected demand in addition to the providers existing commitments?	X			
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 reductions goals?	X			
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	X			

Responses to Checklist Questions

Responses a-e): Implementation of the proposed project would result in increased demands for utilities to serve the project. As such, the EIR will examine each of the environmental issues listed in the checklist above and will decide whether the proposed project has the potential to have a significant impact to utilities and service systems. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

The EIR will analyze wastewater, water, and storm drainage infrastructure, as well as other utilities (i.e. solid waste, gas, electric, etc.), that are needed to serve the proposed project. The wastewater assessment will include a discussion of the proposed collection and conveyance system, treatment methods and capacity at the treatment plants, disposal location(s) and methods, and the potential for recycled water use for irrigation in the future. The EIR will analyze the impacts associated with on-site construction of the conveyance system, including temporary impacts associated with the construction phase. The proposed infrastructure will be presented. The EIR will provide a discussion of the wastewater treatment plants that are within proximity to the project site, including current demand and capacity at these plants. The analysis will discuss the disposal methods and location, including environmental impacts and permit requirements associated with disposal of treated wastewater.

The storm drainage assessment will include a discussion of the proposed drainage collection system including impacts associated with on-site construction of the storm drainage system. The

EIR will identify permit requirements and mitigation needed to minimize and/or avoid impacts. The proposed infrastructure will be presented.

The EIR will include an assessment for consistency with City Master Plans and Management Plans that are directly related to these utilities.

The EIR will analyze the impacts associated with water supply and on-site and off-site construction of the water system, including temporary impacts associated with the construction phase. The results of a project-specific Water Supply Assessment will be provided. The EIR will also identify permit requirements and mitigation needed to minimize and/or avoid impacts, and will present the proposed infrastructure as provided by the project site engineering reports.

The EIR will also address solid waste collection and disposal services for the proposed project. This will include an assessment of the existing capacity and project demands. The assessment will identify whether there is sufficient capacity to meet the project demands.

The EIR will provide thresholds of significance, a project-level impact analysis, cumulative impact analysis, and a discussion of feasible mitigation measures that should be implemented to reduce impacts associated with utilities and service systems.

XX. WILDFIRE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*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?			X	
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?			X	
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?			X	
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?			X	

Existing Setting

The California Department of Forestry and Fire Protection (Cal Fire) has designated the southern portion of the City along Interstate 580 as a Local Responsibility Area (LRA), which is within the Moderate Fire Hazard Severity Zone (MFHSZ) with a small portion along the southern most City limits within the High Fire Hazard Severity Zone (HFHSZ). This rating does not extend to the project site; as such, the site is not in or near land classified as a Very High Fire Hazard Severity Zone (VHFHSZ). Additionally, the proposed project is not located within a State Responsibility Area (SRA). Although this CEQA topic only applies to areas within an SRA or VHFHSZ, out of an abundance of caution, these checklist questions are analyzed below.

Responses to Checklist Questions

Response a): As discussed in Section IX, Hazards and Hazardous Materials, the project site would connect to an existing network of City streets. The nearest Cal Fire Station (Cal Fire Station 26 – Castle Rock) is located approximately 850 feet to the west of the project site and the nearest Tracy Fire Station (Tracy Fire Station 91) is located approximately 3.35 miles northeast of the project site. The project includes a 28-foot-wide fire lane around the perimeter of the proposed warehouse buildings. The appropriate turning radiuses have been planned to accommodate fire trucks on-site. The proposed circulation improvements would allow for greater emergency access relative to existing conditions. Moreover, the proposed project would require building construction to meet the fire code requirements, and would have fire hydrants consistent with the standards of the City; such fire hydrants would assist with fire suppression efforts if a fire was to occur on or near the project site. Therefore, impacts from project implementation would be considered ***less than significant*** relative to adopted emergency response plans or evacuation plans. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response b): The risk of wildfire is related to a variety of parameters, including fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope). Steep slopes contribute to fire hazard by intensifying the effects of wind and making fire suppression difficult. Fuels such as grass are highly flammable because they have a high surface area to mass ratio and require less heat to reach the ignition point. The project site is located in an area that is predominately agricultural and industrial, which is not considered at a significant risk of wildlife. There are no steep slopes on or near the project site. Additionally, the Delta Mendota Canal borders the site to the south, which could function as a firebreak during wildfires. Development of the project would not exacerbate fire risks. Therefore, impacts from project implementation would be considered ***less than significant*** relative to the spread of wildfire. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response c): The project includes development of infrastructure (water, sewer, and storm drainage) to serve the proposed warehouse buildings. The project does not include the construction of fuel breaks, emergency water sources, or power lines. As noted above, the proposed project would require fire hydrants consistent with the standards of the City, and such fire hydrants would assist with fire suppression efforts if a fire was to occur. The proposed infrastructure improvements would allow for decreased fire risk relative to existing conditions. Therefore, impacts from project implementation would be considered ***less than significant*** relative to infrastructure that may exacerbate fire risk. This topic does not warrant additional analysis and will not be addressed further in the EIR.

Response d): The proposed project would require the installation of storm drainage infrastructure to ensure that storm waters properly drain from the project site and does not result in downstream flooding or major drainage changes. Stormwater treatment/detention basins and stormwater bioretention treatment planters would be located throughout the project site, mainly in the proposed landscaped areas and along West Schulte Road. The project site includes four drainage areas: Area 1 (12.67 acres located along the western boundary of the site) Area 2 (77.70 acres which take up the majority of the site), Area 3 (2.38 acres located along the northwestern boundary of the site), and Area 4 (2.60 acres located along the northern central boundary of the site). Stormwater runoff from each of the four drainage areas would be routed to a series of on-site stormwater bioretention treatment planters and treatment/detention basins. The storm drainage plan was designed and engineered to ensure proper construction of storm drainage infrastructure to control runoff and prevent flooding, erosion, and sedimentation.

Best management practices (BMPs) will be applied to the proposed development to limit the concentrations of constituents in any site runoff to acceptable levels. Stormwater flows from the project site would be directed to the proposed stormwater treatment basins, treatment planters, and bioretention areas by a new stormwater conveyance system on the project site. Stormwater runoff would not be allowed to discharge directly to the existing storm drains in West Schulte Road without first discharging to the bioretention areas. The landscaping plan includes stormwater treatment plantings in the treatment/detention basins. Additionally, erosion and sediment control measures would be implemented during construction.

Runoff from the project site currently flows to the existing City storm drains located in Schulte Road. Upon development of the site, stormwater would flow to the on-site retention basins and/or the existing storm drains in the adjacent roadways. Additionally, the project site is located within FEMA Zone X (un-shaded), indicating that the site is located outside of the 100-year flood hazard zone.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. The elevation of the site ranges from approximately 90 feet to 220 feet above MSL. Upon development of the project, the site would be graded to eliminate significant slopes on the project site. The project would also be required to comply with the provisions of the California Building Standard's Code, which requires development projects to perform geotechnical investigations in accordance with State law, which include general engineering characteristics of the subsurface conditions within the project site and potential mitigation strategies to address any geotechnical concerns or potential hazards(such as slope failure). Therefore, the potential for a landslide (including rockfalls, deep slope failure, and shallow slope failure) on the project site is low.

Overall, impacts from project implementation would be considered ***less than significant*** relative to risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. This topic does not warrant additional analysis and will not be addressed further in the EIR.

XXI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
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 periods of California history or prehistory?	X			
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)?	X			
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	X			

Responses to Checklist Questions

Responses a-c): It has been determined that the potential for the proposed project 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 periods of California history or prehistory; degrade the quality of the environment; create cumulatively considerable impacts; or adversely affect human beings will require more detailed analysis in an EIR. As such, the City of Tracy will examine each of these environmental issues in the EIR and will decide whether the proposed project has the potential to have significant impacts on these environmental issues. At this point a definitive impact conclusion for each of these environmental topics will not be made, rather all are considered ***potentially significant*** until a detailed analysis is prepared in the EIR.

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SEPTEMBER 10, 2020

VIA EMAIL: GENEVIEVE.FEDERIGHI@CITYOFTRACY.ORG
Genevieve Federighi, Associate Planner
City of Tracy
Planning Division
333 Civic Center Plaza
Tracy, CA 95376

Dear Ms. Federighi:

INITIAL STUDY AND NOTICE OF PREPARATION FOR THE TRACY COSTCO DEPOT PROJECT, SCH# 2020080531

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed the Initial Study and Notice of Preparation for the Tracy Costco Depot Project (Project). The Division monitors farmland conversion on a statewide basis, provides technical assistance regarding the Williamson Act, and administers various agricultural land conservation programs. We offer the following comments and recommendations with respect to the project's potential impacts on agricultural land and resources.

Project Description

The project would include the construction and subsequent operation of two Costco warehouse and distribution buildings totaling approximately 1,782,317sf on the 103-acre project site. The project would also include the required circulation, parking, and utility improvements. The proposed warehouses will be used to support Costco's ongoing distribution and e-commerce facilities in the area. Additionally, the warehouses may include cold storage for Costco's meat processing plant in Tracy, as well as food processing and canning. The project site is currently designated as Prime Farmland by the Department of Conservation's Farmland Mapping and Monitoring Program.[1]

[1] California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, https://maps.conservation.ca.gov/DLRP/CIFF/

Department Comments

Although conversion of agricultural land is often an unavoidable impact under CEQA analysis, feasible alternatives and/or feasible mitigation measures must be considered. In some cases, the argument is made that mitigation cannot reduce impacts to below the level of significance because agricultural land will still be converted by the project, and therefore, mitigation is not required. However, reduction to a level below significance is not a criterion for mitigation under CEQA. Rather, the criterion is feasible mitigation that lessens a project's impacts. As stated in CEQA statue, mitigation may also include, "Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."[2]

The conversion of agricultural land represents a permanent reduction in the State's agricultural land resources. As such, the Department advises the use of permanent agricultural conservation easements on land of at least equal quality and size as partial compensation for the loss of agricultural land. Conservation easements are an available mitigation tool and considered a standard practice in many areas of the State. The Department highlights conservation easements because of their acceptance and use by lead agencies as an appropriate mitigation measure under CEQA and because it follows an established rationale similar to that of wildlife habitat mitigation.

Mitigation via agricultural conservation easements can be implemented by at least two alternative approaches: the outright purchase of easements or the donation of mitigation fees to a local, regional, or statewide organization or agency whose purpose includes the acquisition and stewardship of agricultural conservation easements. The conversion of agricultural land should be deemed an impact of at least regional significance. Hence, the search for replacement lands should not be limited strictly to lands within the project's surrounding area.

A source that has proven helpful for regional and statewide agricultural mitigation banks is the California Council of Land Trusts. They provide helpful insight into farmland mitigation policies and implementation strategies, including a guidebook with model policies and a model local ordinance. The guidebook can be found at:

http://www.calandtrusts.org/resources/conserving-californias-harvest/

Of course, the use of conservation easements is only one form of mitigation that should be considered. Any other feasible mitigation measures should also be considered.

[2] Public Resources Code Section 15370, Association of Environmental Professionals, 2020 CEQA, California Environmental Quality Act, Statute & Guidelines, page 284, https://www.califaep.org/docs/2020_ceqa_book.pdf

Conclusion

The Department recommends further discussion of the following issues:

- Type, amount, and location of farmland conversion resulting directly and indirectly from implementation of the proposed project.
- Impacts on any current and future agricultural operations in the vicinity; e.g., land-use conflicts, increases in land values and taxes, loss of agricultural support infrastructure such as processing facilities, etc.
- Incremental impacts leading to cumulative impacts on agricultural land. This would include impacts from the proposed project, as well as impacts from past, current, and likely future projects.
- Proposed mitigation measures for all impacted agricultural lands within the proposed project area.
- Projects compatibility with, or, potential contract resolutions for land in an agricultural preserve and/or enrolled in a Williamson Act contract.

Thank you for giving us the opportunity to comment on the Initial Study and Notice of Preparation for the Tracy Costco Depot Project. Please provide this Department with notices of any future hearing dates as well as any staff reports pertaining to this project. If you have any questions regarding our comments, please contact Farl Grundy, Associate Environmental Planner via email at Farl.Grundy@conservation.ca.gov.

Sincerely,

Monique Wilber

Monique Wilber

Conservation Program Support Supervisor

30 September 2020

Genevieve Federighi
City of Tracy
333 Civic Center Plaza
Tracy, CA 95376

COMMENTS TO REQUEST FOR REVIEW FOR THE NOTICE OF PREPARATION FOR THE DRAFT ENVIRONMENTAL IMPACT REPORT, TRACY COSTCO DEPOT PROJECT, SCH#2020080531, SAN JOAQUIN COUNTY

Pursuant to the State Clearinghouse's 28 August 2020 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Notice of Preparation for the Draft Environmental Impact Report* for the Tracy Costco Depot Project, located in San Joaquin County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases, the United States Environmental

Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues. For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Implementation Policy is available on page 74 at:
https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr_201805.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit), Construction General Permit Order No. 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits[1]

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ. For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Threat General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Threat Waiver) R5-2018-0085. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

[1] Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Threat Waiver and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2018-0085.pdf

Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Limited Threat Discharges to Surface Water* (Limited Threat General Order). A complete Notice of Intent must be submitted to the Central Valley Water Board to obtain coverage under the Limited Threat General Order. For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2016-0076-01.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of surface waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit. For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at: https://www.waterboards.ca.gov/centralvalley/help/permit/

If you have questions regarding these comments, please contact me at (916) 464-4856 or Nicholas.White@waterboards.ca.gov.

Nicholas White
Water Resource Control Engineer

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

October 29, 2020

Genevieve Federighi
City of Tracy
Department of Development Services
333 Civic Center Plaza
Tracy, CA 95376

Project: Notice of Preparation of an Environmental Impact Report for the Tracy Costco Depot Project

District CEQA Reference No: 20200730

Dear Mr. Federighi:

The San Joaquin Valley Unified Air Pollution Control District (District) has reviewed the project referenced above from the City of Tracy (City). The project consists of the construction of Costco warehouse and a distribution building at 1,246,066 square feet and 536,251 square feet on 103-acres (Project). The Project is located at 16000 West Schulte Road, in Tracy, CA (APN 209-230-02).

Project Scope

The Project consists of the construction and subsequent operation of two Costco warehouse and distribution buildings with a total square foot of 1,782,317 on 103 acres. The Project would operate 24 hours a day, seven days a week, to provide support to Costco's retail warehouse facilities in northern California. The Project is expected to generate approximately 100 trucks and 300 trailers would be parked on site at any given time, with the typical truck size being approximately 70 feet long for double-axle trailers. It is anticipated that the Project would employ up to approximately 400 full time employees.

The District's initial review of the Project concludes that emissions resulting from construction and/or operation of the Project may exceed the following thresholds of significance: 100 tons per year of carbon monoxide (CO), 10 tons per year of oxides of nitrogen (NOx), 10 tons per year of reactive organic gases (ROG), 27 tons per year of oxides of sulfur (SOx), 15 tons per year of particulate matter of 10 microns or less in size

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(PM10), or 15 tons per year of particulate matter of 2.5 microns or less in size (PM2.5). The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions.

Other potential significant air quality impacts related to Toxic Air Contaminants (see information below under Health Risk Assessment), Ambient Air Quality Standards, Hazards and Odors, may require assessments and mitigation. More information can be found in the District's Guidance for Assessing and Mitigating Air Quality Impacts at: https://www.valleyair.org/transportation/GAMAQI_12-26-19.pdf

The District offers the following comments:

1) Project Related Criteria Pollutant Emissions

The District recommends that a more detailed preliminary review of the Project be conducted for the Project's construction and operational emissions. The additional environmental review of the Project's potential impact on air quality should consider the following items:

1a) Project Related Construction Emissions

Construction emissions are short-term emissions and should be evaluated separately from operational emissions. Equipment exhaust, as well as fugitive dust emissions should be quantified. For reference, the District's annual criteria thresholds of significance for construction are listed above.

The District recommends that the City consider the use of the cleanest reasonably available off-road construction practices (i.e. eliminating unnecessary idling) and fleets, as set forth in §2423 of Title 13 of the California Code of Regulations, and Part 89 of Title 40 Code of Federal Regulations as a mitigation measure to reduce Project related impacts from construction related exhaust emissions.

1b) Project Related Operational Emissions

Emissions from stationary sources and mobile sources should be analyzed separately. For reference, the District's annual criteria thresholds of significance for operational emissions are listed above.

1c) Recommended Model

Project related criteria pollutant emissions from construction and operational sources should be identified and quantified. Emissions analysis should be

performed using CalEEMod (**Cal**ifornia **E**mission **E**stimator **Mod**el), which uses the most recent approved version of relevant Air Resources Board (ARB) emissions models and emission factors. CalEEMod is available to the public and can be downloaded from the CalEEMod website at: www.caleemod.com.

1d) Project Related Operational Emissions– Truck Routing

Truck routing involves the path/roads heavy-duty trucks take to and from their destination. The air emissions from heavy-duty trucks can impact residential communities and sensitive receptors.

The District recommends the City consider evaluating heavy-duty truck routing patterns to help limit emission exposure to residential communities and sensitive receptors. More specifically, this measure would assess current truck routes, in consideration of the number and type of each vehicle, destination/origin of each vehicular trip, time of day/week analysis, vehicle miles traveled and emissions. The truck routing evaluation would also identify alternative truck routes and their impacts on VMT, GHG emissions, and air quality.

1e) Project Related Operational Emissions– Cleanest Available Truck

The San Joaquin Valley will not be able to attain stringent health-based federal air quality standards without significant reductions in emissions from heavy-heavy duty (HHD) Trucks, the single largest source of NOx emissions in the San Joaquin Valley. The District recently adopted the 2018 PM2.5 Plan, which includes significant new reductions from HHD Trucks, including emissions reductions by 2023 through the implementation of the California Air Resources Board (CARB) Statewide Truck and Bus Regulation, which requires truck fleets operating in California to meet the 2010 0.2 g/bhp-hr NOx standard by 2023. Additionally, to meet the federal air quality standards by the 2020 to 2024 attainment deadlines, the District's Plan relies on a significant and immediate transition of heavy duty truck fleets to zero or near-zero emissions technologies, including the near-zero truck standard of 0.02 g/bhp-hr NOx established by the California Air Resources Board.

For development projects which typically generate a high volume of heavy duty truck traffic (e.g. "high-cube" warehouse or distribution center), there are heavy duty trucks traveling to-and-from from the project location at longer trip length distances for potential distribution. Since the project may exceed the District significance thresholds, the District recommends that the following mitigation measures be considered by the City for inclusion in the CEQA document for project related operational emissions.

- Advise fleets associated with Project operational activities to utilize the cleanest available HHD truck technologies, including zero and near-zero (0.02 g/bhp-hr NOx) technologies as feasible.

- Advise all on-site service equipment (cargo handling, yard hostlers, forklifts, pallet jacks, etc.) to utilize zero-emissions technologies as feasible.

- Advise fleets associated with future development projects to be subject to the best practices (i.e. eliminating unnecessary idling).

In addition, the District recommends that the City include mitigation measures to reduce project related operational impacts through incorporation of design elements, for example, increased energy efficiency, reducing vehicle miles traveled, etc. More information on mitigation measures can be found on the District's website at: http://www.valleyair.org/transportation/cega_idx.htm.

1f) Project Related Operational Emissions– Reduce Idling of Heavy Duty Trucks

The goal of this strategy is to limit the potential for localized PM2.5 and toxic air quality impacts associated with failure to comply with the state's Heavy Duty anti-idling regulation (e.g limiting vehicle idling to specific time limits). The diesel exhaust from excessive idling has the potential to impose significant adverse health and environmental impacts. Therefore, efforts to ensure compliance of the anti-idling regulation, especially near sensitive receptors, is important to limit the amount of idling within the community, which will result in community air quality benefits.

1g) Project Related Operational Emissions– Electric On-Site Off-Road and On-Road Equipment

Since the Project consists of a Costco depot and warehouse facility, it may have the potential to result in increased use of off-road equipment (i.e. forklifts) and/or on-road equipment (i.e. mobile yard trucks with the ability to move materials). The District recommends the City advise the project proponent to utilize electric or zero emission off-road and on-road equipment used on-site for this Project.

1h) Solar Deployment in the Community

It is the policy of the State of California that renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-

use customers by December 31, 2045. While various emission control techniques and programs exist to reduce air quality emissions from mobile and stationary sources, the production of solar energy is contributing to improving air quality and public health. The District suggests that the City of Tracy consider the feasibility of incorporating solar power systems, as an emission reduction strategy for this Project.

2) Voluntary Emission Reduction Agreement

If the Project is expected to have a significant impact, the District recommends the NOP also include a discussion on the feasibility of implementing a Voluntary Emission Reduction Agreement (VERA) for this project.

A VERA is a mitigation measure by which the project proponent provides pound-for-pound mitigation of emissions increases through a process that develops, funds, and implements emission reduction projects, with the District serving a role of administrator of the emissions reduction projects and verifier of the successful mitigation effort. To implement a VERA, the project proponent and the District enter into a contractual agreement in which the project proponent agrees to mitigate Project specific emissions by providing funds for the District's incentives programs. The funds are disbursed by the District in the form of grants for projects that achieve emission reductions. Thus, project-specific regional impacts on air quality can be fully mitigated. Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors.

In implementing a VERA, the District verifies the actual emission reductions that have been achieved as a result of completed grant contracts, monitors the emission reduction projects, and ensures the enforceability of achieved reductions. After the project is mitigated, the District certifies to the Lead Agency that the mitigation is completed, providing the Lead Agency with an enforceable mitigation measure demonstrating that project-specific regional emissions have been mitigated to less than significant. To assist the Lead Agency and project proponent in ensuring that the environmental document is compliant with CEQA, the District recommends the Draft EIR includes an assessment of the feasibility of implementing a VERA.

3) Health Risk Screening/Assessment

A Health Risk Screening/Assessment identifies potential Toxic Air Contaminants (TAC's) impact on surrounding sensitive receptors such as hospitals, daycare centers, schools, work-sites, and residences. TAC's are air pollutants identified by

the Office of Environmental Health Hazard Assessment/California Air Resources Board (OEHHA/CARB) that pose a present or potential hazard to human health. A common source of TACs can be attributed to diesel exhaust emitted from both mobile and stationary sources. List of TAC's identified by OEHHA/CARB can be found at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants

The District recommends the Project be evaluated for potential health impacts to surrounding receptors (on-site and off-site) resulting from operational and multi-year construction TAC emissions.

i) The District recommends conducting a screening analysis that includes all sources of emissions. A screening analysis is used to identify projects which may have a significant health impact. A prioritization, using CAPCOA's updated methodology, is the recommended screening method. A prioritization score of 10 or greater is considered to be significant and a refined Health Risk Assessment (HRA) should be performed.

   For your convenience, the District's prioritization calculator can be found at: http:www.valleyair.org/busind/pto/emission_factors/Criteria/Toxics/Utilities/PRIORITIZATION%20RMR%202016.XLS.

ii) The District recommends a refined HRA for projects that result in a prioritization score of 10 or greater. Prior to performing an HRA, it is recommended that the Project proponent contact the District to review the proposed modeling protocol. The Project would be considered to have a significant health risk if the HRA demonstrates that the Project related health impacts would exceed the Districts significance threshold of 20 in a million for carcinogenic risk and 1.0 for the Acute and Chronic Hazard Indices, and would trigger all feasible mitigation measures. The District recommends that Projects that result in a significant health risk not be approved.

   For HRA submittals, please provide the following information electronically to the District for review:

   - HRA AERMOD model files
   - HARP2 files
   - Summary of emissions source locations, emissions rates, and emission factor calculations and methodology.

   More information on toxic emission factors, prioritizations and HRAs can be obtained by:

- E-Mailing inquiries to: hramodeler@valleyair.org; or
- The District can be contacted at (559) 230-6000 for assistance; or
- Visiting the Districts website (Modeling Guidance) at: http://www.valleyair.org/busind/pto/Tox_Resources/AirQualityMonitoring.htm.

4) Health Impact Discussion

As required by the recent decision in Sierra Club v. County of Fresno (2018) 6 Cal.4th 502, a reasonable effort to discuss relevant specifics regarding the connection between potential adverse air quality impacts from the Project with the likely nature and magnitude of potential health impacts may be required. If the potential health impacts from the Project cannot be specifically correlated, explain what is known and why, given scientific constraints, potential health impacts cannot be translated.

5) Ambient Air Quality Analysis

An ambient air quality analysis (AAQA) uses air dispersion modeling to determine if emissions increases from a project will cause or contribute to a violation of the ambient air quality standards. The District recommends that an AAQA be performed for the Project if emissions exceed 100 pounds per day of any pollutant.

If an AAQA is performed, the analysis should include emissions from both Project specific permitted and non-permitted equipment and activities. The District recommends consultation with District staff to determine the appropriate model and input data to use in the analysis.

Specific information for assessing significance, including screening tools and modeling guidance is available online at the District's website www.valleyair.org/ceqa.

6) Cumulative Air Impacts

In addition to the discussions on the topics identified above, the District recommends the EIR also include a discussion of whether the Project would result in a cumulatively considerable net increase of any criteria pollutant or precursor for which the San Joaquin Valley Air Basin is in non-attainment. More information on the District's attainment status can be found online by visiting the District's website at: http://valleyair.org/aqinfo/attainment.htm.

7) District Rules and Regulations

The District issues permits for many types of air pollution sources and regulates some activities not requiring permits. A project subject to District rules and regulation would reduce its impacts on air quality through compliance with regulatory requirements. In general, a regulation is a collection of rules, each of which deals with a specific topic. Here are a couple of example, Regulation II (Permits) deals with permitting emission sources and includes rules such as District permit requirements (Rule 2010), New and Modified Stationary Source Review (Rule 2201), and implementation of Emission Reduction Credit Banking (Rule 2301).

The list of rules below is neither exhaustive nor exclusive. Current District rules can be found online at: www.valleyair.org/rules/1ruleslist.htm. To identify other District rules or regulations that apply to this Project or to obtain information about District permit requirements, the applicant is strongly encouraged to contact the District's Small Business Assistance (SBA) Office at (209) 557-6446.

7a) District Rules 2010 and 2201 - Air Quality Permitting for Stationary Sources

Stationary Source emissions include any building, structure, facility, or installation which emits or may emit any affected pollutant directly or as a fugitive emission. District Rule 2010 requires operators of emission sources to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the District. District Rule 2201 requires that new and modified stationary sources of emissions mitigate their emissions using best available control technology (BACT).

This Project may be subject to District Rule 2010 (Permits Required) and Rule 2201 (New and Modified Stationary Source Review) and may require District permits. Prior to construction, the Project proponent should submit to the District an application for an Authority to Construct (ATC). For further information or assistance, the project proponent may contact the District's Small Business Assistance (SBA) Office at (209) 557-6446

7b) District Rule 9510 (Indirect Source Review)

The purpose of District Rule 9510 is to reduce the growth in both NOx and PM10 emissions associated with development and transportation projects from mobile and area sources associated with construction and operation of development projects. The rule encourages clean air design elements to be incorporated into development projects. In case the proposed development project clean air design elements are insufficient to meet the targeted emission reductions, the rule

requires developers to pay a fee used to fund projects to achieve off-site emissions reductions.

The proposed Project is subject to District Rule 9510 because it will receive a project-level discretionary approval from a public agency and will equal or exceed 2,000 square feet of commercial space. When subject to the rule, an Air Impact Assessment (AIA) application is required no later than applying for project-level approval from a public agency. In this case, if not already done, please inform the project proponent to immediately submit an AIA application to the District to comply with District Rule 9510.

An AIA application is required and the District recommends that demonstration of compliance with District Rule 9510, before issuance of the first building permit, be made a condition of Project approval.

Information about how to comply with District Rule 9510 can be found online at: http://www.valleyair.org/ISR/ISRHome.htm.

The AIA application form can be found online at: http://www.valleyair.org/ISR/ISRFormsAndApplications.htm.

7c) District Rule 9410 (Employer Based Trip Reduction)

The proposed Project may be subject to District Rule 9410 (Employer Based Trip Reduction) if the Project would result in employment of 100 or more "eligible" employees. District Rule 9410 requires employers with 100 or more "eligible" employees at a worksite to establish an Employer Trip Reduction Implementation Plan (eTRIP) that encourages employees to reduce single-occupancy vehicle trips, thus reducing pollutant emissions associated with work commutes. Under an eTRIP plan, employers have the flexibility to select the options that work best for their worksites and their employees.

Information about how District Rule 9410 can be found online at: www.valleyair.org/tripreduction.htm.

For additional information, you can contact the District by phone at 559-230-6000 or by e-mail at etrip@valleyair.org

7d) Other District Rules and Regulations

The Project may also be subject to the following District rules: Regulation VIII, (Fugitive PM10 Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural

Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). In the event an existing building will be renovated, partially demolished or removed, the project may be subject to District Rule 4002 (National Emission Standards for Hazardous Air Pollutants).

If you have any questions or require further information, please contact Harout Sagherian by e-mail at Harout.Sagherian@valleyair.org or by phone at (559) 230-5860.

Sincerely,



For Arnaud Marjollet
Director of Permit Services

AM: hs

APPENDIX B

Air Quality, Greenhouse Gas, and Energy Appendices

CONTENTS

Appendix B.1: CalEEMod Outputs

Appendix B.2: Energy Outputs

Appendix B.3: Health Risk Assessment

Appendix B.4: Analysis of Models and Tools to Correlate Project-Generated Pollutants to Health End Points

APPENDIX B.1

CalEEMod Outputs

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Tracy Costco

San Joaquin County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	543.33	1000sqft	12.47	543,325.00	0
Unrefrigerated Warehouse-No Rail	1,201.73	1000sqft	27.59	1,201,726.00	0
Other Asphalt Surfaces	62.94	Acre	62.94	2,741,666.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Year 2025 is assumed buildout year.

Land Use - Land uses consistent with site plan. 103.0 acres total of Development Area.

Construction Phase - Construction schedule based on project size and type.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading - Total export [cut] of up to 6,000 cy of material.

Architectural Coating - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Vehicle Trips - Trips consistent with trips data provided by traffic consultant (Kimley Horn) (2.177575556 trips/unit/day)

Area Coating - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Fleet Mix - Fleet Mix adjusted to account for heavy-duty truck trips and passenger cars as a proportion of fleet, as provided by the traffic consultant (Kimley Horn). LDA = 0.67789; HHD = 0.32211

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	150
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	120.00	90.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDays	3,100.00	150.00
tblConstructionPhase	NumDays	220.00	60.00
tblConstructionPhase	NumDays	220.00	120.00
tblConstructionPhase	PhaseEndDate	1/13/2023	5/5/2023
tblConstructionPhase	PhaseEndDate	3/22/2024	9/8/2023

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblConstructionPhase	PhaseEndDate	2/8/2036	4/5/2024
tblConstructionPhase	PhaseEndDate	12/12/2036	6/28/2024
tblConstructionPhase	PhaseEndDate	10/16/2037	12/13/2024
tblConstructionPhase	PhaseStartDate	8/1/2022	1/1/2023
tblConstructionPhase	PhaseStartDate	1/14/2023	5/6/2023
tblConstructionPhase	PhaseStartDate	3/23/2024	9/9/2023
tblConstructionPhase	PhaseStartDate	2/9/2036	4/6/2024
tblConstructionPhase	PhaseStartDate	12/13/2036	6/29/2024
tblFleetMix	HHD	0.02	0.32
tblFleetMix	HHD	0.02	0.32
tblFleetMix	LDA	0.54	0.68
tblFleetMix	LDA	0.54	0.68
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.1000e-003	0.00
tblFleetMix	LHD2	6.1000e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	3.3530e-003	0.00
tblFleetMix	MH	3.3530e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	OBUS	4.6700e-004	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblFleetMix	OBUS	4.6700e-004	0.00
tblFleetMix	SBUS	1.1030e-003	0.00
tblFleetMix	SBUS	1.1030e-003	0.00
tblFleetMix	UBUS	3.2200e-004	0.00
tblFleetMix	UBUS	3.2200e-004	0.00
tblGrading	MaterialExported	0.00	6,000.00
tblLandUse	LandUseSquareFeet	1,201,730.00	1,201,726.00
tblLandUse	LandUseSquareFeet	543,330.00	543,325.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	1.74	2.18
tblVehicleTrips	SU_TR	1.74	2.18
tblVehicleTrips	WD_TR	1.74	2.18

2.0 Emissions Summary

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
2023	0.6546	4.8321	5.6080	0.0193	2.4358	0.1616	2.5974	0.9254	0.1495	1.0749	0.0000	1,769.2512	1,769.2512	0.1703	0.1005	1,803.4653
2024	5.1276	2.0984	4.0848	0.0155	1.2562	0.0507	1.3069	0.3375	0.0477	0.3851	0.0000	1,429.6168	1,429.6168	0.0597	0.0875	1,457.1694
Maximum	**5.1276**	**4.8321**	**5.6080**	**0.0193**	**2.4358**	**0.1616**	**2.5974**	**0.9254**	**0.1495**	**1.0749**	**0.0000**	**1,769.2512**	**1,769.2512**	**0.1703**	**0.1005**	**1,803.4653**

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					
2023	0.6546	4.8321	5.6080	0.0193	2.4358	0.1616	2.5974	0.9254	0.1495	1.0749	0.0000	1,769.2506	1,769.2506	0.1703	0.1005	1,803.4647
2024	5.1276	2.0984	4.0848	0.0155	1.2562	0.0507	1.3069	0.3375	0.0477	0.3851	0.0000	1,429.6167	1,429.6167	0.0597	0.0875	1,457.1692
Maximum	**5.1276**	**4.8321**	**5.6080**	**0.0193**	**2.4358**	**0.1616**	**2.5974**	**0.9254**	**0.1495**	**1.0749**	**0.0000**	**1,769.2506**	**1,769.2506**	**0.1703**	**0.1005**	**1,803.4647**

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**11-1-2022**	**1-31-2023**	0.3356	0.3356
3	**2-1-2023**	**4-30-2023**	0.9633	0.9633
4	**5-1-2023**	**7-31-2023**	1.2653	1.2653
5	**8-1-2023**	**10-31-2023**	1.6739	1.6739
6	**11-1-2023**	**1-31-2024**	1.9761	1.9761
7	**2-1-2024**	**4-30-2024**	1.4747	1.4747
8	**5-1-2024**	**7-31-2024**	1.2309	1.2309
9	**8-1-2024**	**9-30-2024**	1.7553	1.7553
		Highest	1.9761	1.9761

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	tons/yr										MT/yr					
Area	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Energy	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	1,298.0286	1,298.0286	0.1297	0.0247	1,308.6408
Mobile	0.8134	16.8939	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Waste						0.0000	0.0000		0.0000	0.0000	332.9783	0.0000	332.9783	19.6785	0.0000	824.9395
Water						0.0000	0.0000		0.0000	0.0000	128.0263	202.0333	330.0596	13.1822	0.3145	753.3210
Total	**8.3260**	**17.4116**	**12.4941**	**0.0984**	**5.6790**	**0.1937**	**5.8727**	**1.5274**	**0.1865**	**1.7139**	**461.0045**	**10,554.0816**	**11,015.0861**	**33.0856**	**1.4450**	**12,272.8437**

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Energy	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	1,298.0286	1,298.0286	0.1297	0.0247	1,308.6408
Mobile	0.8134	16.8939	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Waste						0.0000	0.0000		0.0000	0.0000	332.9783	0.0000	332.9783	19.6785	0.0000	824.9395
Water						0.0000	0.0000		0.0000	0.0000	128.0263	202.0333	330.0596	13.1822	0.3145	753.3210
Total	**8.3260**	**17.4116**	**12.4941**	**0.0984**	**5.6790**	**0.1937**	**5.8727**	**1.5274**	**0.1865**	**1.7139**	**461.0045**	**10,554.0816**	**11,015.0861**	**33.0856**	**1.4450**	**12,272.8437**

	ROG	NOx	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	Site Preparation	Site Preparation	1/1/2023	5/5/2023	5	90	
2	Grading	Grading	5/6/2023	9/8/2023	5	90	
3	Building Construction	Building Construction	9/9/2023	4/5/2024	5	150	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	4/6/2024	6/28/2024	5	60	
5	Architectural Coating	Architectural Coating	6/29/2024	12/13/2024	5	120	

Acres of Grading (Site Preparation Phase): 135

Acres of Grading (Grading Phase): 270

Acres of Paving: 62.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,617,577; Non-Residential Outdoor: 872,526; Striped Parking Area: 164,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	750.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,884.00	735.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	377.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					
Fugitive Dust					0.8846	0.0000	0.8846	0.4546	0.0000	0.4546	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1197	1.2386	0.8210	1.7100e-003		0.0570	0.0570		0.0524	0.0524	0.0000	150.5281	150.5281	0.0487	0.0000	151.7452
Total	**0.1197**	**1.2386**	**0.8210**	**1.7100e-003**	**0.8846**	**0.0570**	**0.9415**	**0.4546**	**0.0524**	**0.5070**	**0.0000**	**150.5281**	**150.5281**	**0.0487**	**0.0000**	**151.7452**

Tracy Costco - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	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	3.0700e-003	2.1800e-003	0.0262	9.0000e-005	0.0100	5.0000e-005	0.0101	2.6700e-003	4.0000e-005	2.7100e-003	0.0000	7.8074	7.8074	1.8000e-004	2.0000e-004	7.8717
Total	**3.0700e-003**	**2.1800e-003**	**0.0262**	**9.0000e-005**	**0.0100**	**5.0000e-005**	**0.0101**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**0.0000**	**7.8074**	**7.8074**	**1.8000e-004**	**2.0000e-004**	**7.8717**

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					0.8846	0.0000	0.8846	0.4546	0.0000	0.4546	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1197	1.2386	0.8210	1.7100e-003		0.0570	0.0570		0.0524	0.0524	0.0000	150.5280	150.5280	0.0487	0.0000	151.7451
Total	**0.1197**	**1.2386**	**0.8210**	**1.7100e-003**	**0.8846**	**0.0570**	**0.9415**	**0.4546**	**0.0524**	**0.5070**	**0.0000**	**150.5280**	**150.5280**	**0.0487**	**0.0000**	**151.7451**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	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	3.0700e-003	2.1800e-003	0.0262	9.0000e-005	0.0100	5.0000e-005	0.0101	2.6700e-003	4.0000e-005	2.7100e-003	0.0000	7.8074	7.8074	1.8000e-004	2.0000e-004	7.8717
Total	**3.0700e-003**	**2.1800e-003**	**0.0262**	**9.0000e-005**	**0.0100**	**5.0000e-005**	**0.0101**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**0.0000**	**7.8074**	**7.8074**	**1.8000e-004**	**2.0000e-004**	**7.8717**

3.3 Grading - 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					
Fugitive Dust					0.4146	0.0000	0.4146	0.1645	0.0000	0.1645	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1495	1.5532	1.2623	2.7900e-003		0.0641	0.0641		0.0590	0.0590	0.0000	245.4084	245.4084	0.0794	0.0000	247.3927
Total	**0.1495**	**1.5532**	**1.2623**	**2.7900e-003**	**0.4146**	**0.0641**	**0.4787**	**0.1645**	**0.0590**	**0.2235**	**0.0000**	**245.4084**	**245.4084**	**0.0794**	**0.0000**	**247.3927**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	tons/yr										MT/yr					
Hauling	7.9000e-004	0.0469	9.7800e-003	2.2000e-004	6.3900e-003	4.4000e-004	6.8400e-003	1.7600e-003	4.2000e-004	2.1800e-003	0.0000	21.2710	21.2710	1.2000e-004	3.3500e-003	22.2711
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	3.4100e-003	2.4200e-003	0.0291	9.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	8.6749	8.6749	2.0000e-004	2.2000e-004	8.7464
Total	**4.2000e-003**	**0.0493**	**0.0389**	**3.1000e-004**	**0.0175**	**4.9000e-004**	**0.0180**	**4.7200e-003**	**4.7000e-004**	**5.1900e-003**	**0.0000**	**29.9459**	**29.9459**	**3.2000e-004**	**3.5700e-003**	**31.0174**

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					0.4146	0.0000	0.4146	0.1645	0.0000	0.1645	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1495	1.5532	1.2623	2.7900e-003		0.0641	0.0641		0.0590	0.0590	0.0000	245.4082	245.4082	0.0794	0.0000	247.3924
Total	**0.1495**	**1.5532**	**1.2623**	**2.7900e-003**	**0.4146**	**0.0641**	**0.4787**	**0.1645**	**0.0590**	**0.2235**	**0.0000**	**245.4082**	**245.4082**	**0.0794**	**0.0000**	**247.3924**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	tons/yr										MT/yr					
Hauling	7.9000e-004	0.0469	9.7800e-003	2.2000e-004	6.3900e-003	4.4000e-004	6.8400e-003	1.7600e-003	4.2000e-004	2.1800e-003	0.0000	21.2710	21.2710	1.2000e-004	3.3500e-003	22.2711
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	3.4100e-003	2.4200e-003	0.0291	9.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	8.6749	8.6749	2.0000e-004	2.2000e-004	8.7464
Total	**4.2000e-003**	**0.0493**	**0.0389**	**3.1000e-004**	**0.0175**	**4.9000e-004**	**0.0180**	**4.7200e-003**	**4.7000e-004**	**5.1900e-003**	**0.0000**	**29.9459**	**29.9459**	**3.2000e-004**	**3.5700e-003**	**31.0174**

3.4 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	0.0629	0.5754	0.6498	1.0800e-003		0.0280	0.0280		0.0263	0.0263	0.0000	92.7219	92.7219	0.0221	0.0000	93.2733
Total	**0.0629**	**0.5754**	**0.6498**	**1.0800e-003**		**0.0280**	**0.0280**		**0.0263**	**0.0263**	**0.0000**	**92.7219**	**92.7219**	**0.0221**	**0.0000**	**93.2733**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	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	0.0298	1.2104	0.3726	5.3800e-003	0.1757	7.5400e-003	0.1833	0.0508	7.2100e-003	0.0580	0.0000	516.4606	516.4606	2.6200e-003	0.0781	539.8025
Worker	0.2855	0.2030	2.4372	7.9200e-003	0.9333	4.4100e-003	0.9378	0.2481	4.0600e-003	0.2522	0.0000	726.3788	726.3788	0.0171	0.0186	732.3624
Total	**0.3153**	**1.4134**	**2.8098**	**0.0133**	**1.1091**	**0.0120**	**1.1210**	**0.2989**	**0.0113**	**0.3102**	**0.0000**	**1,242.8394**	**1,242.8394**	**0.0197**	**0.0968**	**1,272.1649**

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	0.0629	0.5754	0.6498	1.0800e-003		0.0280	0.0280		0.0263	0.0263	0.0000	92.7218	92.7218	0.0221	0.0000	93.2732
Total	**0.0629**	**0.5754**	**0.6498**	**1.0800e-003**		**0.0280**	**0.0280**		**0.0263**	**0.0263**	**0.0000**	**92.7218**	**92.7218**	**0.0221**	**0.0000**	**93.2732**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	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	0.0298	1.2104	0.3726	5.3800e-003	0.1757	7.5400e-003	0.1833	0.0508	7.2100e-003	0.0580	0.0000	516.4606	516.4606	2.6200e-003	0.0781	539.8025
Worker	0.2855	0.2030	2.4372	7.9200e-003	0.9333	4.4100e-003	0.9378	0.2481	4.0600e-003	0.2522	0.0000	726.3788	726.3788	0.0171	0.0186	732.3624
Total	**0.3153**	**1.4134**	**2.8098**	**0.0133**	**1.1091**	**0.0120**	**1.1210**	**0.2989**	**0.0113**	**0.3102**	**0.0000**	**1,242.8394**	**1,242.8394**	**0.0197**	**0.0968**	**1,272.1649**

3.4 Building Construction - 2024

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1472	81.1472	0.0192	0.0000	81.6269
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1472**	**81.1472**	**0.0192**	**0.0000**	**81.6269**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0255	1.0596	0.3199	4.6400e-003	0.1538	6.6500e-003	0.1604	0.0445	6.3600e-003	0.0508	0.0000	444.8731	444.8731	2.1900e-003	0.0672	464.9553
Worker	0.2308	0.1551	1.9644	6.6900e-003	0.8167	3.6300e-003	0.8203	0.2171	3.3400e-003	0.2204	0.0000	613.5416	613.5416	0.0133	0.0150	618.3446
Total	**0.2563**	**1.2147**	**2.2843**	**0.0113**	**0.9704**	**0.0103**	**0.9807**	**0.2615**	**9.7000e-003**	**0.2712**	**0.0000**	**1,058.4147**	**1,058.4147**	**0.0155**	**0.0822**	**1,083.2998**

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1471	81.1471	0.0192	0.0000	81.6268
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1471**	**81.1471**	**0.0192**	**0.0000**	**81.6268**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0255	1.0596	0.3199	4.6400e-003	0.1538	6.6500e-003	0.1604	0.0445	6.3600e-003	0.0508	0.0000	444.8731	444.8731	2.1900e-003	0.0672	464.9553
Worker	0.2308	0.1551	1.9644	6.6900e-003	0.8167	3.6300e-003	0.8203	0.2171	3.3400e-003	0.2204	0.0000	613.5416	613.5416	0.0133	0.0150	618.3446
Total	**0.2563**	**1.2147**	**2.2843**	**0.0113**	**0.9704**	**0.0103**	**0.9807**	**0.2615**	**9.7000e-003**	**0.2712**	**0.0000**	**1,058.4147**	**1,058.4147**	**0.0155**	**0.0822**	**1,083.2998**

3.5 Paving - 2024

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	0.0296	0.2857	0.4388	6.8000e-004		0.0141	0.0141		0.0129	0.0129	0.0000	60.0796	60.0796	0.0194	0.0000	60.5654
Paving	0.0825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1121**	**0.2857**	**0.4388**	**6.8000e-004**		**0.0141**	**0.0141**		**0.0129**	**0.0129**	**0.0000**	**60.0796**	**60.0796**	**0.0194**	**0.0000**	**60.5654**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

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	1.5800e-003	1.0600e-003	0.0134	5.0000e-005	5.5700e-003	2.0000e-005	5.6000e-003	1.4800e-003	2.0000e-005	1.5000e-003	0.0000	4.1870	4.1870	9.0000e-005	1.0000e-004	4.2198
Total	**1.5800e-003**	**1.0600e-003**	**0.0134**	**5.0000e-005**	**5.5700e-003**	**2.0000e-005**	**5.6000e-003**	**1.4800e-003**	**2.0000e-005**	**1.5000e-003**	**0.0000**	**4.1870**	**4.1870**	**9.0000e-005**	**1.0000e-004**	**4.2198**

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	0.0296	0.2857	0.4388	6.8000e-004		0.0141	0.0141		0.0129	0.0129	0.0000	60.0795	60.0795	0.0194	0.0000	60.5653
Paving	0.0825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1121**	**0.2857**	**0.4388**	**6.8000e-004**		**0.0141**	**0.0141**		**0.0129**	**0.0129**	**0.0000**	**60.0795**	**60.0795**	**0.0194**	**0.0000**	**60.5653**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

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	1.5800e-003	1.0600e-003	0.0134	5.0000e-005	5.5700e-003	2.0000e-005	5.6000e-003	1.4800e-003	2.0000e-005	1.5000e-003	0.0000	4.1870	4.1870	9.0000e-005	1.0000e-004	4.2198
Total	**1.5800e-003**	**1.0600e-003**	**0.0134**	**5.0000e-005**	**5.5700e-003**	**2.0000e-005**	**5.6000e-003**	**1.4800e-003**	**2.0000e-005**	**1.5000e-003**	**0.0000**	**4.1870**	**4.1870**	**9.0000e-005**	**1.0000e-004**	**4.2198**

3.6 Architectural Coating - 2024

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	4.6160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0731	0.1086	1.8000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	15.3195	15.3195	8.6000e-004	0.0000	15.3411
Total	**4.6269**	**0.0731**	**0.1086**	**1.8000e-004**		**3.6500e-003**	**3.6500e-003**		**3.6500e-003**	**3.6500e-003**	**0.0000**	**15.3195**	**15.3195**	**8.6000e-004**	**0.0000**	**15.3411**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	0.0792	0.0532	0.6739	2.3000e-003	0.2802	1.2500e-003	0.2814	0.0745	1.1500e-003	0.0756	0.0000	210.4688	210.4688	4.5800e-003	5.1500e-003	212.1164
Total	**0.0792**	**0.0532**	**0.6739**	**2.3000e-003**	**0.2802**	**1.2500e-003**	**0.2814**	**0.0745**	**1.1500e-003**	**0.0756**	**0.0000**	**210.4688**	**210.4688**	**4.5800e-003**	**5.1500e-003**	**212.1164**

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	4.6160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0731	0.1086	1.8000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	15.3195	15.3195	8.6000e-004	0.0000	15.3411
Total	**4.6269**	**0.0731**	**0.1086**	**1.8000e-004**		**3.6500e-003**	**3.6500e-003**		**3.6500e-003**	**3.6500e-003**	**0.0000**	**15.3195**	**15.3195**	**8.6000e-004**	**0.0000**	**15.3411**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	0.0792	0.0532	0.6739	2.3000e-003	0.2802	1.2500e-003	0.2814	0.0745	1.1500e-003	0.0756	0.0000	210.4688	210.4688	4.5800e-003	5.1500e-003	212.1164
Total	**0.0792**	**0.0532**	**0.6739**	**2.3000e-003**	**0.2802**	**1.2500e-003**	**0.2814**	**0.0745**	**1.1500e-003**	**0.0756**	**0.0000**	**210.4688**	**210.4688**	**4.5800e-003**	**5.1500e-003**	**212.1164**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.8134	16.8939	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Unmitigated	0.8134	16.8939	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079

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		
Unrefrigerated Warehouse-No Rail	1,183.14	1,183.14	1183.14	4,571,029	4,571,029
Unrefrigerated Warehouse-No Rail	2,616.86	2,616.86	2616.86	10,110,141	10,110,141
Total	3,800.00	3,800.00	3,800.00	14,681,171	14,681,171

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	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.677890	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.322110	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.677890	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.322110	0.000000	0.000000	0.000000	0.000000	0.000000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	734.6371	734.6371	0.1189	0.0144	741.9013
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	734.6371	734.6371	0.1189	0.0144	741.9013
NaturalGas Mitigated	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	563.3915	563.3915	0.0108	0.0103	566.7395
NaturalGas Unmitigated	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	563.3915	563.3915	0.0108	0.0103	566.7395

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	3.28712e+006	0.0177	0.1611	0.1354	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	175.4130	175.4130	3.3600e-003	3.2200e-003	176.4554
Unrefrigerated Warehouse-No Rail	7.27044e+006	0.0392	0.3564	0.2994	2.1400e-003		0.0271	0.0271		0.0271	0.0271	0.0000	387.9785	387.9785	7.4400e-003	7.1100e-003	390.2841
Total		**0.0569**	**0.5175**	**0.4347**	**3.1100e-003**		**0.0393**	**0.0393**		**0.0393**	**0.0393**	**0.0000**	**563.3915**	**563.3915**	**0.0108**	**0.0103**	**566.7395**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	7.27044e+006	0.0392	0.3564	0.2994	2.1400e-003		0.0271	0.0271		0.0271	0.0271	0.0000	387.9785	387.9785	7.4400e-003	7.1100e-003	390.2841
Unrefrigerated Warehouse-No Rail	3.28712e+006	0.0177	0.1611	0.1354	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	175.4130	175.4130	3.3600e-003	3.2200e-003	176.4554
Total		**0.0569**	**0.5175**	**0.4347**	**3.1100e-003**		**0.0393**	**0.0393**		**0.0393**	**0.0393**	**0.0000**	**563.3915**	**563.3915**	**0.0108**	**0.0103**	**566.7395**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	2.47213e+006	228.7307	0.0370	4.4900e-003	230.9924
Unrefrigerated Warehouse-No Rail	5.46785e+006	505.9064	0.0819	9.9200e-003	510.9089
Total		**734.6371**	**0.1189**	**0.0144**	**741.9014**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	2.47213e+006	228.7307	0.0370	4.4900e-003	230.9924
Unrefrigerated Warehouse-No Rail	5.46785e+006	505.9064	0.0819	9.9200e-003	510.9089
Total		**734.6371**	**0.1189**	**0.0144**	**741.9014**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Unmitigated	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344

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	0.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Total	**7.4557**	**1.5000e-004**	**0.0166**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0323**	**0.0323**	**8.0000e-005**	**0.0000**	**0.0344**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Total	**7.4557**	**1.5000e-004**	**0.0166**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0323**	**0.0323**	**8.0000e-005**	**0.0000**	**0.0344**

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 Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	330.0596	13.1822	0.3145	753.3210
Unmitigated	330.0596	13.1822	0.3145	753.3210

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
Unrefrigerated Warehouse-No Rail	403.545 / 0	330.0596	13.1822	0.3145	753.3210
Total		**330.0596**	**13.1822**	**0.3145**	**753.3210**

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
Unrefrigerated Warehouse-No Rail	403.545 / 0	330.0596	13.1822	0.3145	753.3210
Total		**330.0596**	**13.1822**	**0.3145**	**753.3210**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	332.9783	19.6785	0.0000	824.9395
Unmitigated	332.9783	19.6785	0.0000	824.9395

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Unrefrigerated Warehouse-No Rail	1640.36	332.9783	19.6785	0.0000	824.9395
Total		**332.9783**	**19.6785**	**0.0000**	**824.9395**

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
Unrefrigerated Warehouse-No Rail	1640.36	332.9783	19.6785	0.0000	824.9395
Total		**332.9783**	**19.6785**	**0.0000**	**824.9395**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Tracy Costco (Clean Truck Fleet Mitigation Applied)

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	543.33	1000sqft	12.47	543,325.00	0
Unrefrigerated Warehouse-No Rail	1,201.73	1000sqft	27.59	1,201,726.00	0
Other Asphalt Surfaces	62.94	Acre	62.94	2,741,666.40	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.7	**Precipitation Freq (Days)**	51
Climate Zone	2			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Year 2025 is assumed buildout year.

Land Use - Land uses consistent with site plan. 103.0 acres total of Development Area.

Construction Phase - Construction schedule based on project size and type.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Demolition -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading - Total export [cut] of up to 6,000 cy of material.

Architectural Coating - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Vehicle Trips - Trips consistent with trips data provided by traffic consultant (Kimley Horn) (2.177575556 trips/unit/day)

Area Coating - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation -

Area Mitigation - VOC limits for extrerior and interior building coatings to be 50 g/L or less (per SJVAPCD Rule 4601).

Fleet Mix - Fleet Mix adjusted to account for heavy-duty truck trips and passenger cars as a proportion of fleet, as provided by the traffic consultant (Kimley Horn). LDA = 0.67789; HHD = 0.32211

Vehicle Emission Factors - Note: Reduced HHD NOx "Runex" emissions by 90%. Instead of 2.377878 HHD Nox "Runex" emissions, the CLean Truck Fleet HHD NOx "Runex" emissions would be 0.2377878

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	150.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	150	50
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	150	50
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	50	150
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	5
tblConstructionPhase	NumDays	120.00	90.00
tblConstructionPhase	NumDays	310.00	90.00
tblConstructionPhase	NumDays	3,100.00	150.00
tblConstructionPhase	NumDays	220.00	60.00
tblConstructionPhase	NumDays	220.00	120.00
tblConstructionPhase	PhaseEndDate	1/13/2023	5/5/2023

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tblConstructionPhase	PhaseEndDate	3/22/2024	9/8/2023
tblConstructionPhase	PhaseEndDate	2/8/2036	4/5/2024
tblConstructionPhase	PhaseEndDate	12/12/2036	6/28/2024
tblConstructionPhase	PhaseEndDate	10/16/2037	12/13/2024
tblConstructionPhase	PhaseStartDate	8/1/2022	1/1/2023
tblConstructionPhase	PhaseStartDate	1/14/2023	5/6/2023
tblConstructionPhase	PhaseStartDate	3/23/2024	9/9/2023
tblConstructionPhase	PhaseStartDate	2/9/2036	4/6/2024
tblConstructionPhase	PhaseStartDate	12/13/2036	6/29/2024
tblFleetMix	HHD	0.02	0.32
tblFleetMix	HHD	0.02	0.32
tblFleetMix	LDA	0.54	0.68
tblFleetMix	LDA	0.54	0.68
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT1	0.05	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD1	0.03	0.00
tblFleetMix	LHD2	6.1000e-003	0.00
tblFleetMix	LHD2	6.1000e-003	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MCY	0.02	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MDV	0.15	0.00
tblFleetMix	MH	3.3530e-003	0.00
tblFleetMix	MH	3.3530e-003	0.00
tblFleetMix	MHD	0.01	0.00
tblFleetMix	MHD	0.01	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblFleetMix	OBUS	4.6700e-004	0.00
tblFleetMix	OBUS	4.6700e-004	0.00
tblFleetMix	SBUS	1.1030e-003	0.00
tblFleetMix	SBUS	1.1030e-003	0.00
tblFleetMix	UBUS	3.2200e-004	0.00
tblFleetMix	UBUS	3.2200e-004	0.00
tblGrading	MaterialExported	0.00	6,000.00
tblLandUse	LandUseSquareFeet	1,201,730.00	1,201,726.00
tblLandUse	LandUseSquareFeet	543,330.00	543,325.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleEF	HHD	2.38	0.24
tblVehicleTrips	ST_TR	1.74	2.18
tblVehicleTrips	SU_TR	1.74	2.18
tblVehicleTrips	WD_TR	1.74	2.18

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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					
2023	0.6546	4.8321	5.6080	0.0193	2.4358	0.1616	2.5974	0.9254	0.1495	1.0749	0.0000	1,769.2512	1,769.2512	0.1703	0.1005	1,803.4653
2024	5.1276	2.0984	4.0848	0.0155	1.2562	0.0507	1.3069	0.3375	0.0477	0.3851	0.0000	1,429.6168	1,429.6168	0.0597	0.0875	1,457.1694
Maximum	**5.1276**	**4.8321**	**5.6080**	**0.0193**	**2.4358**	**0.1616**	**2.5974**	**0.9254**	**0.1495**	**1.0749**	**0.0000**	**1,769.2512**	**1,769.2512**	**0.1703**	**0.1005**	**1,803.4653**

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					
2023	0.6546	4.8321	5.6080	0.0193	2.4358	0.1616	2.5974	0.9254	0.1495	1.0749	0.0000	1,769.2506	1,769.2506	0.1703	0.1005	1,803.4647
2024	5.1276	2.0984	4.0848	0.0155	1.2562	0.0507	1.3069	0.3375	0.0477	0.3851	0.0000	1,429.6167	1,429.6167	0.0597	0.0875	1,457.1692
Maximum	**5.1276**	**4.8321**	**5.6080**	**0.0193**	**2.4358**	**0.1616**	**2.5974**	**0.9254**	**0.1495**	**1.0749**	**0.0000**	**1,769.2506**	**1,769.2506**	**0.1703**	**0.1005**	**1,803.4647**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	**11-1-2022**	**1-31-2023**	0.3356	0.3356
3	**2-1-2023**	**4-30-2023**	0.9633	0.9633
4	**5-1-2023**	**7-31-2023**	1.2653	1.2653
5	**8-1-2023**	**10-31-2023**	1.6739	1.6739
6	**11-1-2023**	**1-31-2024**	1.9761	1.9761
7	**2-1-2024**	**4-30-2024**	1.4747	1.4747
8	**5-1-2024**	**7-31-2024**	1.2309	1.2309
9	**8-1-2024**	**9-30-2024**	1.7553	1.7553
		Highest	1.9761	1.9761

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	tons/yr										MT/yr					
Area	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Energy	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	1,298.0286	1,298.0286	0.1297	0.0247	1,308.6408
Mobile	0.8134	5.7514	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Waste						0.0000	0.0000		0.0000	0.0000	332.9783	0.0000	332.9783	19.6785	0.0000	824.9395
Water						0.0000	0.0000		0.0000	0.0000	128.0263	202.0333	330.0596	13.1822	0.3145	753.3210
Total	**8.3260**	**6.2690**	**12.4941**	**0.0984**	**5.6790**	**0.1937**	**5.8727**	**1.5274**	**0.1865**	**1.7139**	**461.0045**	**10,554.0816**	**11,015.0861**	**33.0856**	**1.4450**	**12,272.8437**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Energy	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	1,298.0286	1,298.0286	0.1297	0.0247	1,308.6408
Mobile	0.8134	5.7514	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Waste						0.0000	0.0000		0.0000	0.0000	332.9783	0.0000	332.9783	19.6785	0.0000	824.9395
Water						0.0000	0.0000		0.0000	0.0000	128.0263	202.0333	330.0596	13.1822	0.3145	753.3210
Total	**8.3260**	**6.2690**	**12.4941**	**0.0984**	**5.6790**	**0.1937**	**5.8727**	**1.5274**	**0.1865**	**1.7139**	**461.0045**	**10,554.0816**	**11,015.0861**	**33.0856**	**1.4450**	**12,272.8437**

	ROG	NOx	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	Site Preparation	Site Preparation	1/1/2023	5/5/2023	5	90	
2	Grading	Grading	5/6/2023	9/8/2023	5	90	
3	Building Construction	Building Construction	9/9/2023	4/5/2024	5	150	

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4	Paving	Paving	4/6/2024	6/28/2024	5	60	
5	Architectural Coating	Architectural Coating	6/29/2024	12/13/2024	5	120	

Acres of Grading (Site Preparation Phase): 135

Acres of Grading (Grading Phase): 270

Acres of Paving: 62.94

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 2,617,577; Non-Residential Outdoor: 872,526; Striped Parking Area: 164,500 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
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
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Site Preparation	7	18.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	750.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,884.00	735.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	377.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 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					
Fugitive Dust					0.8846	0.0000	0.8846	0.4546	0.0000	0.4546	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1197	1.2386	0.8210	1.7100e-003		0.0570	0.0570		0.0524	0.0524	0.0000	150.5281	150.5281	0.0487	0.0000	151.7452
Total	**0.1197**	**1.2386**	**0.8210**	**1.7100e-003**	**0.8846**	**0.0570**	**0.9415**	**0.4546**	**0.0524**	**0.5070**	**0.0000**	**150.5281**	**150.5281**	**0.0487**	**0.0000**	**151.7452**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	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	3.0700e-003	2.1800e-003	0.0262	9.0000e-005	0.0100	5.0000e-005	0.0101	2.6700e-003	4.0000e-005	2.7100e-003	0.0000	7.8074	7.8074	1.8000e-004	2.0000e-004	7.8717
Total	**3.0700e-003**	**2.1800e-003**	**0.0262**	**9.0000e-005**	**0.0100**	**5.0000e-005**	**0.0101**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**0.0000**	**7.8074**	**7.8074**	**1.8000e-004**	**2.0000e-004**	**7.8717**

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					0.8846	0.0000	0.8846	0.4546	0.0000	0.4546	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1197	1.2386	0.8210	1.7100e-003		0.0570	0.0570		0.0524	0.0524	0.0000	150.5280	150.5280	0.0487	0.0000	151.7451
Total	**0.1197**	**1.2386**	**0.8210**	**1.7100e-003**	**0.8846**	**0.0570**	**0.9415**	**0.4546**	**0.0524**	**0.5070**	**0.0000**	**150.5280**	**150.5280**	**0.0487**	**0.0000**	**151.7451**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 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	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	3.0700e-003	2.1800e-003	0.0262	9.0000e-005	0.0100	5.0000e-005	0.0101	2.6700e-003	4.0000e-005	2.7100e-003	0.0000	7.8074	7.8074	1.8000e-004	2.0000e-004	7.8717
Total	**3.0700e-003**	**2.1800e-003**	**0.0262**	**9.0000e-005**	**0.0100**	**5.0000e-005**	**0.0101**	**2.6700e-003**	**4.0000e-005**	**2.7100e-003**	**0.0000**	**7.8074**	**7.8074**	**1.8000e-004**	**2.0000e-004**	**7.8717**

3.3 Grading - 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					
Fugitive Dust					0.4146	0.0000	0.4146	0.1645	0.0000	0.1645	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1495	1.5532	1.2623	2.7900e-003		0.0641	0.0641		0.0590	0.0590	0.0000	245.4084	245.4084	0.0794	0.0000	247.3927
Total	**0.1495**	**1.5532**	**1.2623**	**2.7900e-003**	**0.4146**	**0.0641**	**0.4787**	**0.1645**	**0.0590**	**0.2235**	**0.0000**	**245.4084**	**245.4084**	**0.0794**	**0.0000**	**247.3927**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	tons/yr										MT/yr					
Hauling	7.9000e-004	0.0469	9.7800e-003	2.2000e-004	6.3900e-003	4.4000e-004	6.8400e-003	1.7600e-003	4.2000e-004	2.1800e-003	0.0000	21.2710	21.2710	1.2000e-004	3.3500e-003	22.2711
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	3.4100e-003	2.4200e-003	0.0291	9.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	8.6749	8.6749	2.0000e-004	2.2000e-004	8.7464
Total	**4.2000e-003**	**0.0493**	**0.0389**	**3.1000e-004**	**0.0175**	**4.9000e-004**	**0.0180**	**4.7200e-003**	**4.7000e-004**	**5.1900e-003**	**0.0000**	**29.9459**	**29.9459**	**3.2000e-004**	**3.5700e-003**	**31.0174**

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					0.4146	0.0000	0.4146	0.1645	0.0000	0.1645	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1495	1.5532	1.2623	2.7900e-003		0.0641	0.0641		0.0590	0.0590	0.0000	245.4082	245.4082	0.0794	0.0000	247.3924
Total	**0.1495**	**1.5532**	**1.2623**	**2.7900e-003**	**0.4146**	**0.0641**	**0.4787**	**0.1645**	**0.0590**	**0.2235**	**0.0000**	**245.4082**	**245.4082**	**0.0794**	**0.0000**	**247.3924**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 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	tons/yr										MT/yr					
Hauling	7.9000e-004	0.0469	9.7800e-003	2.2000e-004	6.3900e-003	4.4000e-004	6.8400e-003	1.7600e-003	4.2000e-004	2.1800e-003	0.0000	21.2710	21.2710	1.2000e-004	3.3500e-003	22.2711
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	3.4100e-003	2.4200e-003	0.0291	9.0000e-005	0.0112	5.0000e-005	0.0112	2.9600e-003	5.0000e-005	3.0100e-003	0.0000	8.6749	8.6749	2.0000e-004	2.2000e-004	8.7464
Total	**4.2000e-003**	**0.0493**	**0.0389**	**3.1000e-004**	**0.0175**	**4.9000e-004**	**0.0180**	**4.7200e-003**	**4.7000e-004**	**5.1900e-003**	**0.0000**	**29.9459**	**29.9459**	**3.2000e-004**	**3.5700e-003**	**31.0174**

3.4 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	0.0629	0.5754	0.6498	1.0800e-003		0.0280	0.0280		0.0263	0.0263	0.0000	92.7219	92.7219	0.0221	0.0000	93.2733
Total	**0.0629**	**0.5754**	**0.6498**	**1.0800e-003**		**0.0280**	**0.0280**		**0.0263**	**0.0263**	**0.0000**	**92.7219**	**92.7219**	**0.0221**	**0.0000**	**93.2733**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	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	0.0298	1.2104	0.3726	5.3800e-003	0.1757	7.5400e-003	0.1833	0.0508	7.2100e-003	0.0580	0.0000	516.4606	516.4606	2.6200e-003	0.0781	539.8025
Worker	0.2855	0.2030	2.4372	7.9200e-003	0.9333	4.4100e-003	0.9378	0.2481	4.0600e-003	0.2522	0.0000	726.3788	726.3788	0.0171	0.0186	732.3624
Total	**0.3153**	**1.4134**	**2.8098**	**0.0133**	**1.1091**	**0.0120**	**1.1210**	**0.2989**	**0.0113**	**0.3102**	**0.0000**	**1,242.8394**	**1,242.8394**	**0.0197**	**0.0968**	**1,272.1649**

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	0.0629	0.5754	0.6498	1.0800e-003		0.0280	0.0280		0.0263	0.0263	0.0000	92.7218	92.7218	0.0221	0.0000	93.2732
Total	**0.0629**	**0.5754**	**0.6498**	**1.0800e-003**		**0.0280**	**0.0280**		**0.0263**	**0.0263**	**0.0000**	**92.7218**	**92.7218**	**0.0221**	**0.0000**	**93.2732**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 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	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	0.0298	1.2104	0.3726	5.3800e-003	0.1757	7.5400e-003	0.1833	0.0508	7.2100e-003	0.0580	0.0000	516.4606	516.4606	2.6200e-003	0.0781	539.8025
Worker	0.2855	0.2030	2.4372	7.9200e-003	0.9333	4.4100e-003	0.9378	0.2481	4.0600e-003	0.2522	0.0000	726.3788	726.3788	0.0171	0.0186	732.3624
Total	**0.3153**	**1.4134**	**2.8098**	**0.0133**	**1.1091**	**0.0120**	**1.1210**	**0.2989**	**0.0113**	**0.3102**	**0.0000**	**1,242.8394**	**1,242.8394**	**0.0197**	**0.0968**	**1,272.1649**

3.4 Building Construction - 2024

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1472	81.1472	0.0192	0.0000	81.6269
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1472**	**81.1472**	**0.0192**	**0.0000**	**81.6269**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0255	1.0596	0.3199	4.6400e-003	0.1538	6.6500e-003	0.1604	0.0445	6.3600e-003	0.0508	0.0000	444.8731	444.8731	2.1900e-003	0.0672	464.9553
Worker	0.2308	0.1551	1.9644	6.6900e-003	0.8167	3.6300e-003	0.8203	0.2171	3.3400e-003	0.2204	0.0000	613.5416	613.5416	0.0133	0.0150	618.3446
Total	**0.2563**	**1.2147**	**2.2843**	**0.0113**	**0.9704**	**0.0103**	**0.9807**	**0.2615**	**9.7000e-003**	**0.2712**	**0.0000**	**1,058.4147**	**1,058.4147**	**0.0155**	**0.0822**	**1,083.2998**

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	0.0515	0.4705	0.5658	9.4000e-004		0.0215	0.0215		0.0202	0.0202	0.0000	81.1471	81.1471	0.0192	0.0000	81.6268
Total	**0.0515**	**0.4705**	**0.5658**	**9.4000e-004**		**0.0215**	**0.0215**		**0.0202**	**0.0202**	**0.0000**	**81.1471**	**81.1471**	**0.0192**	**0.0000**	**81.6268**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2024

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	0.0255	1.0596	0.3199	4.6400e-003	0.1538	6.6500e-003	0.1604	0.0445	6.3600e-003	0.0508	0.0000	444.8731	444.8731	2.1900e-003	0.0672	464.9553
Worker	0.2308	0.1551	1.9644	6.6900e-003	0.8167	3.6300e-003	0.8203	0.2171	3.3400e-003	0.2204	0.0000	613.5416	613.5416	0.0133	0.0150	618.3446
Total	**0.2563**	**1.2147**	**2.2843**	**0.0113**	**0.9704**	**0.0103**	**0.9807**	**0.2615**	**9.7000e-003**	**0.2712**	**0.0000**	**1,058.4147**	**1,058.4147**	**0.0155**	**0.0822**	**1,083.2998**

3.5 Paving - 2024

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	0.0296	0.2857	0.4388	6.8000e-004		0.0141	0.0141		0.0129	0.0129	0.0000	60.0796	60.0796	0.0194	0.0000	60.5654
Paving	0.0825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1121**	**0.2857**	**0.4388**	**6.8000e-004**		**0.0141**	**0.0141**		**0.0129**	**0.0129**	**0.0000**	**60.0796**	**60.0796**	**0.0194**	**0.0000**	**60.5654**

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3.5 Paving - 2024

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	1.5800e-003	1.0600e-003	0.0134	5.0000e-005	5.5700e-003	2.0000e-005	5.6000e-003	1.4800e-003	2.0000e-005	1.5000e-003	0.0000	4.1870	4.1870	9.0000e-005	1.0000e-004	4.2198
Total	**1.5800e-003**	**1.0600e-003**	**0.0134**	**5.0000e-005**	**5.5700e-003**	**2.0000e-005**	**5.6000e-003**	**1.4800e-003**	**2.0000e-005**	**1.5000e-003**	**0.0000**	**4.1870**	**4.1870**	**9.0000e-005**	**1.0000e-004**	**4.2198**

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	0.0296	0.2857	0.4388	6.8000e-004		0.0141	0.0141		0.0129	0.0129	0.0000	60.0795	60.0795	0.0194	0.0000	60.5653
Paving	0.0825					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1121**	**0.2857**	**0.4388**	**6.8000e-004**		**0.0141**	**0.0141**		**0.0129**	**0.0129**	**0.0000**	**60.0795**	**60.0795**	**0.0194**	**0.0000**	**60.5653**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2024

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	1.5800e-003	1.0600e-003	0.0134	5.0000e-005	5.5700e-003	2.0000e-005	5.6000e-003	1.4800e-003	2.0000e-005	1.5000e-003	0.0000	4.1870	4.1870	9.0000e-005	1.0000e-004	4.2198
Total	**1.5800e-003**	**1.0600e-003**	**0.0134**	**5.0000e-005**	**5.5700e-003**	**2.0000e-005**	**5.6000e-003**	**1.4800e-003**	**2.0000e-005**	**1.5000e-003**	**0.0000**	**4.1870**	**4.1870**	**9.0000e-005**	**1.0000e-004**	**4.2198**

3.6 Architectural Coating - 2024

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	4.6160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0731	0.1086	1.8000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	15.3195	15.3195	8.6000e-004	0.0000	15.3411
Total	**4.6269**	**0.0731**	**0.1086**	**1.8000e-004**		**3.6500e-003**	**3.6500e-003**		**3.6500e-003**	**3.6500e-003**	**0.0000**	**15.3195**	**15.3195**	**8.6000e-004**	**0.0000**	**15.3411**

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	0.0792	0.0532	0.6739	2.3000e-003	0.2802	1.2500e-003	0.2814	0.0745	1.1500e-003	0.0756	0.0000	210.4688	210.4688	4.5800e-003	5.1500e-003	212.1164
Total	**0.0792**	**0.0532**	**0.6739**	**2.3000e-003**	**0.2802**	**1.2500e-003**	**0.2814**	**0.0745**	**1.1500e-003**	**0.0756**	**0.0000**	**210.4688**	**210.4688**	**4.5800e-003**	**5.1500e-003**	**212.1164**

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	4.6160					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.0731	0.1086	1.8000e-004		3.6500e-003	3.6500e-003		3.6500e-003	3.6500e-003	0.0000	15.3195	15.3195	8.6000e-004	0.0000	15.3411
Total	**4.6269**	**0.0731**	**0.1086**	**1.8000e-004**		**3.6500e-003**	**3.6500e-003**		**3.6500e-003**	**3.6500e-003**	**0.0000**	**15.3195**	**15.3195**	**8.6000e-004**	**0.0000**	**15.3411**

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2024

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	0.0792	0.0532	0.6739	2.3000e-003	0.2802	1.2500e-003	0.2814	0.0745	1.1500e-003	0.0756	0.0000	210.4688	210.4688	4.5800e-003	5.1500e-003	212.1164
Total	**0.0792**	**0.0532**	**0.6739**	**2.3000e-003**	**0.2802**	**1.2500e-003**	**0.2814**	**0.0745**	**1.1500e-003**	**0.0756**	**0.0000**	**210.4688**	**210.4688**	**4.5800e-003**	**5.1500e-003**	**212.1164**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.8134	5.7514	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079
Unmitigated	0.8134	5.7514	12.0428	0.0953	5.6790	0.1543	5.8333	1.5274	0.1471	1.6745	0.0000	9,053.9874	9,053.9874	0.0952	1.1058	9,385.9079

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		
Unrefrigerated Warehouse-No Rail	1,183.14	1,183.14	1183.14	4,571,029	4,571,029
Unrefrigerated Warehouse-No Rail	2,616.86	2,616.86	2616.86	10,110,141	10,110,141
Total	3,800.00	3,800.00	3,800.00	14,681,171	14,681,171

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	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3
Unrefrigerated Warehouse-No	14.70	6.60	6.60	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.677890	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.322110	0.000000	0.000000	0.000000	0.000000	0.000000
Unrefrigerated Warehouse-No Rail	0.677890	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.322110	0.000000	0.000000	0.000000	0.000000	0.000000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	734.6371	734.6371	0.1189	0.0144	741.9013
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	734.6371	734.6371	0.1189	0.0144	741.9013
NaturalGas Mitigated	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	563.3915	563.3915	0.0108	0.0103	566.7395
NaturalGas Unmitigated	0.0569	0.5175	0.4347	3.1100e-003		0.0393	0.0393		0.0393	0.0393	0.0000	563.3915	563.3915	0.0108	0.0103	566.7395

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	3.28712e+006	0.0177	0.1611	0.1354	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	175.4130	175.4130	3.3600e-003	3.2200e-003	176.4554
Unrefrigerated Warehouse-No Rail	7.27044e+006	0.0392	0.3564	0.2994	2.1400e-003		0.0271	0.0271		0.0271	0.0271	0.0000	387.9785	387.9785	7.4400e-003	7.1100e-003	390.2841
Total		**0.0569**	**0.5175**	**0.4347**	**3.1100e-003**		**0.0393**	**0.0393**		**0.0393**	**0.0393**	**0.0000**	**563.3915**	**563.3915**	**0.0108**	**0.0103**	**566.7395**

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	7.27044e+006	0.0392	0.3564	0.2994	2.1400e-003		0.0271	0.0271		0.0271	0.0271	0.0000	387.9785	387.9785	7.4400e-003	7.1100e-003	390.2841
Unrefrigerated Warehouse-No Rail	3.28712e+006	0.0177	0.1611	0.1354	9.7000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	175.4130	175.4130	3.3600e-003	3.2200e-003	176.4554
Total		**0.0569**	**0.5175**	**0.4347**	**3.1100e-003**		**0.0393**	**0.0393**		**0.0393**	**0.0393**	**0.0000**	**563.3915**	**563.3915**	**0.0108**	**0.0103**	**566.7395**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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
Unrefrigerated Warehouse-No Rail	2.47213e+006	228.7307	0.0370	4.4900e-003	230.9924
Unrefrigerated Warehouse-No Rail	5.46785e+006	505.9064	0.0819	9.9200e-003	510.9089
Total		**734.6371**	**0.1189**	**0.0144**	**741.9014**

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
Unrefrigerated Warehouse-No Rail	2.47213e+006	228.7307	0.0370	4.4900e-003	230.9924
Unrefrigerated Warehouse-No Rail	5.46785e+006	505.9064	0.0819	9.9200e-003	510.9089
Total		**734.6371**	**0.1189**	**0.0144**	**741.9014**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Unmitigated	7.4557	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344

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	0.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Total	**7.4557**	**1.5000e-004**	**0.0166**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0323**	**0.0323**	**8.0000e-005**	**0.0000**	**0.0344**

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not 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	0.4616					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.9925					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0166	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0323	0.0323	8.0000e-005	0.0000	0.0344
Total	**7.4557**	**1.5000e-004**	**0.0166**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0323**	**0.0323**	**8.0000e-005**	**0.0000**	**0.0344**

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 Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	330.0596	13.1822	0.3145	753.3210
Unmitigated	330.0596	13.1822	0.3145	753.3210

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
Unrefrigerated Warehouse-No Rail	403.545 / 0	330.0596	13.1822	0.3145	753.3210
Total		**330.0596**	**13.1822**	**0.3145**	**753.3210**

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Unrefrigerated Warehouse-No Rail	403.545 / 0	330.0596	13.1822	0.3145	753.3210
Total		**330.0596**	**13.1822**	**0.3145**	**753.3210**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	332.9783	19.6785	0.0000	824.9395
Unmitigated	332.9783	19.6785	0.0000	824.9395

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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
Unrefrigerated Warehouse-No Rail	1640.36	332.9783	19.6785	0.0000	824.9395
Total		**332.9783**	**19.6785**	**0.0000**	**824.9395**

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
Unrefrigerated Warehouse-No Rail	1640.36	332.9783	19.6785	0.0000	824.9395
Total		**332.9783**	**19.6785**	**0.0000**	**824.9395**

9.0 Operational Offroad

Tracy Costco (Clean Truck Fleet Mitigation Applied) - San Joaquin County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

APPENDIX B.2

Energy Outputs

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: San Joaquin
Calendar Year: 2023, 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	Total VMT	Trips	Fuel Consumption	MPG	
San Joaquin	2023	All Other Buses	Aggregate	Aggregate	Diesel	63.39460475	3393.93922	564.2119822	0.391421545	**8.670803**	
San Joaquin	2023	LDA	Aggregate	Aggregate	Gasoline	246367.0682	9973102.47	1138235.391	349.3216614	**28.54991**	
San Joaquin	2023	LDA	Aggregate	Aggregate	Diesel	705.734891	23139.8254	3023.214022	0.543997543	**42.53664**	
San Joaquin	2023	LDT1	Aggregate	Aggregate	Gasoline	22016.87719	727225.714	95173.38769	30.52486616	**23.82404**	
San Joaquin	2023	LDT1	Aggregate	Aggregate	Diesel	6.309776167	72.3140659	18.53577151	0.002954101	**24.47922**	
San Joaquin	2023	LDT2	Aggregate	Aggregate	Gasoline	99986.64004	4006976.31	463638.6569	174.3583341	**22.98127**	
San Joaquin	2023	LDT2	Aggregate	Aggregate	Diesel	269.0353638	11767.7731	1277.639106	0.369317903	**31.86353**	
San Joaquin	2023	LHD1	Aggregate	Aggregate	Gasoline	9831.305478	343356.563	146471.803	37.0137846	**9.276451**	
San Joaquin	2023	LHD1	Aggregate	Aggregate	Diesel	8858.793592	311287.78	111432.479	19.67413691	**15.82218**	
San Joaquin	2023	LHD2	Aggregate	Aggregate	Gasoline	1172.202392	40932.8123	17464.06906	4.90823024	**8.339628**	
San Joaquin	2023	LHD2	Aggregate	Aggregate	Diesel	3130.564849	115648.086	39378.56755	8.863291415	**13.04798**	
San Joaquin	2023	MCY	Aggregate	Aggregate	Gasoline	12111.77426	65765.9483	24223.54852	1.643730409	**40.01018**	
San Joaquin	2023	MDV	Aggregate	Aggregate	Gasoline	94539.47242	3309649.73	427287.8869	178.486066	**18.5429**	
San Joaquin	2023	MDV	Aggregate	Aggregate	Diesel	1386.649679	54072.4946	6485.715736	2.267270858	**23.84916**	
San Joaquin	2023	MH	Aggregate	Aggregate	Gasoline	1507.494843	13134.1796	150.8097841	2.977418428	**4.411264**	
San Joaquin	2023	MH	Aggregate	Aggregate	Diesel	642.7961913	5646.6428	64.27961913	0.600452961	**9.403972**	
San Joaquin	2023	Motor Coach	Aggregate	Aggregate	Diesel	17.50069597	2493.47591	402.1659934	0.455354651	**5.475899**	
San Joaquin	2023	OBUS	Aggregate	Aggregate	Gasoline	184.2186442	8143.5346	3685.846633	1.733278965	**4.69834**	
San Joaquin	2023	PTO	Aggregate	Aggregate	Diesel	0	19769.5175	0	4.013121008	**4.92622**	
San Joaquin	2023	SBUS	Aggregate	Aggregate	Gasoline	127.6658449	7011.40481	510.6633795	0.69096273	**10.1473**	
San Joaquin	2023	SBUS	Aggregate	Aggregate	Diesel	488.0661519	10999.7571	7067.197879	1.346323697	**8.170217**	
San Joaquin	2023	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	10.21525791	684.779876	234.7466267	0.077405114	**8.846701**	
San Joaquin	2023	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	13.70885779	939.491781	315.0295519	0.106056052	**8.858446**	
San Joaquin	2023	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	43.24157557	2453.39435	993.6914066	0.273109788	**8.98318**	
San Joaquin	2023	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	74.64743229	15398.8197	1715.397994	1.609252898	**9.568925**	**MHD**
San Joaquin	2023	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	243.75384	8276.65194	3478.367297	1.005561316	**8.230877**	**8.579141**
San Joaquin	2023	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	156.2432876	5383.85911	2229.591714	0.657027122	**8.194272**	
San Joaquin	2023	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	682.6025228	23363.9411	9740.738001	2.839033489	**8.229541**	
San Joaquin	2023	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	122.4768589	6703.21055	1747.744776	0.802391793	**8.354037**	
San Joaquin	2023	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	449.8451938	18399.4289	5200.21044	2.166542487	**8.492531**	
San Joaquin	2023	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1174.570894	51943.6226	13578.03953	6.096265009	**8.520565**	
San Joaquin	2023	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	912.5417949	38573.6428	10548.98315	4.50612298	**8.560273**	
San Joaquin	2023	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	553.092214	25667.2012	6393.745994	2.950154535	**8.70029**	
San Joaquin	2023	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	10.69132111	510.925844	123.591672	0.060247854	**8.480399**	
San Joaquin	2023	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	696.5366058	42802.4924	8051.963163	4.748833943	**9.013264**	
San Joaquin	2023	T6 OOS Class 4	Aggregate	Aggregate	Diesel	5.905142679	392.334655	135.7001788	0.044317954	**8.852725**	
San Joaquin	2023	T6 OOS Class 5	Aggregate	Aggregate	Diesel	7.890998517	538.212595	181.3351459	0.060737656	**8.861267**	
San Joaquin	2023	T6 OOS Class 6	Aggregate	Aggregate	Diesel	24.97157764	1406.36491	573.8468541	0.156409596	**8.991551**	
San Joaquin	2023	T6 OOS Class 7	Aggregate	Aggregate	Diesel	40.57354344	10226.0217	932.3800283	1.062980063	**9.620144**	
San Joaquin	2023	T6 Public Class 4	Aggregate	Aggregate	Diesel	32.09216486	1056.60486	164.6328057	0.140824099	**7.503012**	
San Joaquin	2023	T6 Public Class 5	Aggregate	Aggregate	Diesel	76.27568061	2776.64108	391.2942415	0.361173048	**7.687841**	
San Joaquin	2023	T6 Public Class 6	Aggregate	Aggregate	Diesel	126.4582156	4446.297	648.7306462	0.576020372	**7.718993**	
San Joaquin	2023	T6 Public Class 7	Aggregate	Aggregate	Diesel	152.7305258	6768.06936	783.5075973	0.883776286	**7.658125**	
San Joaquin	2023	T6 Utility Class 5	Aggregate	Aggregate	Diesel	33.47606031	1364.93307	428.493572	0.154770907	**8.819055**	
San Joaquin	2023	T6 Utility Class 6	Aggregate	Aggregate	Diesel	6.356456131	257.430851	81.36263848	0.029104667	**8.845002**	
San Joaquin	2023	T6 Utility Class 7	Aggregate	Aggregate	Diesel	7.230830053	358.500092	92.55462468	0.040337535	**8.887506**	
San Joaquin	2023	T6TS	Aggregate	Aggregate	Gasoline	560.525111	27400.6685	11214.98642	5.873758607	**4.664929**	
San Joaquin	2023	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1500.771839	308143.872	34487.73687	51.00604804	**6.04132**	**HHD**
San Joaquin	2023	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1343.474448	364734.036	30873.04281	59.83110996	**6.09606**	**5.596459**
San Joaquin	2023	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	562.3598205	132501.396	12923.02868	21.97566159	**6.029461**	
San Joaquin	2023	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	28.6781176	5381.65764	469.174004	0.90785985	**5.927851**	
San Joaquin	2023	T7 POAK Class 8	Aggregate	Aggregate	Diesel	131.1211785	13188.0173	2145.142481	2.26470624	**5.823279**	
San Joaquin	2023	T7 POLA Class 8	Aggregate	Aggregate	Diesel	139.588006	18353.09	2283.659779	3.154875131	**5.817374**	
San Joaquin	2023	T7 Public Class 8	Aggregate	Aggregate	Diesel	387.066761	16533.9411	1985.652484	3.205449572	**5.158072**	
San Joaquin	2023	T7 Single Concrete/Transit Mix Class 8	Aggregate	Aggregate	Diesel	118.1878034	8595.90453	1113.329108	1.467125303	**5.859012**	
San Joaquin	2023	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	486.5561857	30707.0394	4583.359269	5.327318734	**5.76407**	
San Joaquin	2023	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1040.735731	57042.4876	9803.730584	9.736964144	**5.858344**	
San Joaquin	2023	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	175.044521	11346.9523	805.2047965	4.507153801	**2.517543**	
San Joaquin	2023	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	2638.276559	211937.817	38334.1584	34.91925222	**6.069369**	
San Joaquin	2023	T7 Utility Class 8	Aggregate	Aggregate	Diesel	23.22093261	1080.67322	297.2279374	0.186573576	**5.792209**	
San Joaquin	2023	T7IS	Aggregate	Aggregate	Gasoline	2.419215607	60.0081934	48.40366587	0.018776223	**3.195967**	
San Joaquin	2023	UBUS	Aggregate	Aggregate	Gasoline	49.369827	3719.55506	197.479308	0.791708132	**4.698139**	
San Joaquin	2023	UBUS	Aggregate	Aggregate	Diesel	78.33872382	5427.523	313.3548953	0.602229331	**9.012386**	
San Joaquin	2025	All Other Buses	Aggregate	Aggregate	Diesel	67.92171408	3454.27959	604.5032553	0.395338932	**8.737514**	
San Joaquin	2025	LDA	Aggregate	Aggregate	Gasoline	247812.193	10065418.7	1143376.643	340.6379829	**29.54873**	
San Joaquin	2025	LDA	Aggregate	Aggregate	Diesel	620.8563183	19917.7375	2643.071074	0.459921869	**43.30678**	
San Joaquin	2025	LDT1	Aggregate	Aggregate	Gasoline	20969.62889	704503.526	90823.61908	28.55436416	**24.67236**	
San Joaquin	2025	LDT1	Aggregate	Aggregate	Diesel	5.057977491	54.7985719	14.33247387	0.002232746	**24.54313**	
San Joaquin	2025	LDT2	Aggregate	Aggregate	Gasoline	105887.2734	4297523.94	491668.9279	179.0193905	**24.00591**	
San Joaquin	2025	LDT2	Aggregate	Aggregate	Diesel	305.5941154	13558.4186	1463.961841	0.410704288	**33.01261**	
San Joaquin	2025	LHD1	Aggregate	Aggregate	Gasoline	9450.489324	335570.018	140798.2097	34.90157426	**9.614753**	
San Joaquin	2025	LHD1	Aggregate	Aggregate	Diesel	8447.684296	292201.982	106261.2413	18.38163512	**15.89641**	
San Joaquin	2025	LHD2	Aggregate	Aggregate	Gasoline	1129.168714	39496.2437	16822.93138	4.600897482	**8.584465**	
San Joaquin	2025	LHD2	Aggregate	Aggregate	Diesel	3098.911716	112092.227	38980.41096	8.493201579	**13.19788**	
San Joaquin	2025	MCY	Aggregate	Aggregate	Gasoline	12009.69999	64631.0827	24019.39998	1.598967718	**40.42051**	
San Joaquin	2025	MDV	Aggregate	Aggregate	Gasoline	92446.53152	3253692.9	417141.1232	169.0306745	**19.24913**	
San Joaquin	2025	MDV	Aggregate	Aggregate	Diesel	1393.091492	51951.9772	6420.977754	2.139013823	**24.28782**	
San Joaquin	2025	MH	Aggregate	Aggregate	Gasoline	1345.73466	11738.0981	134.6272954	2.660033836	**4.412763**	
San Joaquin	2025	MH	Aggregate	Aggregate	Diesel	631.6240768	5453.24118	63.16240768	0.580283559	**9.397546**	
San Joaquin	2025	Motor Coach	Aggregate	Aggregate	Diesel	18.80772922	2514.51501	432.2016174	0.452917647	**5.551815**	
San Joaquin	2025	OBUS	Aggregate	Aggregate	Gasoline	170.8324994	7309.03024	3418.016649	1.52248184	**4.800734**	

San Joaquin	2025	PTO	Aggregate	Aggregate	Diesel	0	20105.4227	0	3.98427046	**5.046199**		
San Joaquin	2025	SBUS	Aggregate	Aggregate	Gasoline	131.6189784	7271.29468	526.4759134	0.71341232	**10.19228**		
San Joaquin	2025	SBUS	Aggregate	Aggregate	Diesel	490.2787139	10849.6548	7099.235777	1.320741795	**8.214819**	**MHD**	
San Joaquin	2025	T6 CAIRP Class 4	Aggregate	Aggregate	Diesel	10.57610418	697.742444	243.038874	0.077548733	**8.997471**	**8.711536**	
San Joaquin	2025	T6 CAIRP Class 5	Aggregate	Aggregate	Diesel	14.00551629	958.755772	321.8467643	0.106617779	**8.992457**		
San Joaquin	2025	T6 CAIRP Class 6	Aggregate	Aggregate	Diesel	47.29566683	2488.35531	1086.854424	0.272426579	**9.13404**		
San Joaquin	2025	T6 CAIRP Class 7	Aggregate	Aggregate	Diesel	78.11014265	15772.0773	1794.971078	1.605687139	**9.822634**		
San Joaquin	2025	T6 Instate Delivery Class 4	Aggregate	Aggregate	Diesel	252.424868	8475.97193	3602.102866	1.019116289	**8.316982**		
San Joaquin	2025	T6 Instate Delivery Class 5	Aggregate	Aggregate	Diesel	162.4907366	5516.89416	2318.742812	0.666350411	**8.279269**		
San Joaquin	2025	T6 Instate Delivery Class 6	Aggregate	Aggregate	Diesel	708.1406495	23932.0747	10105.16707	2.87788442	**8.315857**		
San Joaquin	2025	T6 Instate Delivery Class 7	Aggregate	Aggregate	Diesel	127.2799027	6929.15534	1816.284212	0.825964977	**8.389164**		
San Joaquin	2025	T6 Instate Other Class 4	Aggregate	Aggregate	Diesel	457.3843802	18839.146	5287.363435	2.200026822	**8.563144**		
San Joaquin	2025	T6 Instate Other Class 5	Aggregate	Aggregate	Diesel	1233.945904	53254.2945	14264.41465	6.208167542	**8.578102**		
San Joaquin	2025	T6 Instate Other Class 6	Aggregate	Aggregate	Diesel	939.5521797	39531.7219	10861.2232	4.582174014	**8.627285**		
San Joaquin	2025	T6 Instate Other Class 7	Aggregate	Aggregate	Diesel	601.2468734	26326.7381	6950.413857	3.002944814	**8.766974**		
San Joaquin	2025	T6 Instate Tractor Class 6	Aggregate	Aggregate	Diesel	11.09411194	521.271565	128.2479341	0.060836197	**8.568444**		
San Joaquin	2025	T6 Instate Tractor Class 7	Aggregate	Aggregate	Diesel	742.8431118	44239.5012	8587.266373	4.878765067	**9.067766**		
San Joaquin	2025	T6 OOS Class 4	Aggregate	Aggregate	Diesel	6.191325924	405.515484	142.2766697	0.044545776	**9.103343**		
San Joaquin	2025	T6 OOS Class 5	Aggregate	Aggregate	Diesel	8.158025029	556.294323	187.4714152	0.061223253	**9.086324**		
San Joaquin	2025	T6 OOS Class 6	Aggregate	Aggregate	Diesel	27.75525515	1453.61298	637.8157633	0.156720574	**9.275189**		
San Joaquin	2025	T6 OOS Class 7	Aggregate	Aggregate	Diesel	42.05361037	10569.5739	966.3919663	1.066856767	**9.90721**		
San Joaquin	2025	T6 Public Class 4	Aggregate	Aggregate	Diesel	30.96340517	1050.77782	158.8422685	0.137051326	**7.667039**		
San Joaquin	2025	T6 Public Class 5	Aggregate	Aggregate	Diesel	77.40598482	2785.90976	397.0927021	0.357713881	**7.788095**		
San Joaquin	2025	T6 Public Class 6	Aggregate	Aggregate	Diesel	124.4648645	4446.56253	638.5047549	0.566454177	**7.849819**		
San Joaquin	2025	T6 Public Class 7	Aggregate	Aggregate	Diesel	148.2002736	6742.4666	760.2674038	0.856702113	**7.870258**		
San Joaquin	2025	T6 Utility Class 5	Aggregate	Aggregate	Diesel	33.80713566	1371.26265	432.7313364	0.154052822	**8.90125**		
San Joaquin	2025	T6 Utility Class 6	Aggregate	Aggregate	Diesel	6.404694197	258.753793	81.98008572	0.028984726	**8.927246**		
San Joaquin	2025	T6 Utility Class 7	Aggregate	Aggregate	Diesel	7.233394318	359.399463	92.58744727	0.039964166	**8.993043**		
San Joaquin	2025	T6TS	Aggregate	Aggregate	Gasoline	531.0756316	27321.54	10625.76124	5.695995374	**4.796623**	**HHD**	
San Joaquin	2025	T7 CAIRP Class 8	Aggregate	Aggregate	Diesel	1559.383676	317454.145	35834.63687	51.17555421	**6.203238**	**5.689878**	
San Joaquin	2025	T7 NNOOS Class 8	Aggregate	Aggregate	Diesel	1399.986354	379791.503	32171.68641	59.50406302	**6.382615**		
San Joaquin	2025	T7 NOOS Class 8	Aggregate	Aggregate	Diesel	592.9033383	137971.507	13624.91871	22.13949036	**6.231919**		
San Joaquin	2025	T7 Other Port Class 8	Aggregate	Aggregate	Diesel	31.09466321	5773.39367	508.7086901	0.965450648	**5.979999**		
San Joaquin	2025	T7 POAK Class 8	Aggregate	Aggregate	Diesel	137.4284865	13680.6366	2248.330039	2.333991731	**5.861476**		
San Joaquin	2025	T7 POLA Class 8	Aggregate	Aggregate	Diesel	157.478818	19849.822	2576.353462	3.419583803	**5.804748**		
San Joaquin	2025	T7 Public Class 8	Aggregate	Aggregate	Diesel	386.4284577	16615.451	1982.377988	3.157962941	**5.261446**		
San Joaquin	2025	T7 Single Concrete/Transit Mix Class 8	Aggregate	Aggregate	Diesel	121.0999578	8533.43151	1140.761603	1.428680336	**5.972947**		
San Joaquin	2025	T7 Single Dump Class 8	Aggregate	Aggregate	Diesel	518.3758674	30855.2217	4883.100671	5.328325632	**5.790791**		
San Joaquin	2025	T7 Single Other Class 8	Aggregate	Aggregate	Diesel	1163.187559	58572.1124	10957.22681	9.897066107	**5.918129**		
San Joaquin	2025	T7 SWCV Class 8	Aggregate	Aggregate	Diesel	167.5568448	10862.3368	770.7614863	4.227120943	**2.569677**		
San Joaquin	2025	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	2947.082282	219605.844	42821.10556	35.73125002	**6.146044**		
San Joaquin	2025	T7 Utility Class 8	Aggregate	Aggregate	Diesel	24.5522509	1096.54573	314.2688115	0.187591616	**5.845388**		
San Joaquin	2025	T7IS	Aggregate	Aggregate	Gasoline	1.372290651	54.2951776	27.45679134	0.014900233	**3.643915**		
San Joaquin	2025	UBUS	Aggregate	Aggregate	Gasoline	50.67993554	3818.16315	202.7197421	0.812722391	**4.697992**		
San Joaquin	2025	UBUS	Aggregate	Aggregate	Diesel	73.34639924	4977.17265	293.3855969	0.526331001	**9.456355**		

On-road Mobile (Operational) Energy Usage

Unmitigated:

Step 1:

Therefore:

Average Daily VMT:

30,429	Source: CalEEMod

Step 2: Given:

Fleet Mix (CalEEMod Output)

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
37.37%	3.63%	11.71%	10.11%	1.74%	0.42%	0.87%	32.21%	0.03%	0.02%	1.58%	0.08%	0.23%

And:

Gasoline MPG Factors for each Vehicle Class - Year 2025 (EMFAC2021 Output)

LDA	LDT1	LDT2	MDV	MCY	MH
29.549	24.672	24.006	19.249	40.421	4.413

Diesel MPG Factors for each Vehicle Class - Year 2023 (EMFAC2021 Output)

LHD1	LHD2	MHD	HHD	OBUS	UBUS	SBUS
15.896	13.198	8.712	5.690	4.801	9.456	8.215

Therefore:

Weighted Average MPG Factors

Gasoline: **26.8** Diesel: **6.4**

Step 3: **Therefore:**

733	**daily gallons of gasoline**	**1,694**	**daily gallons of diesel**

or

267,504	**annual gallons of gasoline**	**618,486**	**annual gallons of diesel**

Off-road Mobile (Construction) Energy Usage

Note: For the sake of simplicity, and as a conservative estimation, it was assumed that all off-road vehicles use diesel fuel as an energy source.

Given Factor:	**634.6**	**metric tons**	**CO2**	**(provided in CalEEMod Output File)**
Conversion Factor:	2204.6262	pounds	per metric ton	
Intermediate Result:	**1,399,062**	**pounds**	**CO2**	
Conversion Factor:	22.38	pounds	CO2 per 1 gallon of diesel fuel	Source: U.S. EIA, 2016
Final Result:	**62,514**	**gallons**	**diesel fuel**	http://www.eia.gov/tools/faqs/faq.cfm?id=307&t=11

Mitigated Onsite Scenario	Total CO2 (MT/yr) (provided in CalEEMod Output File)
Site Preparation	151.7451
Grading	247.3924

On-road Mobile (Construction) Energy Usage - Site Preparation

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

18

Worker Trip Length (miles) (CalEEMod Output)

16.8

Therefore:

Average Worker Daily VMT:

302

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2021 Output) - Year 2023

LDA	LDT1	LDT2
28.55	23.82	22.98

Therefore:

Weighted Average Worker MPG Factor

26.0

Step 3: **Therefore:**

11.6 Worker daily gallons of gasoline

Step 4: 90 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,048** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Grading

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1:

Total Daily Worker Trips (CalEEMod Output)

20

Total Hauling Trips (CalEEMod Output)

750

Worker Trip Length (miles) (CalEEMod Output)

16.8

Hauling Trip Length (miles) (CalEEMod Output)

20

Therefore:

Average Worker Daily VMT:

336

Average Vendor Daily VMT:

15,000

Step 2: Given:

Assumed Fleet Mix for Workers

LDA	LDT1	LDT2
0.5	0.25	0.25

(Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

Fleet Mix for Workers (Conservative Estimate)

MHD	HHD
0%	100%

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2021 Output) - Year 2023

LDA	LDT1	LDT2
28.55	23.82	22.98

Diesel:

MHD	HHD
8.58	5.60

Therefore:

Weighted Average Worker MPG Factor

26.0

Weighted Average Hauling (Diesel) MPG Factor

5.6

Step 3: **Therefore:**

12.9 Worker daily gallons of gasoline

Step 4: 90 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,164** **Total gallons of gasoline**

Therefore:

2,680 **Total gallons of diesel**

On-road Mobile (Construction) Energy Usage - Building Construction

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1:

Total Daily Worker Trips (CalEEMod Output)

1,834

Note: Assumes 5% of workers are on-site on a given day.

Total Daily Vendor Trips (CalEEMod Output)

716

Note: Assumes 5% of workers are on-site on a given day.

Worker Trip Length (miles) (CalEEMod Output)

16.8

Vendor Trip Length (miles) (CalEEMod Output)

6.6

Therefore:

Average Worker Daily VMT:

30,811

Average Vendor Daily VMT:

4,726

Step 2:

Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

Assumed Fleet Mix for Vendors

Fleet Mix for Workers (CalEEMod Output)

MHD	HHD
100%	0%

And:

MPG Factors for each Vehicle Class (from EMFAC2021) - Year 2023

Gasoline:

LDA	LDT1	LDT2
28.55	23.82	22.98

Diesel:

MHD	HHD
8.58	5.60

Therefore:

Weighted Average Worker (Gasoline) MPG Factor

26.0

Weighted Average Vendor (Diesel) MPG Factor

8.6

Step 3:

Therefore:

1,186 **Worker daily gallons of gasoline**

Therefore:

551 **Vendor daily gallons of diesel**

Step 4:

150 **# of Days (CalEEMod Output)**

Therefore:

177,919 **Total gallons of gasoline**

Therefore:

82,624 **Total gallons of diesel**

On-road Mobile (Construction) Energy Usage - Paving

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

15

Worker Trip Length (miles) (CalEEMod Output)

16.8

Therefore:

Average Worker Daily VMT:

252

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2021 Output) - Year 2023

LDA	LDT1	LDT2
28.55	23.82	22.98

Therefore:

Weighted Average Worker MPG Factor

26.0

Step 3: **Therefore:**

9.7 Worker daily gallons of gasoline

Step 4: 60 **# of Days (CalEEMod Output)**

Therefore:

Result: **582** **Total gallons of gasoline**

On-road Mobile (Construction) Energy Usage - Architectural Coating

Note: Year 2021 MPG factors were derived for construction-releated energy consumption (for the sake of a conservative estimate).

Step 1: **Total Daily Worker Trips (CalEEMod Output)**

367	5%	**18**

Note: Assumes 5% of workers are on-site on a given day.

Worker Trip Length (miles) (CalEEMod Output)

16.8

Therefore:

Average Worker Daily VMT:

308

Step 2: Given:

Assumed Fleet Mix for Workers (Percentage mix is provided on Appendix A: Calculation Details for CalEEMOD p. 15)

LDA	LDT1	LDT2
0.5	0.25	0.25

And:

Gasoline MPG Factors for each Vehicle Class (EMFAC2021 Output) - Year 2023

LDA	LDT1	LDT2
28.55	23.82	22.98

Therefore:

Weighted Average Worker MPG Factor

26.0

Step 3: **Therefore:**

11.9 Worker daily gallons of gasoline

Step 4: 120 **# of Days (CalEEMod Output)**

Therefore:

Result: **1,424** **Total gallons of gasoline**

APPENDIX B.3

Health Risk Assessment

ANALYSIS OF PUBLIC HEALTH RISKS

FOR THE

TRACY COSTCO DEPOT

TRACY CALIFORNIA

JUNE 8, 2022

PROJECT TITLE

Tracy Costco Depot

PREPARED BY:

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INTRODUCTION

This Health Risk Assessment (HRA) was prepared to assess potential public health risks that may be present at the proposed Tracy Costco Depot Project in the city of Tracy, San Joaquin County, California. This report analyzes the emissions of toxic air pollutants within the project area and their impacts on public health.

PROJECT DESCRIPTION

PROJECT LOCATION

The Project site is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (see Figure 1). The Project site is within the Tracy Sphere of Influence (SOI) 10-Year Planning Horizon and is immediately adjacent to the Tracy city limits to the north of the site.

The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant agricultural land. The Project site is located within Sections 35 of Township 2 South, Range 4 East Mount Diablo Base Meridian (MDBM). Figure 1 show the Project's vicinity.

EXISTING SURROUNDING USES

Surrounding land uses include warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

PROJECT CHARACTERISTICS

The Project would include the construction and subsequent operation of two Costco Direct Delivery Center (DDC) buildings (approximately 543,325 sf for Building 1 and 1,201,726 sf for Building 2) totaling approximately 1,745,051 sf on the 103.0-acre development portion of the Project site. Building 1 is anticipated to serve as a regional ecommerce fulfillment distribution center primarily for large and bulky items. Building 2 is anticipated to serve as a warehouse for high turnover merchandise sold at warehouse stores and as a pallet repair and a Return to Vendor (RTV) facility. The Project would also include the required circulation, parking, and utility improvements. The site plan is shown in Figure 2.

SCOPE OF RISK ASSESSMENT

Preparation of risk assessments is a three-step process. The first step is to identify potential contaminants that may lead to public health risks. The second step is to assess the magnitude of contaminants that may reach the public (exposure assessment). The last step is to calculate the magnitude of the health risk as a result of exposure to harmful contaminants on the basis of the toxicology of the contaminants.

The Office of Environmental Health Hazard Assessment, and the San Joaquin Valley Air Pollution Control District (SJVAPCD) provide guidance on the procedures that should be used, including, toxicological data for individual contaminants. This risk assessment is based on the guidance provided within these guidance documents. It should be noted that while this risk assessment uses certain procedures and data from these Guidelines, this assessment is not intended to satisfy the reporting requirements under AB-2588 "Air Toxics" Hot Spots program.

The health risks that are evaluated in this study include:

- Residential Cancer Risk (70-year exposure; start at third trimester);
- Workplace Cancer Risk (40-year exposure; start at age 16); and
- Acute and Chronic Hazard Indices.

The 70-year risk applies to residential areas where exposure may potentially occur 24 hours/day, 365 days/year. The 40-year risk is applicable to workplace exposure and therefore accounts for a reduced exposure for the fact that individuals typically would be exposed 8-hrs per day, 5 days per week, and 50 weeks per year. Non-cancer risks can be described as acute (short-term, exposure) or chronic health impacts.

SIGNIFICANCE CRITERIA

The following significance criteria shown in Table 1, based on guidance from the SJVAPCD, are used in this report to assess the significance of public health risks.

TABLE 1 THRESHOLDS OF SIGNIFICANCE FOR PUBLIC HEALTH RISKS

Risk Metric	*Significance Threshold*
Residential Cancer Risk	20 per million
Workplace Cancer Risk	20 per million
Chronic and Acute non-cancer hazard Indices	non-cancer health hazard exposure index of 1.0

SOURCE: SJVAPCD, 2015.

As shown in Table 1, a project that contributes a cancer risk in excess of 20 new cases in a population of one million persons at identified receptors, or a non-cancer hazard index of greater than or equal to 1.0 would be considered to have a significant project-level impact.

EMISSION SOURCES AND EXPOSURE

The main source of toxic air pollutants (TACs) by the proposed Project is diesel particulate matter (DPM) from truck idle and mobile emissions. Based on numerous studies by the California Air Resources Board (ARB), DPM represents the largest single contributor to public health risks. Additionally, in its comprehensive assessment of diesel exhaust, OEHHA analyzed more than 30 studies of people who worked around diesel equipment, including truck drivers, railroad workers, and equipment operators. The studies showed these workers were more likely to develop lung cancer than workers who were not exposed to diesel emissions. These studies provide strong evidence that long-term occupational exposure to diesel exhaust increases the risk of lung cancer. Exposure to diesel exhaust can have immediate health effects. Diesel exhaust

can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Emissions from the following project sources were analyzed and are shown in Table 2:

- Truck on-site and off-site mobile emissions
- Truck on-site idling emissions
- Truck TRUs

TABLE 2: EMISSION SOURCE ASSUMPTIONS

Source Type / Emission	Configuration	Assumptions
On- and Off-site Mobile Diesel Truck Circulation (DPM)	*Modeled as line-volume sources* Release Height = 6 ft Plume Height = 12 ft Plume Width = 12 ft (width of a truck) Line Lengths = based on path of travel	• On-site and off-site travel of 612 trucks per day (Kimley Horn, 2021). • Traveling distance based on proposed site plan layout and anticipated ingress/egress routes. • Both on-site and off-site mobile circulation modeled. • Off-site mobile routes modeled up to approximately 0.25 miles from project site boundaries. • PM_{10} mobile emissions factor provided by EMFAC 2021 (Parameters: San Joaquin County, Annual, Year 2025; emission factor for T7 Tractor Class 8)
On-site Diesel Truck Idling (DPM)	*Modeled as point sources* Release Height = 12 ft Diameter = 0.1 meter Velocity = 57.1 m/s @ 1500 rpm Temperature = 366 K	• On-site Idle of 612 trucks per day (Kimley Horn, 2021) • 5 minutes idling per vehicle • PM_{10} mobile emissions factor provided by CARB's EMFAC2021 idling emission factors for 2025 HHDT diesel trucks.
TRUs (DPM)	*Modeled as point sources* Release Height = 13 ft Diameter = 0.044 meter Velocity = 49.0 m/s Temperature = 501 K	• Trucks are assumed to run their TRUs for 15 minutes per hour. • 34 hp rated TRUs • Emission factor (Source: ARB Guidelines for in-use Diesel-Fueled Transport Refrigeration Units TRU) • 0.53 load factor • 15% of trucks have TRUs bases on fleet mix (Source: ATA)

DAILY TRUCK TRIPS AND ROUTES

The total diesel truck trips generated by the proposed project is based on Technical Memorandum for the proposed project prepared by Kimley Horn in 2021. According to Kimley Horn, the average total daily truck traffic includes 612 heavy-duty truck trips per day. The Technical Memorandum is provided in Appendix 2.

The off-site diesel truck routes were modeled consistent with the trip distribution for heavy trucks as provided in Figure 12 of Kimley Horn's Technical Memorandum (see Appendix 2 of this report for further detail), at least 0.25 miles away from the Project site (in accordance with San Joaquin Valley Air Pollution Control District guidance). As shown in Kimley Horn's Technical Memorandum, the diesel truck trips are anticipated to travel between the Project site I-580 and I-205. The routes from the Project site to and from these routes were modeled based on the ingress/egress points as provided in the Project site plan (see Figure 2 of this report). Consistent with Kimley Horn's Technical Memorandum, it was assumed that all heavy-duty trucks enter at the Schulte Road entrance (located at the northeastern corner of the Project site), and exit at the central exist (located across from Bud Lyons Way). The trucks would use Schulte road to enter and exit the project site.

Separately, the on-site circulation of trucks was modeled to account for the diesel truck travel throughout the entirety of the internal circulation route. Specifically, on-site circulation was modelled to account for internal Project site travel between each of the ingress/egress locations and the circulation pattern that surrounds the warehouses (for docking and loading/unloading) and the diesel truck parking areas.

EMISSION RATES

Table 3 provides emissions rates by source and emissions factors. For calculations, data outputs, and reference documents please see Appendix 1.

TABLE 3: EMISSION RATES BY SOURCE

Source	Pollutant	Volume/Size	Emission Factor	Emissions Pounds/Year
On-site Diesel Truck (Mobile) Circulation	DPM	612 truck trips per day traveling 1.97 miles	0.005584 g/mile	2.71
Off-site Diesel Truck (Mobile) Circulation	DPM	612 truck trips per day	0.005584 g/mile	4.55
On-site Diesel Truck Idling	DPM	612 trucks per day idling 5 min	0.25 g/hr -vehicle	5.13
On-site Diesel TRUs	DPM	612 trucks per day idling for 15 min	0.02 g/hp-hr	6.66

SOURCES: EMFAC 2021; AERMOD; KIMLEY HORN.

EXPOSURE ASSESSMENT

Exposure assessment involves translating the emission rate (e.g., lbs/hr, g/hr) of individual toxic air contaminants into the concentration (e.g., grams/cubic meter g /sec m^2 or parts per million) of each toxic air contaminant. The key step in performing an exposure assessment is the application of an air dispersion model. The dispersion model incorporates the local meteorological data (wind speed, wind direction, local temperature, inversions, etc.), stack height, and exhaust flow characteristics, into the dispersion of individual air contaminant. The Lakes Environmental AERMOD Version 10.2.1 (AERMOD Version 21112) dispersion model was employed for this assessment. The AERMOD output file is shown in Appendix 3.

Modeling Receptors: Receptors were placed at locations of nearby sensitive receptors, including residential and workplace locations. Residential receptors were located at each of the nearby residential receptors, as previously described, as follows:

- A cluster of farmhouses/residences is located along the western portion of the Project site, adjacent to the Project site;
- A cluster of residences is located approximately 2,000 feet to the southwest of the Project site;
- Additional scattered residences are located approximately 2,200 to 3,000 feet to the south and southwest of the Project site;
- Residences are located approximately 900 feet to the southeast of the Project site; and
- An additional residence is located approximately 2,650 feet to the southeast of the Project site.

Additionally, workplace receptors were placed at various locations within the Project site, as well as surrounding the Project site boundary. This allows for an analysis of the receptors that have the potential be most affected by the TACs generated by the proposed project. Lastly, a receptor 21 x 21 receptor modeling grid was included in the modeling, at a distance of 350 meters apart, to provide additional resolution to the modeling (it should be noted that although a receptor modeling grid is not required by the SJVAPCD, it provides additional refinement to the TAC risk contours).

Meteorological Data: Five years of meteorological data was used in the exposure assessment. The meteorological ("Met") data (wind speed, wind direction, temperature, etc.) were recorded at the Tracy, CA location for the latest years of data available from the SJVAPCD. This location was the closest location MET data was available.

Building Downwash: The effects of building downwash on air dispersion from the Project warehouses and the warehouse located just to the north of the Project site (i.e. the Southern Carlson Distribution Center) were modeled within AERMOD.

RISK ASSESSMENT

Once the emissions rates of individual air contaminants have been calculated, and an air dispersion model has been run through AERMOD, the next step in determining health risks is to

determine the cancer risk, and acute and chronic incident rates. Period and 1-hour dispersion files we used in combination with HARP-2 risk modelling software to calculate risk scenarios for residential, and workplace cancer rates, as well as acute and chronic incidences. The Hotspots Analysis and Reporting Program (HARP) is a software suite used to assist with the programmatic requirements of the Air Toxics "Hot Spots" Program [Assembly Bill (AB) 2588]. HARP combines the tools needed to implement the requirements of AB 2588, such as reporting a facilities emissions inventory, determining a facilities prioritization score, conducting air dispersion modeling, and performing a facility health risk assessment. This study utilized the HARP2 Air Dispersion and Risk Tool with dispersion plot files created in AERMOD. After the risk assessment was complete, HARP-2 plot files were then imported back into AREMOD for spatial and visual representation, and analysis of impact areas.

The Intake Rate Percentile sets the intake rate at which a person is exposed to the air pollutant. This study utilized the high-end intake rate to assess risk at the 95th percentile exposure rate for risk scenarios (see Appendix 4 HARP-2 project summary report). Additionally, residential cancer risk is assessed using a 70-year exposure duration starting at the third trimester; workplace cancer risks are assessed at a 40-year exposure duration with age 16 being the first potential exposure year.

RISK ASSESSMENT RESULTS

The results of the risk analysis indicate that cancer risks vary depending on the exposure scenario (residential or worker) and on location. As would be expected, locations nearest the Project site have the greatest exposure and the associated risks are considerably lower as distance from the project site increases. Table 4 displays the residential and workplace cancer risk, and acute and chronic incidence rate results at nearest receptors. Figure 3 provides wind patterns at the Tracy, CA location where meteorological data was used for the modeling.

TABLE 4: SUMMARY OF MAXIMUM HEALTH RISKS

RISK METRIC	*MAXIMUM RISK*	*SIGNIFICANCE THRESHOLD*	*IS THRESHOLD EXCEEDED?*
Residential Cancer Risk (70-year exposure)	0.52	20 per million	No
Workplace Cancer Risk (40-year exposure)	0.72	20 per million	No
Chronic (non-cancer)	<0.01	Hazard Index ≥1	No
Acute (non-cancer) [1]	0	Hazard Index ≥1	No

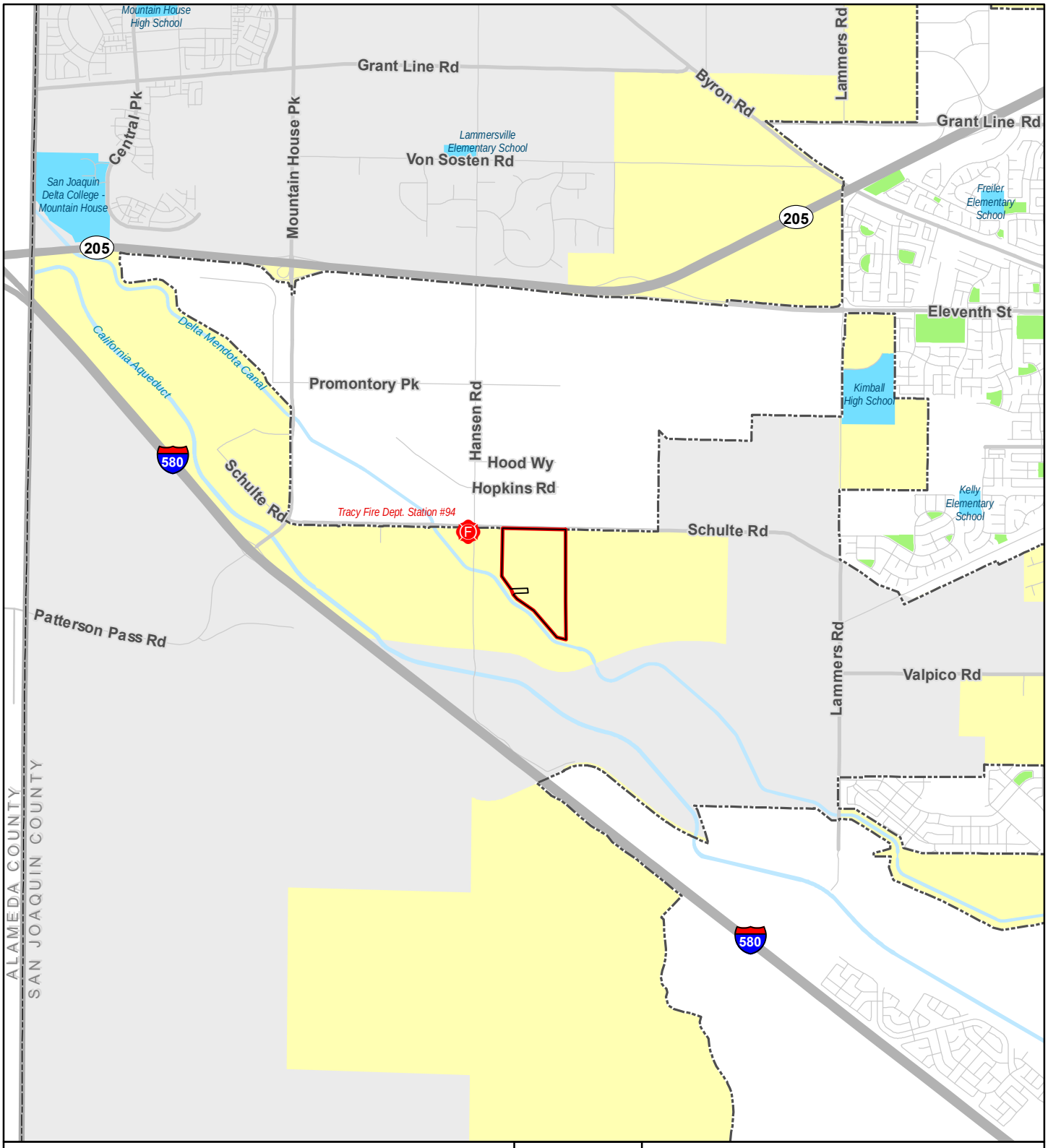
SOURCES: AERMOD 10.2.1 (LAKES ENVIRONMENTAL SOFTWARE, 2022); AND HARP-2 AIR DISPERSION AND RISK TOOL.

The TAC emissions from the project result from the on-site and off-site truck travel, and on-site idling of diesel-fueled vehicles. The nearest sensitive receptors are those that surround the Project site, to the west, southwest, and southeast.

Overall, the results show that residential 70-year cancer risk would remain below the threshold of 20 in a million at areas near the project site that contain residential receptors, at 0.52 per million (at the location of maximum cancer risk). The sensitive receptor with this maximum cancer risk is located at 25730 Hansen Road, Tracy, CA 95377, to the west of the Project site. As shown in Figure 3, the wind patterns in the area generally blow from the west to the east. The modeling results show that the residences with the highest risk are the farmhouses/residences located along the western portion of the Project site, adjacent to the Project site. However, it is very unlikely any individual would remain at the same location for 70 years; therefore, this result represents a conservative estimate.

The results also show that 40-year workplace cancer risk would remain below the threshold of 20 in a million (the SJVPACD threshold) at the project site, with a maximum value measured within the Project site at 0.72 per million (at the location of maximum measured cancer risk).

Chronic or long-term exposures and Acute exposure to DPM can result is non-cancer health effects. Chronic and Acute Non-Cancer Hazards results show that the acute and chronic risk on and near the project site would remain below the hazard index of ≥1.



Legend

- Project Site/ Annexation Area
- Development Area
- Tracy City Limits
- Tracy Sphere of Influence
- San Joaquin County
- School
- Park
- Fire Station

N

0 ¼ ½

Miles

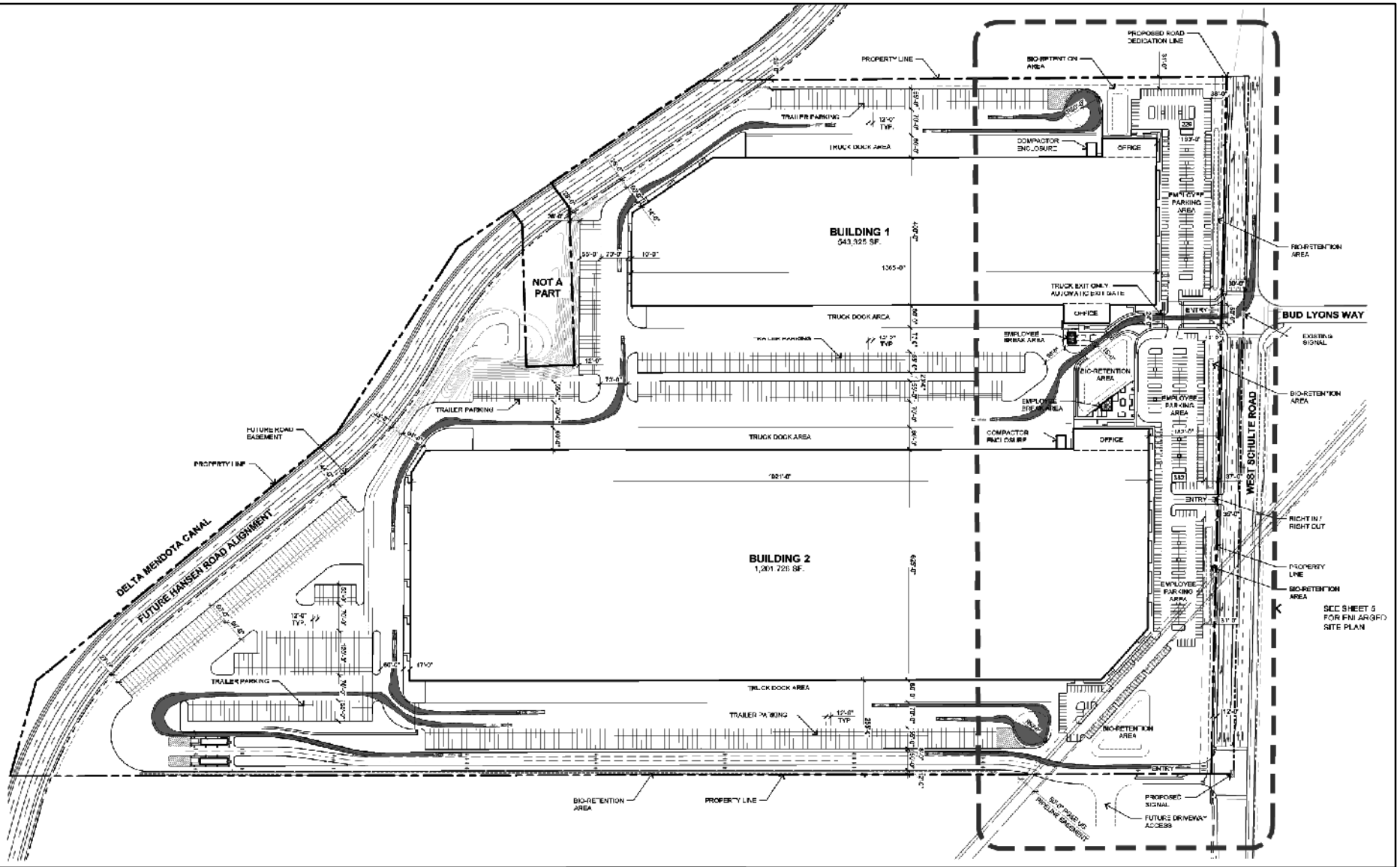
Sources: San Joaquin County GIS. Map date: October 25, 2019. Revised: June 28, 2021.

TRACY COSTCO DEPOT PROJECT

Figure 2.0-2. Project Vicinity

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

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N

0 150 300

Feet

TRACY COSTCO DEPOT PROJECT

Figure 2.0-4.Site Plan

Source: David Babcock + Associates, June 16, 2021. Map date: August 26, 2021.

De Novo Planning Group
A Land Use Planning, Design, and Environmental Firm

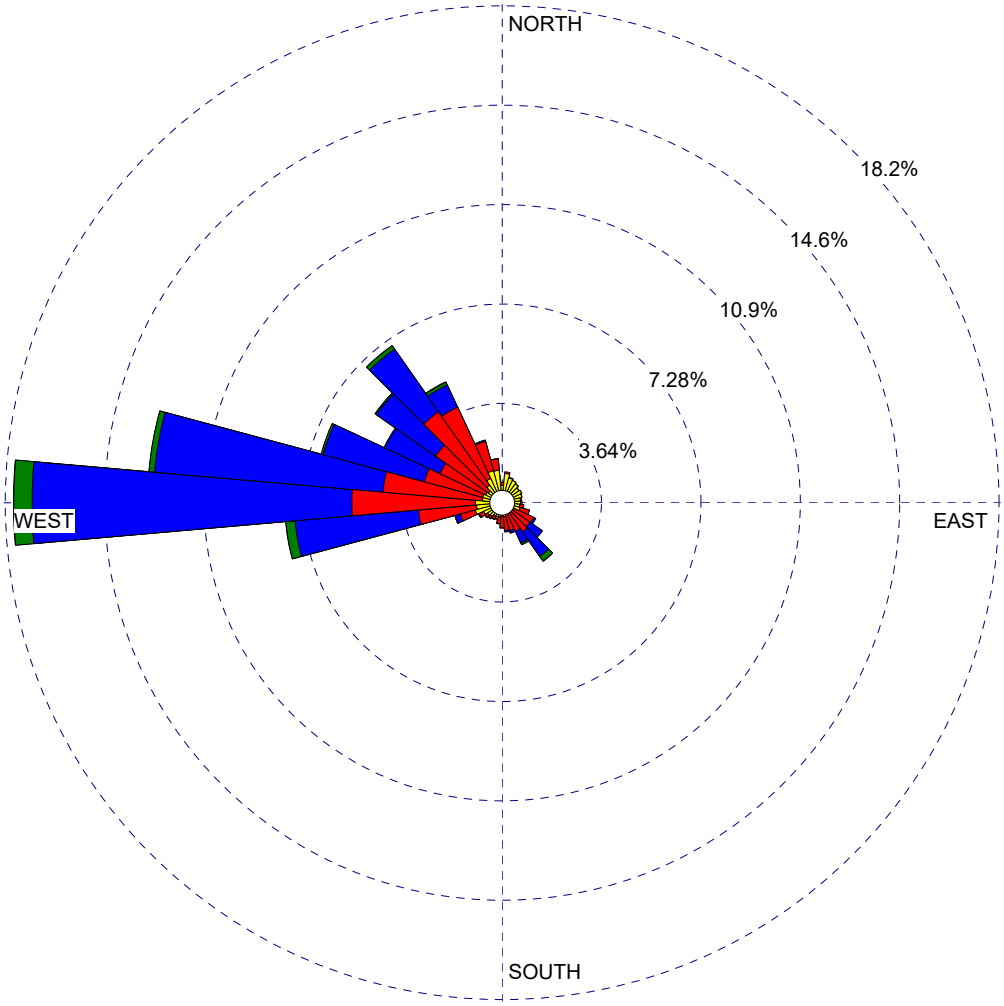
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WIND ROSE PLOT:

Station #99008

DISPLAY:

Wind Speed
Direction (blowing from)



WIND SPEED
(Knots)

- >= 21.58
- 17.11 - 21.58
- 11.08 - 17.11
- 7.00 - 11.08
- 4.08 - 7.00
- 0.97 - 4.08

Calms: 0.86%

COMMENTS:	DATA PERIOD: **Start Date: 1/1/2004 - 00:00** **End Date: 12/31/2008 - 23:59**	COMPANY NAME:	
		MODELER:	
	CALM WINDS: **0.86%**	TOTAL COUNT: **43848 hrs.**	
	AVG. WIND SPEED: **9.41 Knots**	DATE: **1/28/2022**	PROJECT NO.:

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REPORT PREPARERS

This document was prepared by De Novo Planning Group, Inc. of El Dorado Hills under the direction of the City of Tracy. De Novo Planning Group staff participating in document preparation included the following:

- Steve McMurtry, Principal
- Josh Smith, Senior Planner

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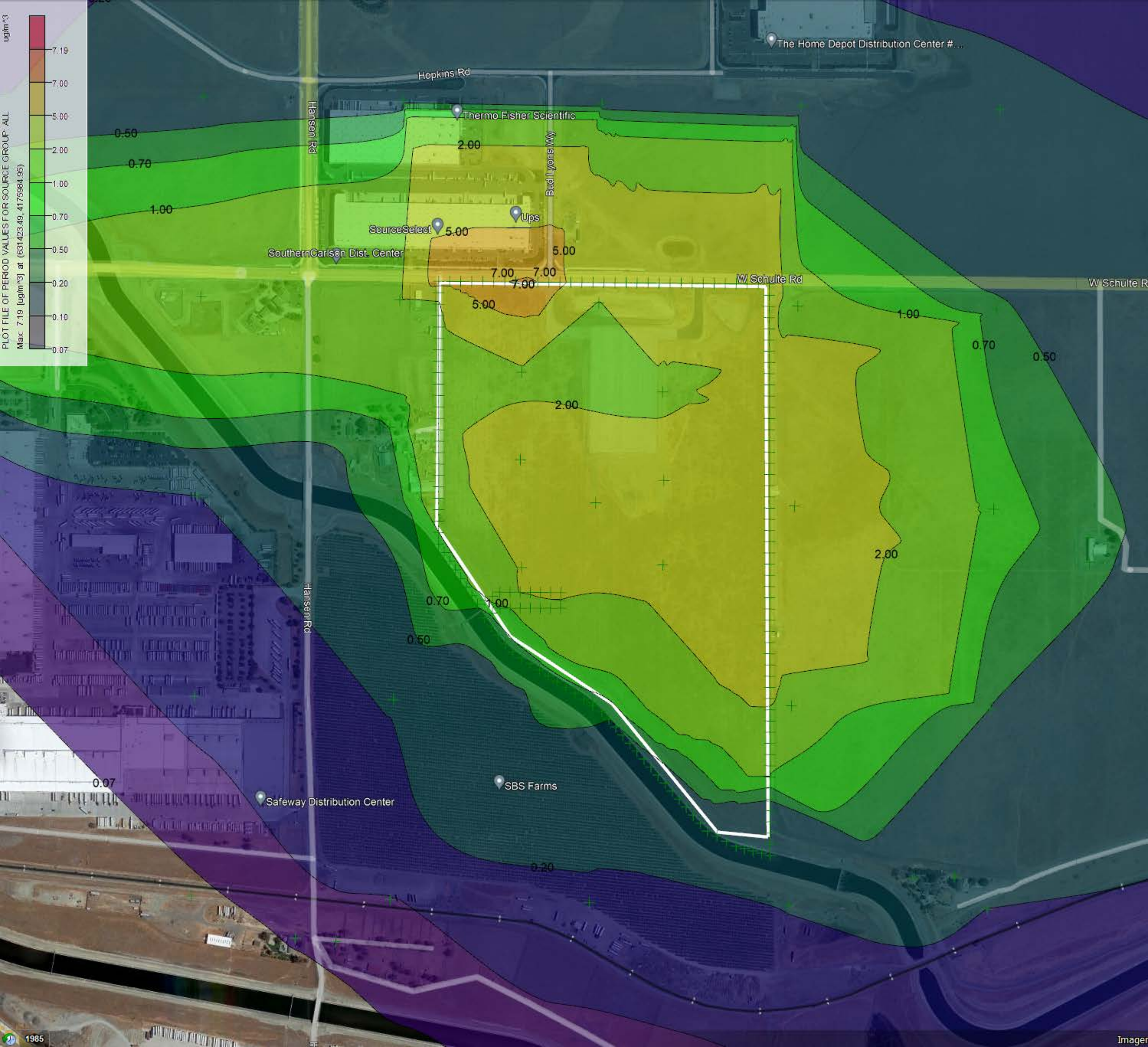
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Residential Cancer Risk Contours


ug/m^3
7.19
7.00
5.00
2.00
1.00
0.70
0.50
0.20
0.10
0.07
PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL
Max: 7.19 [ug/m^3] at (631423.49, 4175984.95)
The Home Depot Distribution Center #...
Hopkins Rd
Hansen Rd
Thermo Fisher Scientific
Bud Lyons Wy
Ups
SourceSelect
SouthernCarlson Dist. Center
W Schulte Rd
W Schulte R
0.50
0.70
1.00
2.00
5.00
7.00
SBS Farms
Safeway Distribution Center
0.07
0.20
1985
Imager

Workplace Risk Contours

ug/m^3
0.722
0.700
0.500
0.200
0.100
0.070
0.050
0.020
0.010
0.007
PLOT FILE OF PERIOD VALUES FOR SOURCE GROUP: ALL
Max: 0.722 [ug/m^3] at (631423.49, 4175984.95)
FedEx Ground
Fedex Distribution
Hood Wy
Hansen Rd
The Home Depot Distribution Center #...
Hopkins Rd
Thermo Fisher Scientific
Bud Lyons Wy
Ups
SourceSelect
SouthernCarlson Dist. Center
W Schulte Rd
0.200
0.500
0.700
0.100
0.070
0.050
0.020
0.007
SBS Farms
Safeway Distribution Center
1985

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Appendix 1 - Emissions Calculations:

Source: EMFAC2021 (v1.0.1) Emissions Inventory
Region Type: County
Region: San Joaquin
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC202x Categories
Units: miles/day for CVMT and EVMT, trips/day for Trips, kWh/day for Energy Consumption, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	**PM10_RUNEX**
San Joaquin	2025	T7 Tractor Class 8	Aggregate	Aggregate	Diesel	**0.0055837**

Mobile Truck Emissions - On-site Mobile

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	1.974096	miles	AERMOD
2. # of trucks per day (total):	612	trucks	Kimley Horn
3. Proportion of project site traveled per truck per day:	0.5		Based on site plan and layout.
3. PM10 Mobile Em. Factor (San Joaquin County, Year 2025 Aggregate MPH, T7 Tractor Class 8:			**0.005584** g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

3.3729648 g/day-all trucks
0.00743611 lbs/day-all trucks
2.71417856 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000620 lbs/hour-all trucks

Mobile Truck Emissions - Off-site Mobile - Exit headed West

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.71023	miles	AERMOD
2. # of truck trips per day:	612	truck trips	Kimley Horn
3. DPM Mobile EF (San Joaquin County, Year 2025 Aggregate MPH, T7 Tractor Class 8):			EMFAC2021 (v1.0.1)
Note: T7 Tractor Class 8 EF was used for a conservative EF (large truck class).	**0.0055837**	g/mile	

Therefore:
Total daily PM10 On-site Mobile Emissions Generated:

2.42701549 g/day-all trucks
0.00535065 lbs/day-all trucks
1.95298612 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000446 lbs/hour-all trucks

Mobile Truck Emissions - Off-site Mobile - Entrance from West

meters per mile: 1609.34 pounds per gram: 0.002205

Assumptions:			Source:
1. Distance travelled on-site per truck (line segment):	0.94598	miles	AERMOD
2. # of truck trips per day (prorated - 6 routes):	612	truck trips	Kimley Horn
3. DPM Mobile EF (San Joaquin County, Year 2025 Aggregate MPH, T7 Tractor Class 8):			EMFAC2021 (v1.0.1)
Note: T7 Tractor Class 8 EF was used for a conservative EF (large truck class).		**0.0055837**	g/mile

Therefore:
Total daily PM10 On-site Mobile Emissions Generated by the project:

3.23262622 g/day-all trucks
0.00712671 lbs/day-all trucks
2.60125003 lbs/year-all trucks

Max Hr Emissions
Two times the average trip generation over the course of 1 hour, based on the given 24-hour daily totals (conservative estimate)

0.000594 lbs/hour-all trucks

Truck Idling

CARB EMFAC2021 idling emission factors for 2022 HHDT diesel trucks: PM10 **0.25** g/hr-truck Source: CARB correspondance

0.010416667	g/5 minutes-truck	Note: assuming 5 minutes of active idling per truck
0.010416667	g/day-truck	
612	Total # of trucks per day	Source: Kimley Horn
6.375	g/day-all trucks	
2326.875	g/year-all trucks	
5.129875163	lbs/year-all trucks	
0.265625	g/hr-all trucks	
0.004427083	g/min-all trucks	
7.37847E-05	g/sec-all trucks	

pounds per gram: 0.002205

As provided by the Kimley Horn Traffic Study (2021): 63 Peak hour truck trips (maximum peak hour truck trips is used for the sake of a conservative analysis)

0.651041667	g/5 minutes-26 vehicles
0.0014353	lbs/5 minutes-26 vehicles

Annual Emissions:	**0.366419654**	lbs/year-all trucks for each of the	**14** idling points
Max Hr Emissions:	**0.0001025**	for each sampling point, for max 1 hr	

Truck TRU (Idling)

pounds per gram: 0.002205

0.02 g/hp-hr source: ARB
34 hp rated TRU engines

0.15 15% of trucks are refrigerated trucks (based on the # of 500,000 trucks in the U.S being reefers and approximately 3.2 million trucks in use nationwide). Source ATA

0.53 Load Factor of 0.53 based Walmart Riverwalk Marketplace HRA Impact Sciences, Inc

0.25 Trucks are expected to run their TRUs for 15 minutes per hour (Leland Vilalvazo, phone conversation) On/Off Cycle Factor

612 Total # of trucks per day (note: truck trips are round trips; hence, total # of trucks is equal to half the number of truck trips)
Source: Kimley Horn
1 Max hours trucks are assumed to be idle on-site

8.27118 Emissions (g/day)

Total	
8.27118	**Emissions (g/day)**
3,019	**Emissions (g/year)**
6.656	**Emissions (lbs/year)**
0.475	**Emissions (lbs/year)**

Note: For each of the 14 point sources

Total Max 1 Hr	
1.0338975	**Emissions (g/hr)**
1.0338975	**Emissions (g/hour)**
0.00228	**Emissions (lbs/hour)**
0.0001628	**Emissions (lbs/hour)**

Note: For each of the 14 point sources

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Appendix 2 – Trip Generation Technical Memorandum:

Land Uses	Project Size	AM PEAK HOUR			PM PEAK HOUR			Daily[3]
		Total Peak Hour	IN	OUT	Total Peak Hour	IN	OUT	
Trip Generation Rates								
Project Use								
Costco Ecommerce Warehouse[1]	- ksf	0.23	94%	6%	0.05	21%	79%	2.18
Trips Generated								
Building 1	**543.326 ksf**	**125**	**118**	**7**	**27**	**6**	**21**	**1183**
Passenger Cars[2]		*86*	*81*	*5*	*21*	*5*	*16*	*802*
Trucks[2]		*39*	*37*	*2*	*6*	*1*	*5*	*381*
Building 2	**1,201.727 ksf**	**276**	**259**	**17**	**60**	**13**	**47**	**2,617**
Passenger Cars[2]		*190*	*179*	*11*	*47*	*10*	*37*	*1774*
Trucks[2]		*86*	*80*	*6*	*13*	*3*	*10*	*843*
TOTAL		***401***	***377***	***24***	***87***	***19***	***68***	***3,800***
Passenger Cars		***276***	***260***	***16***	***68***	***15***	***53***	***2,576***
Trucks		***125***	***117***	***8***	***19***	***4***	***15***	***1,224***

Trip Rates

	AM	PM	AM+PM	Daily	AM+PM/Daily
ITE LU 154	0.08	0.1	0.18	1.4	12.9%
Costco	0.23	0.05	0.28	**2.2**	12.9%

NOTES

1. Trip generation provided by Kittleson Tracy Costco Depot Transportation Impact Analysis Report (August 28, 2017)

2. ITE guidance for high-cube and warehousing facilities used, 2016. The percentage of passenger car vehicles for Short-Term Storage, Transload, & Cold Storage is the following:
Daily: 67.8%
AM: 69.2%
PM: 78.3%

3. Daily trip rate was calculated based on ratios from ITE LU 154.

Kimley»Horn

MEMORANDUM

From: Frederik Venter, PE and Colin Ogilvie | Kimley-Horn and Associates

To: Robert Armijo, PE | City of Tracy

Date: December 16, 2021

Re: **Costco Direct Delivery Center Traffic Analysis**

---

1. Executive Summary

The proposed Costco Direct Delivery Center (Project) consists of two buildings totaling 1,782,317 square feet of warehouse space located south of Old Schulte Road.

The Project proposes three driveways along Old Schulte Road (two signals and one right-in, right-out).

The project will generate 401 AM and 87 PM peak hour trips. In the AM 30.8% and in the PM 21.7% will be trucks, respectively.

The following sections summarize the findings of this report:

Traffic Review

VMT Analysis

The proposed Costco distribution warehouse project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.2 VMT per Employee. The evaluation tool estimates that the Project would generate 24.8 VMT per Employee, and the Project exceeds the threshold by 170%.

TDM Program

This program recommends TDM measures that would individually reduce the Project's VMT and trips with the goal of obtaining a feasible maximum of 15% VMT reduction. **Table 4** lists the toolbox of potential TDM measures that could partially mitigate the Project's VMT impact. Maximum TDM reductions are provided for each TDM element. The applicant will select specific TDM measures in consultation with the City to partially mitigate the VMT impact.

This TDM program aims to achieve a feasible maximum of 15% VMT reduction, with the opportunity for XX% VMT reduction coming from the VMT Banking Fee Program as discussed after this section.

For the TDM program, the following TDM measures are being proposed:

1. TDM Measure 1
2. TDM Measure 2
3. TDM Measure 3

VMT Banking Fees

The City of Tracy VMT Banking Fee Program is a programmatic approach to respond to the need for feasible VMT mitigation programs. Programmatic approaches that rely on collectively funding larger projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The VMT Banking Fee Program calculates the cost per VMT reduction as $633.11. Therefore, to achieve a the XX% reduction needed after implementation of the TDM program, the project would be responsible to pay $XX.XX. This is calculated as XX% being equivalent to a 1.0 VMT per employee reduction. Since there are XX employees and each employee needs to reduce by 1.0 VMT at a cost of $633.11 per VMT the calculation is as follows:

VMT Banking Fee = XX employees x 1.0 VMT per employee x $633.11 per VMT

Table 1 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction
Transit Strategies		
Parking Cash-Out	Provide employees a choice of forgoing current parking for a cash payment to be determined by the employer. The higher the cash payment, the higher the reduction.	2.0%
Transit Stops	Coordinate with local transit agency to provide bus stop near the site. Real time transportation information displays support on-the-go decision making to support sustainable trip making.	2%
Implement Neighborhood Shuttle	Implement project-operated or project-sponsored neighborhood shuttle serving residents, employees, and visitors of the project site	5%
Transit Subsidies	Involves the subsidization of transit fare for residents and employees of the project site. This strategy assumes transit service is already present in the project area.	5%
	Pays for employees to use local transit. This could either be a discounted ticket or a full-reimbursed transit ticket.	
Communication & Information Strategies		
Travel Behavior Change Program	Involves the development of a travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Provide a web site that allows employees to research other modes of transportation for commuting. Employee-focused travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. DIBS	4%
Promotions & Marketing	Involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices with passive educational and promotional materials. Marketing and public information campaign to promote awareness of TDM program with an on-site coordinator to monitor program. DIBS	
Commuting Strategies		
Employer Sponsored Vanpool or Shuttle	Implementation of employer-sponsored employee vanpool or shuttle providing new opportunities for access to connect employees to the project site.	5%
Preferential Carpool / Vanpool Parking Spaces	Reserved carpool / vanpool spaces closer to the building entrance.	1%
Emergency Ride Home (ERH) Program	Provides an occasional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available. DIBS	4%
On-site Childcare	Provides on-site childcare to remove the need to drive a child to daycare at a separate location.	2%
Telecommuting Alternative work schedule	Four-Ten work schedule results in 20% weekly VMT reduction, 10% trip reduction equals 15% VMT reduction	20%
Shared Mobility Strategies		
Ride Share Program	Increases vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. Need a point person form the business on-site	5%
Employee/Employer Car Share	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on -site.	1%
	Provide an on-site car vehicle for employees to use for short trips. This allows for employees to run errands or travel for lunch.	1%
Designated Parking Spaces for Car Share Vehicles	Reserved car share spaces closer to the building entrance.	1%
Bicycle Infrastructure Strategies		
Bike Share Program	Participate in a bike share program/On site bike share program	1%

Table 1 (Cont.) – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction
Bicycle Infrastructure Strategies		
Implement/Improve On-street Bicycle Facility	Implements or provides funding for improvements to corridors and crossings for bike networks identified within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel.	1%
Include Bike Parking Per City Code	Implements short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations	
Include Secure Bike Parking and Showers	Implements additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel.	
Bicycle Repair Station / Services	On-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.	
Neighborhood Enhancement Strategies		
Pedestrian Network Improvements	Implements pedestrian network improvements throughout and around the project site that encourages people to walk.	2%
Miscellaneous Strategies		

Notes:
1. DIBS is a transportation program designed by the San Joaquin Council of Governments to incentivize carpooling or alternative modes of transportation. The website is located here: https://www.dibsmyway.com/

Background Plus Project

Deficiencies in LOS operations, exacerbated or caused by the project, will either be fully or partially eliminated by implementing the following improvements for Background conditions. Background conditions include Existing plus approved project traffic on the study road network. All improvements listed were also identified in the Cordes Phase 2nd Consistency Analysis (June 2020) except for Intersection #11 which is triggered by the Costco project.

- Intersection #1 - International Parkway & I-205 Westbound Ramps (AM Peak Hour)
  - Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.
  - AM intersection operations improve from an LOS F to a LOS A.
- Intersection #3 - International Parkway & Old Schulte Road (AM and PM Peak Hours)
  - Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.
  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #4 - International Parkway & I-580 Westbound Ramps (AM and PM Peak Hours)
  - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.

  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #5 - International Parkway & I-580 Eastbound Ramps (AM and PM Peak Hours)
  - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #6 - Hansen Road & Old Schulte Road (AM Peak Hour)
  - Add one additional westbound and eastbound through lane at the intersection to establish a four-lane facility to the Safeway driveway along Old Schulte Road. Based on SimTraffic microsimulation analysis, the 95th-percentile queue from the westbound lane merge between Intersection #6 and the Delta-Mendota Canal bridge backs up into the intersection. Therefore, the Project shall widen the Delta-Mendota Canal bridge to continue the four lanes to the Safeway driveway.
  - AM intersection operations improve from LOS E to LOS C.
- Intersection #11 – Lammers Road & Old Schulte Road (AM Peak Hour)
  - Provide an overlap phase for the eastbound right turn.
  - AM intersection operations improve from LOS E to LOS D.
- Intersection #12 - Lammers Road & Western Pacific Way (AM Peak Hour)
  - Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.
  - AM intersection operations improve from LOS F to LOS C.
- Intersection #13 - Lammers Road & Valpico Road (AM Peak Hour)
  - Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.
  - AM intersection operations improve from LOS F to LOS C
- The above various intersection widening improvements along Old Schulte Road result in a continuous four lane facility between the easterly Project driveway and the Safeway driveway on the west side of the Delta-Mendota Canal. Subsequently, the bridge across the canal shall also be widened. If the bridge is not widened, the 95% queue will extend into the Old Schulte Rd/Hansen Rd intersection in the westbound direction during the AM peak period.
- The project shall, at a minimum, provide emergency access to the future Hansen Road. It is anticipated that the property immediately west of the Project site (APN 209-23-025) may develop in the near future and that Hansen Road will be extended to Old Schulte Road.

Table 2 provides a summary of improvements as well as the Costco Obligations for the Background Plus Project Conditions.

Cumulative Plus Project

No additional improvements have been identified for Cumulative Conditions, The Project will, however, pay the City TIF fees.

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Table 2 – Costco Obligations (Background Plus Project Conditions)

Costco Intersection #	Intersection /Location	Peak Hour	Background Plus Project Conditions		
			Improvement	Recommended Costco Improvement?	Costco Project Obligation
1	International Pkwy & I-205 WB Ramps	AM	Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
3	International Pkwy & Old Schulte Rd	AM & PM	Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
4	International Pkwy & I-580 WB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
5	International Pkwy & I-580 EB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
6[1]	Hansen Road & Old Schulte Rd	AM	Add one additional westbound and eastbound through lane at the intersection to establish a four-lane facility to the Safeway driveway along Old Schulte Road.	Y	Costco to implement
11	Lammers Rd & Old Schulte Rd	AM	Provide an overlap phase for the eastbound right turn.	Y	Costco to implement
12[1]	Lammers Rd & Western Pacific Way	AM	Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
13	Lammers Rd & Valpico Rd	AM	Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
-	Delta Mendota Bridge	-	Based on SimTraffic microsimulation analysis, the 95th-percentile queue from the westbound lane merge between Intersection #6 and the Delta-Mendota Canal bridge backs up into the intersection. Therefore, the Project shall widen the Delta-Mendota Canal bridge to continue the four lanes to the Safeway driveway. Old Schulte Road shall be a four-lane divided arterial from Hansen Road to the Safeway Driveway once this improvement is implemented. TIF credits will be due to Costco.	Y	Costco to implement

Notes:
1. Costco will construct improvement if not already implemented by another development. This improvement is anticipated to be included in the City of Tracy Transportation Master Plan (TMP) Fee Program Update. If included, Costco could receive reimbursement for improvements within the fee program.
2. Kimley-Horn traffic study identified TIF, this is not reflected in the conditions.

Engineering Review

Table 3 provides the summary of the engineering comments for the Project.

Table 3 – Engineering Review Summary

Section	Recommendations/Comments
Driveway Access Review	• Driveway #1 - Revise striping to the following: 1 left turn and 1 through/right turn lane. • Driveway #2 - Provide Stop (R1-1), Right Turn Only (R3-5R), and One Way (R6-1) signage. • Driveway #3 - A left turn lane and a right turn pocket are needed for the signal. • Emergency vehicle access(es) may be required off Hansen Road.
Internal Circulation Review	• Approximately 100 feet is provided between Old Schulte Road and the internal drive aisle. This is only enough space for 4 passenger car vehicles or 1 STAA and 1 passenger car vehicle per lane. Since this is the only location where a passenger car can perform a left turn out of the site, this is not adequate during the shift change peaks. To alleviate congestion at this point, it is recommended to provide an eastbound U-turn lane (that could potentially convert to a future left turn lane) at the Old Schulte Road and Project Driveway #3 signalized intersection. • At Project Driveway #1, the northern internal crosswalk should be removed as this will conflict with vehicles entering and exiting the Project. This crossing should occur at the signal instead or at the southern internal crosswalk. • Provide a three way stop at the Project Driveway #1 internal intersection with the inbound movement as the free movement. • No project detail is known for the eastern adjacent parcel that will share Project Driveway #3. The cross access shown will be reviewed in the future, once a development application is submitted for the adjacent parcel. • Provide clear signage and/or pavement markings for trucks entering Project Driveway #3 that designates security versus bypass lanes. • Provide truck turning templates at reverse curve within Project Driveway #3.
Vehicle Turning Templates	• STAA trucks are unable to perform northbound right turn at Driveways #1. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site. • STAA trucks are unable to perform eastbound and northbound right turns at Driveways #3. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site. • A westbound left turn must be provided at Driveway #3 and it must accommodate a STAA truck turning template.
External Network Review	• Provide more detail on the transitions between existing conditions on both the east and west end of the Project limits. • Provide the striping at the intersection of Old Schulte Road and Project Driveway #3. This approach must include a westbound left turn pocket that can accommodate a CA-STAA truck. • Revise the signing and striping for the southbound movement at Old Schulte Road and Bud Lyons Way. Provide one left turn and one through/right lane. • The Westbound right turn lane at the intersection of Old Schulte Road and Bud Lyons is existing and should be shown on the plan set. • Provide eastbound shoulder stripe. • Lengthen the westbound left turn lane at Project Driveway #1 to accommodate 375 feet of deceleration and 150 feet of storage. • Emergency vehicles access(es) may be required off Hansen Road. In addition, the City typically requires all street frontage improvements to be constructed by the Project developer.

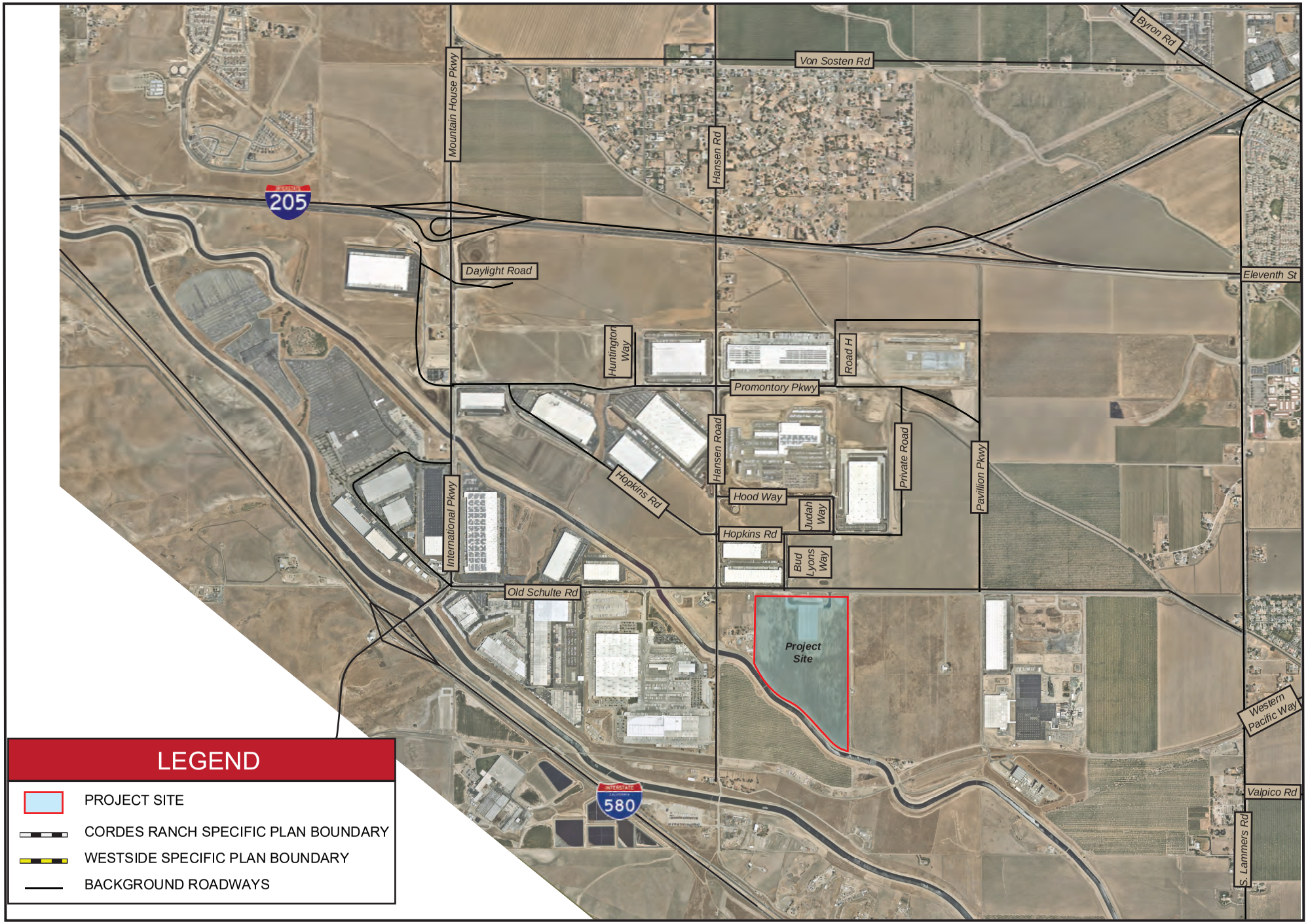
2. Introduction

This memorandum presents a traffic review of the Costco Direct Delivery Center (Project) located south of Old Schulte Road (West Schulte Road) and north of the proposed Hansen Road Extension in Tracy, California. The Project consists of two warehouse buildings:

- Building 1: 543,326 Square Feet
- Building 2: 1,201,727 Square Feet
- Total: 1,745,053 Square Feet

Figure 1 provides a Project vicinity map. The Project is located on agricultural land in the City of Tracy Sphere of Influence. Adjacent development includes industrial uses in the County of San Joaquin and Cordes Ranch. Regional access to the site is via I-205 and I-580 via the Mountain House and Patterson Pass interchanges, respectively. Additional industrial development is also occurring to the east of the Project site, and the future Westside Specific Plan area is located to the northeast of the site. The Project will be annexed into the City.

The Project site plan is shown in **Figure 2**. The Project proposes three access points along Old Schulte Road (two signals and one right-in, right-out) and none along the future Hansen Road.



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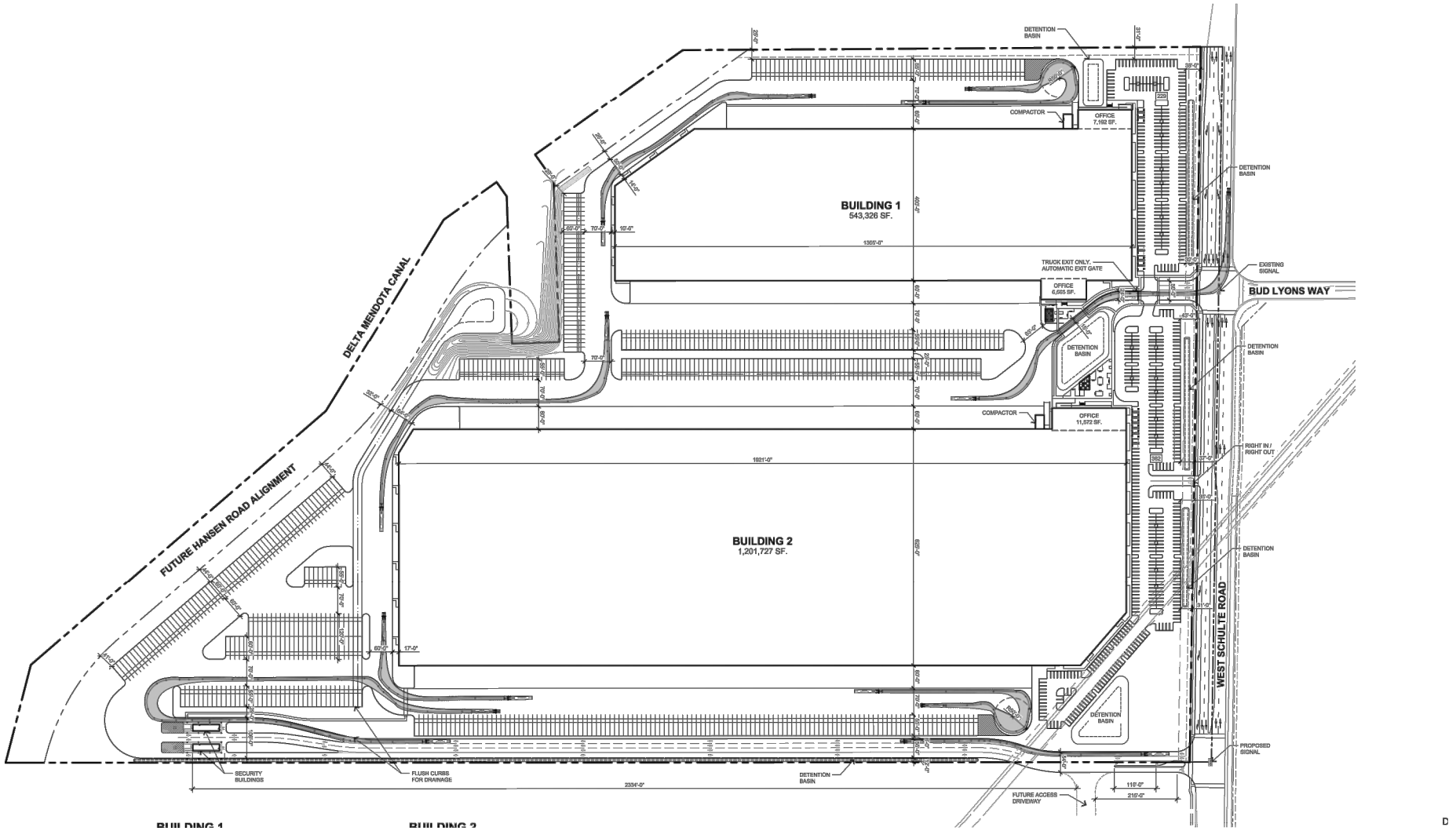
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Figure 1

Project Vicinity Map

Costco Depot Traffic Analysis

December 2021



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Figure 2

Project Site Plan

December 2021

Tracy Costco Direct Delivery Center

3. VMT Analysis

VMT Calculations

In 2018, the California state legislature, in approving Senate Bill (SB) 743, directed the Office of Planning and Research to develop guidelines for assessing transportation impacts based on vehicle miles traveled, or VMT. In response to SB 743, CEQA and its implementing guidelines (CEQA Guidelines) were significantly amended regarding the methods by which lead agencies are to evaluate a project's transportation impacts. As described in CEQA Guidelines Section 15064.3(a):

Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact.

This section of the Guidelines continues to set forth the criteria for analyzing transportation impacts. Currently, the City is studying their own thresholds, but none have been adopted.

In 2013, SB 743 was signed into law by California Governor Jerry Brown with a goal of reducing Greenhouse Gas (GHG) emissions, promoting the development of infill land use projects and multimodal transportation networks, and to promote a diversity of land uses within developments. One significant outcome resulting from this statue is the removal of automobile delay and congestion, commonly known as Level of Service (LOS), as a basis for determining significant transportation impacts under the California Environmental Quality Act (CEQA).

The Governor's Office of Planning and Research (OPR) has documented recommended analysis guidelines for SB 743 in its *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) which provides for Vehicle Miles Traveled (VMT) as the principal measure to replace LOS for determining significant transportation impacts. VMT is a measure of total vehicular travel that accounts for the number of vehicle trips and the length of those trips. OPR selected VMT, in part, because jurisdictions are already familiar with this metric. VMT is already used in CEQA to study other potential impacts such as Greenhouse Gases (GHG), air quality, and energy impacts and is used in planning for regional Sustainable Communities Strategies (SCS).

VMT also allows for an analysis of a project's impact throughout the City rather than only in the vicinity of the proposed project, allowing for a better understanding of the full extent of a project's transportation-related impact. It should be noted that SB 743 still allows the City of Tracy to use LOS for other planning purposes outside the scope of CEQA.

Understanding how the local roadway network functions from an engineering standpoint is still critical to local land use agencies to monitor traffic flow, identify safety issues, establish fees and manage congestion. However, for the purposes of evaluating environmental impacts under CEQA, the new regulations have removed congestion from the range of required subjects analyzed within CEQA documents.

The proposed Costco Direct Delivery Center project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.2 VMT per Employee. The evaluation

tool estimates that the Project would generate 24.8 VMT per Employee, and the Project exceeds the threshold by 170%.

Per the City's VMT threshold and SB 743 guidelines, the Project causes a significant transportation impact. For projects that would cause a VMT impact, VMT reduction strategies such as introducing transportation demand management (TDM), or additional multimodal infrastructure can be implemented to reasonably mitigate the VMT impact which is estimated from research literature and case studies.

Potential Mitigations

The Project exceeds the City threshold by 170% and this reduction is not feasible. The California Air Pollution Control Officers Association (CAPCOA) indicates that up to 15% of VMT reduction can reasonably be achieved. The Project has the option to "purchase" additional VMT from the VMT banking fee above 15%. For the purpose of this report, a maximum of 15% is assumed.

TDM Program

This program recommends TDM measures that would individually reduce the Project's VMT and trips with the goal of obtaining a feasible maximum of 15% VMT reduction. **Table 4** lists the toolbox of potential TDM measures that could partially mitigate the Project's VMT impact. Maximum TDM reductions are provided for each TDM element. The applicant will select specific TDM measures in consultation with the City to partially mitigate the VMT impact.

This TDM program aims to achieve a feasible maximum of 15% VMT reduction, with the opportunity for XX% VMT reduction coming from the VMT Banking Fee Program as discussed after this section.

For the TDM program, the following TDM measures are being proposed:

4. TDM Measure 1
5. TDM Measure 2
6. TDM Measure 3

VMT Banking Fees

The City of Tracy VMT Banking Fee Program is a programmatic approach to respond to the need for feasible VMT mitigation programs. Programmatic approaches that rely on collectively funding larger projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The VMT Banking Fee Program calculates the cost per VMT reduction as $633.11. Therefore, to achieve a the XX% reduction needed after implementation of the TDM program, the project would be responsible to pay $XX.XX. This is calculated as XX% being equivalent to a 1.0 VMT per employee reduction. Since there are XX employees and each employee needs to reduce by 1.0 VMT at a cost of $633.11 per VMT the calculation is as follows:

VMT Banking Fee = XX employees x 1.0 VMT per employee x $633.11 per VMT

Table 4 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction
Transit Strategies		
Parking Cash-Out	Provide employees a choice of forgoing current parking for a cash payment to be determined by the employer. The higher the cash payment, the higher the reduction.	2.0%
Transit Stops	Coordinate with local transit agency to provide bus stop near the site. Real time transportation information displays support on-the-go decision making to support sustainable trip making.	2%
Implement Neighborhood Shuttle	Implement project-operated or project-sponsored neighborhood shuttle serving residents, employees, and visitors of the project site	5%
Transit Subsidies	Involves the subsidization of transit fare for residents and employees of the project site. This strategy assumes transit service is already present in the project area.	5%
	Pays for employees to use local transit. This could either be a discounted ticket or a full-reimbursed transit ticket.	
Communication & Information Strategies		
Travel Behavior Change Program	Involves the development of a travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Provide a web site that allows employees to research other modes of transportation for commuting. Employee-focused travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. DIBS	4%
Promotions & Marketing	Involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices with passive educational and promotional materials. Marketing and public information campaign to promote awareness of TDM program with an on-site coordinator to monitor program. DIBS	
Commuting Strategies		
Employer Sponsored Vanpool or Shuttle	Implementation of employer-sponsored employee vanpool or shuttle providing new opportunities for access to connect employees to the project site.	5%
Preferential Carpool / Vanpool Parking Spaces	Reserved carpool / vanpool spaces closer to the building entrance.	1%
Emergency Ride Home (ERH) Program	Provides an occasional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available. DIBS	4%
On-site Childcare	Provides on-site childcare to remove the need to drive a child to daycare at a separate location.	2%
Telecommuting Alternative work schedule	Four-Ten work schedule results in 20% weekly VMT reduction, 10% trip reduction equals 15% VMT reduction	20%

Table 4 (Cont.) – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction
Shared Mobility Strategies		
Ride Share Program	Increases vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. Need a point person from the business on-site	5%
Employee/Employer Car Share	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on -site.	1%
	Provide an on-site car vehicle for employees to use for short trips. This allows for employees to run errands or travel for lunch.	1%
Designated Parking Spaces for Car Share Vehicles	Reserved car share spaces closer to the building entrance.	1%
Bicycle Infrastructure Strategies		
Bike Share Program	Participate in a bike share program/On site bike share program	1%
Implement/Improve On-street Bicycle Facility	Implements or provides funding for improvements to corridors and crossings for bike networks identified within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel.	1%
Include Bike Parking Per City Code	Implements short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations	
Include Secure Bike Parking and Showers	Implements additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel.	
Bicycle Repair Station / Services	On-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.	
Neighborhood Enhancement Strategies		
Pedestrian Network Improvements	Implements pedestrian network improvements throughout and around the project site that encourages people to walk.	2%
Miscellaneous Strategies		

Notes:
1. DIBS is a transportation program designed by the San Joaquin Council of Governments to incentivize carpooling or alternative modes of transportation. The website is located here: https://www.dibsmyway.com/

4. Analysis Methodology

Study Intersections

The following intersections were analyzed for this study:

1. International Pkwy & I-205 WB Ramps
2. International Pkwy & I-205 EB Ramps
3. International Pkwy & Old Schulte Rd
4. International Pkwy & I-580 WB Ramps
5. International Pkwy & I-580 EB Ramps
6. Hansen Rd & Old Schulte Rd
7. Bud Lyons Wy/Project Driveway #1 & Old Schulte Rd
8. Project Driveway #2 & Old Schulte Rd
9. Project Driveway #3 & Old Schulte Rd
10. Pavillion Pkwy & Old Schulte Rd
11. Lammers Rd & Old Schulte Rd
12. Lammers Rd & Western Pacific Wy
13. Lammers Rd & Valpico Rd

These intersections were selected based on the City threshold established in the City of Tracy Transportation Master Plan and the General Plan. The intersection analysis will not be used for CEQA purposes but only for conditions of approval for implementing engineering improvements.

Study Conditions

The following scenarios were analyzed to determine if the Project causes study intersections to degrade to an unacceptable level of service (LOS):

- **Background Conditions** – represents the following:
  - Existing traffic counts
    - May 2019 traffic counts
    - One supplemental count at Old Schulte Road and Bud Lyons Way was collected on November 19, 2020 from 5:00 AM to 8:00 AM and 3:00 PM to 6:00 PM while the COVID-19 pandemic and associated shelter in place restrictions were in effect. The industrial facilities near the count location were operational and counts were reviewed against pre-pandemic volumes and deemed acceptable to use for this study.
  - Plus Approved but unconstructed projects' traffic volumes
    - Cordes Ranch Scheme 170A Transportation Impact Analysis dated November 1, 2017
    - Cordes Ranch 2nd Consistency Analysis (Phase 1K) Traffic Study Memorandum dated June 30, 2020
- **Background Plus Project Conditions** – represents Background Conditions plus traffic generated by the proposed Project

- **Cumulative Conditions** – represents the following:
    - Future 2035 volumes derived from the City of Tracy Travel Demand Model, excluding the Project site traffic
    - Plus Project trips from the Cordes Ranch 2nd Consistency Analysis (Phase 1K) Traffic Study Memorandum dated June 30th, 2020
- **Cumulative Plus Project Conditions** – represents Cumulative Conditions along with traffic generated by the proposed Project

5. Background Conditions

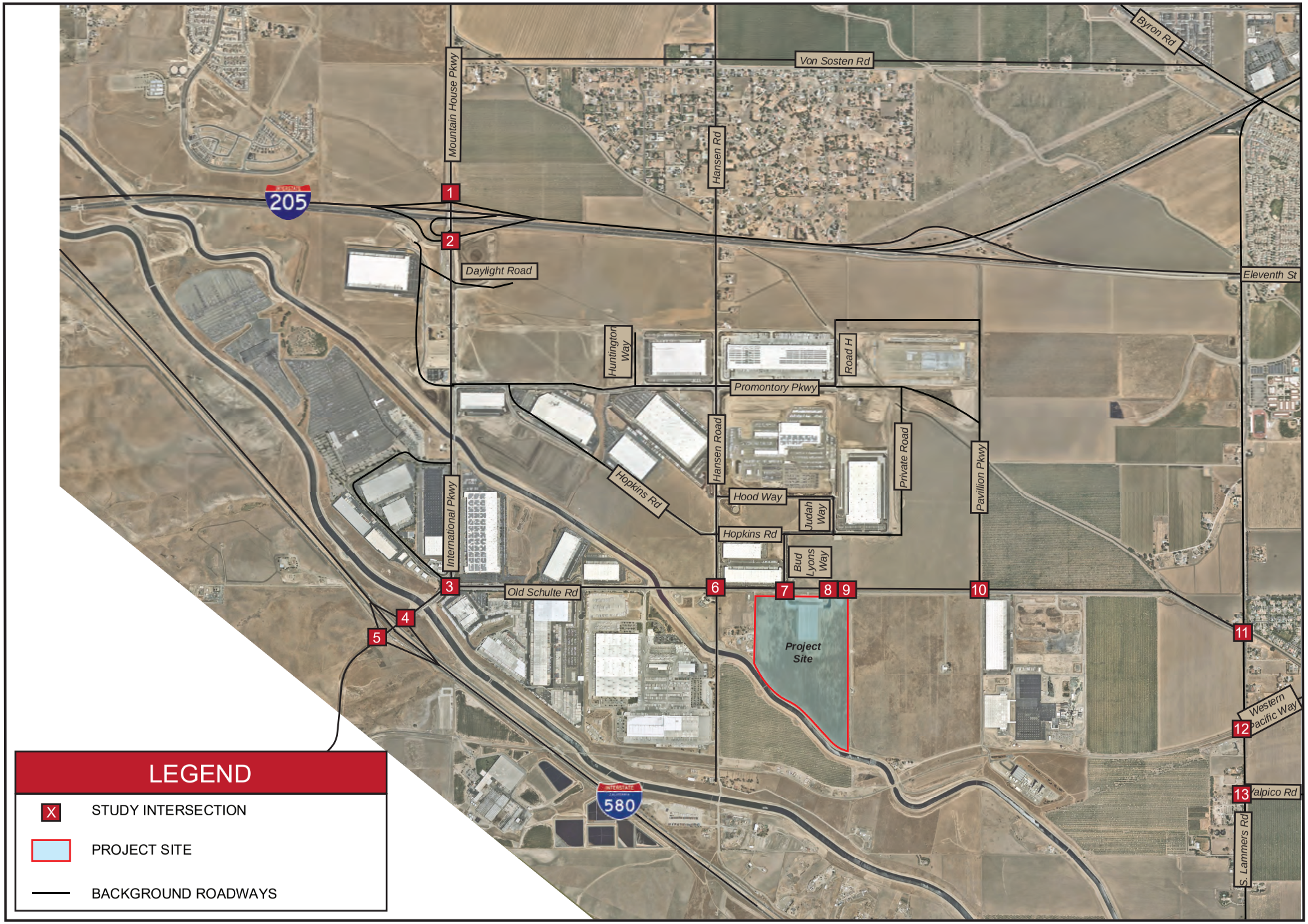
Background Conditions are based on Existing Conditions traffic volumes plus traffic generated by approved but unconstructed projects. Background Conditions also assumed an updated roadway network reflecting the Cordes Ranch Phase 1K street improvement plan.

The Background Conditions roadway network is shown in **Figure 3**. The Background Conditions lane geometry is shown in **Figure 4** and traffic volumes are shown in **Figure 5**.

Results of the Background Conditions level of service analysis are presented in **Table 5**. All intersections operated at acceptable levels of service except for the following:

- Intersection #1 - International Pkwy & I-205 WB Ramps (AM Peak Hour)
- Intersection #3 - International Pkwy & Old Schulte Rd (AM and PM Peak Hours)
- Intersection #4 - International Pkwy & I-580 WB Ramps (AM and PM Peak Hours)
- Intersection #5 - International Pkwy & I-580 EB Ramps (AM and PM Peak Hours)
- Intersection #6 - Hansen Rd & Old Schulte Rd (AM Peak Hour)
- Intersection #7 - Bud Lyons Wy/Project Driveway #1 & Old Schulte Rd (AM Peak Hour)
- Intersection #10 - Pavillion Pkwy & Old Schulte Rd (AM Peak Hour)
- Intersection #12 - Lammers Rd & Western Pacific Wy (AM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (AM Peak Hour)

Analysis output sheets for Background Conditions are provided in the **Appendix**.



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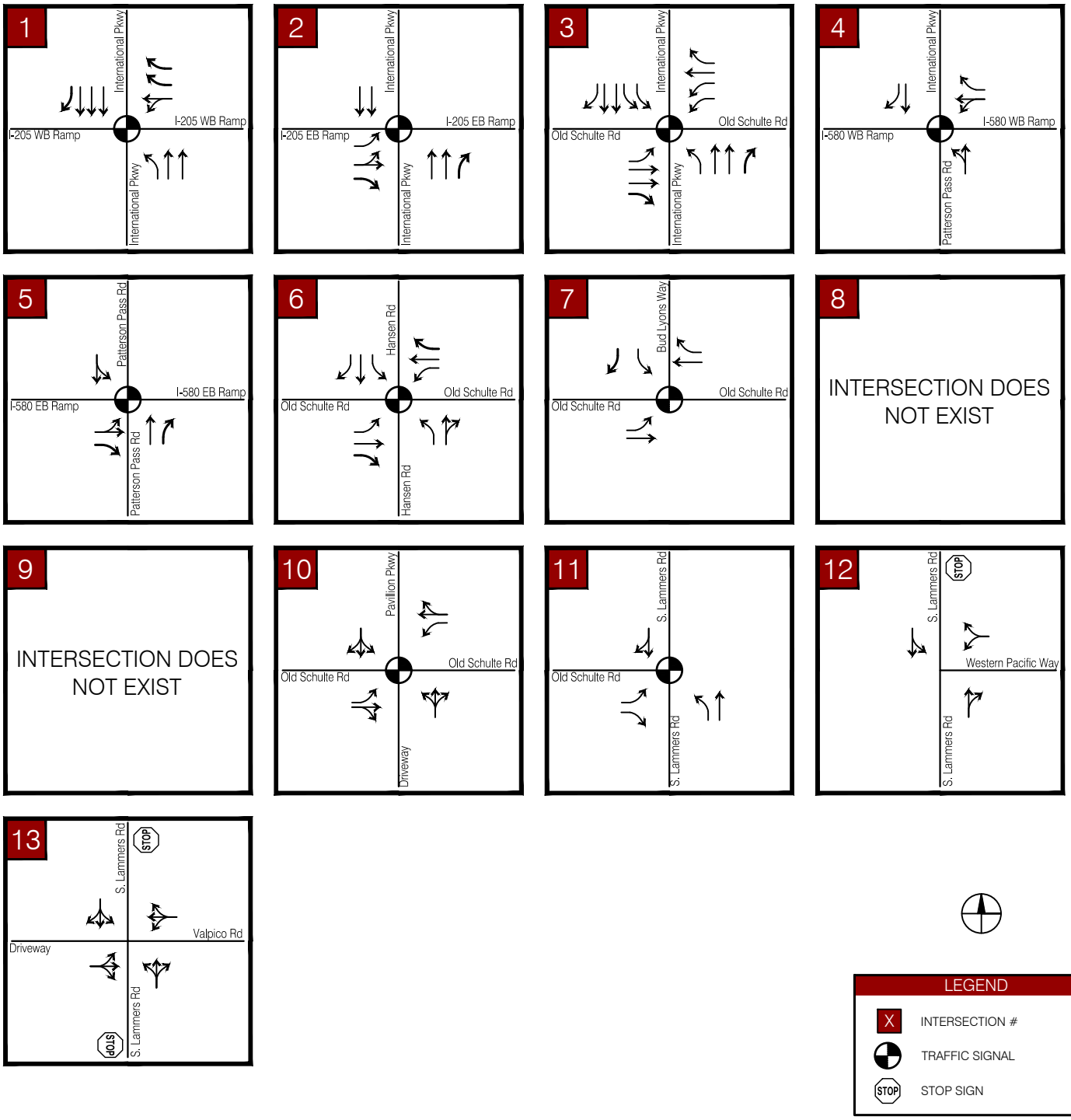
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Figure 3

Background Conditions Overview Map

Costco Depot Traffic Analysis

December 2021



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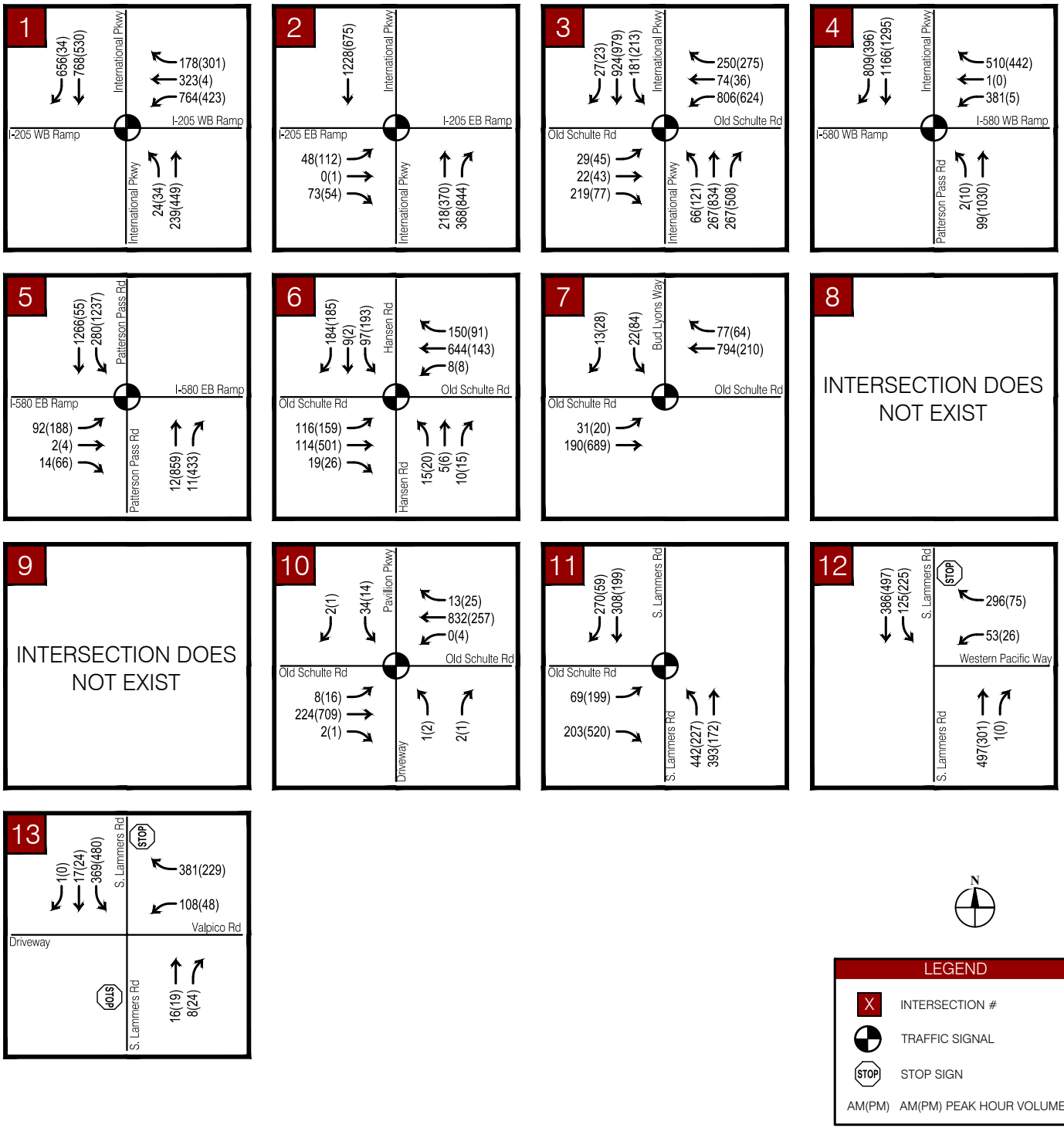
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Figure 4

Background Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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December 2021

Figure 5

Background Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 5 – Background Conditions LOS Summary Results

#	Intersection	Agency	Control	Background Conditions					
				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	**-**	**229.2**	**F**	**-**	13.4	B
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	6.1	A	-	12.5	B
3	International Pkwy & Old Schulte Rd	Tracy	Signal	**-**	**146.9**	**F**	**-**	**150.9**	**F**
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	**-**	**369.7**	**F**	**-**	**427.4**	**F**
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	**-**	**160.8**	**F**	**-**	**424.1**	**F**
6	Hansen Road & Old Schulte Rd	Tracy	Signal	**-**	**58.0**	**E**	-	37.0	D
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	**-**	**91.4**	**F**	-	9.4	A
8	Project Dwy #2 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist					
	Worst Approach								
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exit					
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	19.9	B	-	11.9	B
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	52.9	D	-	32.6	C
12	Western Pacific Wy & Old Schulte Rd	Tracy	TWSC	**-**	**-**	**-**	-	-	-
	Worst Approach			**WB**	**114.6**	**F**	WB	24.1	C
13	Lammers Rd & Valpico Rd	Tracy	TWSC	**-**	**-**	**-**	-	-	-
	Worst Approach			**WB**	**92.3**	**F**	WB	26.8	D

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6. Trip Generation, Distribution, and Assignment

Trip Generation

Trip generation for the proposed Costco development was calculated using the E-Commerce trip generation rates provided by Kittleson's *Tracy Costco Depot Transportation Impact Analysis Report* (August 28, 2017). These rates were then split into passenger car and truck trips based on ITE guidance for high-cube and warehousing facilities. These rates were compared against the City trip rates and ITE trip rates. The e-commerce rates from Costco are higher than the City and ITE trip rates.

The proposed Project is anticipated to generate 401 AM peak hour (377 IN / 24 OUT) and 87 PM peak hour (19 IN / 68 OUT) gross trips.

Table 6 - Trip Generation

Land Uses	Project Size	AM PEAK HOUR				PM PEAK HOUR			
		Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Trip Generation Rates									
Project Use									
Costco E-commerce Warehouse[1]	- KSF	0.23	94%	/	6%	0.05	21%	/	79%
Trips Generated									
Building 1	**543.326 KSF**	**125**	**118**	**/**	**7**	**27**	**6**	**/**	**21**
Passenger Cars[2]		*86*	*81*	*/*	*5*	*21*	*5*	*/*	*16*
Trucks[2]		*39*	*37*	*/*	*2*	*6*	*1*	*/*	*5*
Building 2	**1,201.727 KSF**	**276**	**259**	**/**	**17**	**60**	**13**	**/**	**47**
Passenger Cars[2]		*190*	*179*	*/*	*11*	*47*	*10*	*/*	*37*
Trucks[2]		*86*	*80*	*/*	*6*	*13*	*3*	*/*	*10*
TOTAL		***401***	***377***	***/***	***24***	***87***	***19***	***/***	***68***
Passenger Cars		***276***	***260***	***/***	***16***	***68***	***15***	***/***	***53***
Trucks		***125***	***117***	***/***	***8***	***19***	***4***	***/***	***15***

NOTES

1. Trip generation provided by Kittleson's *Tracy Costco Depot Transportation Impact Analysis Report* (August 28, 2017).

2. ITE's *High-Cube Warehouse Vehicle Trip Generation Analysis*, 2016. The percentage of passenger car vehicles for Short-Term Storage, Transload, & Cold Storage is the following:
Daily: 67.8%
AM: 69.2%
PM: 78.3%

Trip Distribution and Assignment

Project Background Conditions

Trips were distributed along the roadway network based on the Cordes Ranch EIR. The following provides the passenger car distribution for Project Background Conditions:

- 23% to/from the east along I-580
- 3% to/from the west along I-580
- 2% to/from the west along I-205

- 15% to/from the north along Mountain House Parkway
- 26% to/from the east along I-205
- 6% to/from the north along Lammers Road
- 23% to/from the east along Valpico Road
- 2% to/from the south along Lammers Road

The following provides the assumed truck distribution that was provided by Kittelson:

- 37% to/from the east along I-580
- 19% to/from the west along I-580
- 11% to/from the west along I-205
- 33% to/from the east along I-205

Refer to **Figure 6** and **Figure 7** for the Project Background Conditions passenger car trip distribution and assignment, respectively. Refer to **Figure 8** and **Figure 9** for the Project Background Conditions truck trip distribution and assignment, respectively.

Project Cumulative Conditions

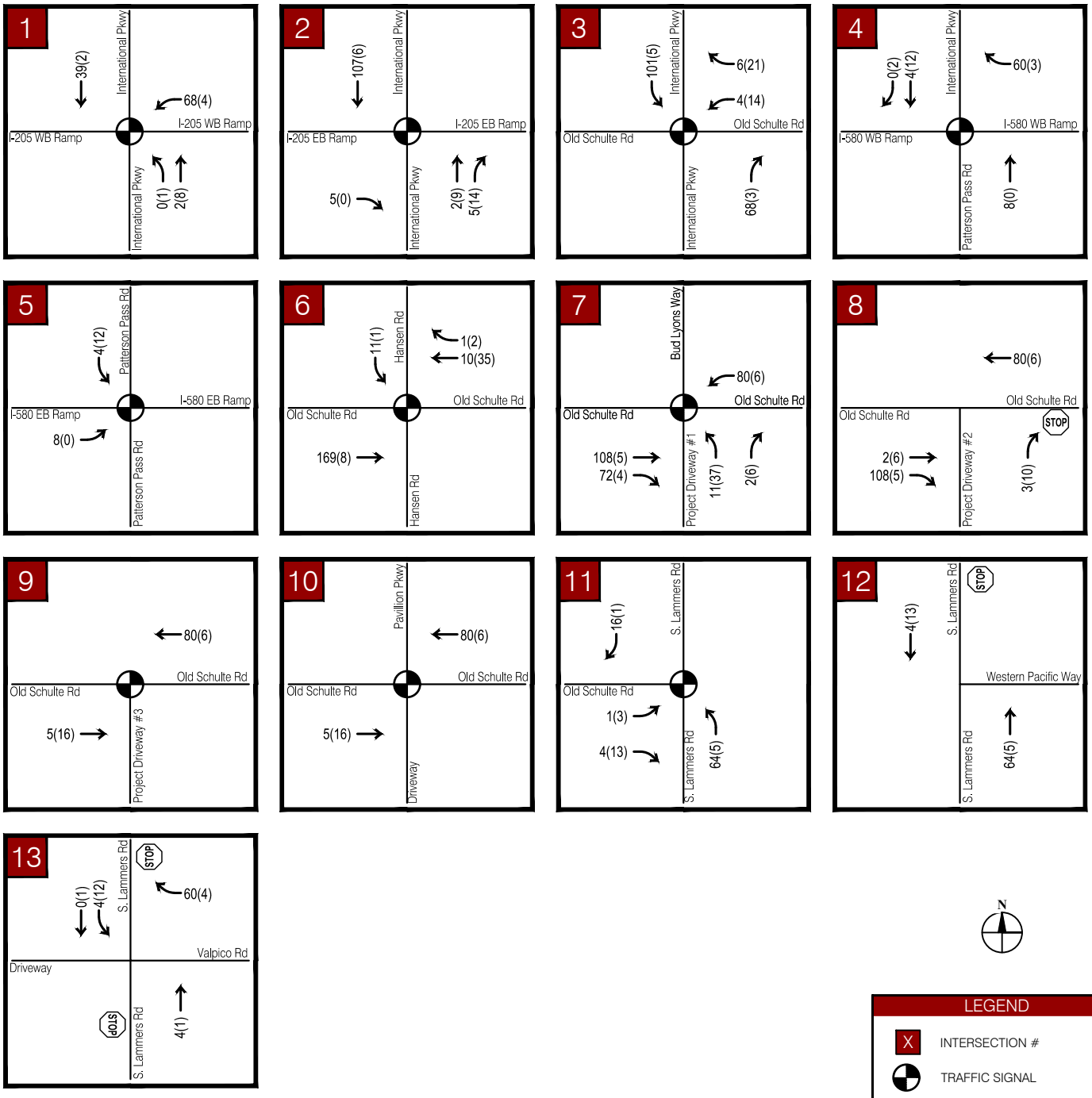
The following provides the passenger car distribution derived from the City's 2035 travel demand model for Project Cumulative Conditions:

- 12% to/from the east along I-580
- 3% to/from the west along I-580
- 2% to/from the west along I-205
- 15% to/from the north along Mountain House Parkway
- 26% to/from the east along I-205
- 10% to/from the north along Lammers Road
- 10% to/from the east along Promontory Parkway
- 9% to/from the east along Valpico Road
- 6% to/from the south along Lammers Road
- 7% to/from the east along Hansen Road

The assumed truck distribution remained the same between Project Background and Project Cumulative Conditions. Refer to **Figure 10** and **Figure 11** for the Project Cumulative Conditions passenger car trip distribution and assignment, respectively. Refer to **Figure 12** and **Figure 13** for the Project Cumulative Conditions truck trip distribution and assignment, respectively. Trips for the Project Cumulative Conditions are based on the trip generation provided in **Table 6**.



Figure 6
Passenger Car Project Trip Distribution
Background Plus Project Conditions



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Figure 7

Passenger Car Background Project Assignment

Background Plus Project Conditions

Tracy Costco Direct Delivery Center



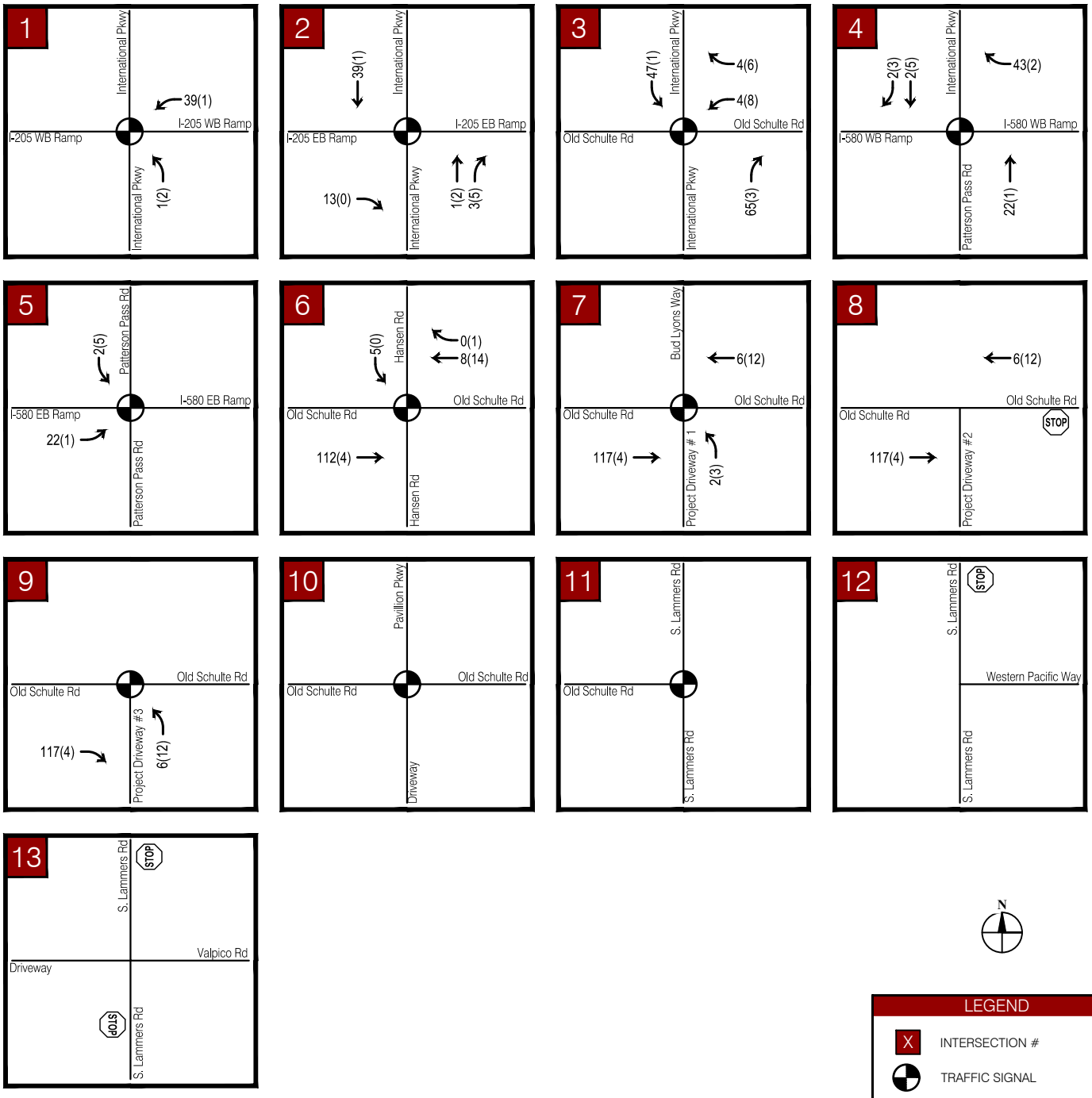
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Figure 8
Truck Project Trip Distribution
Background Plus Project Conditions

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Costco Depot Traffic Analysis



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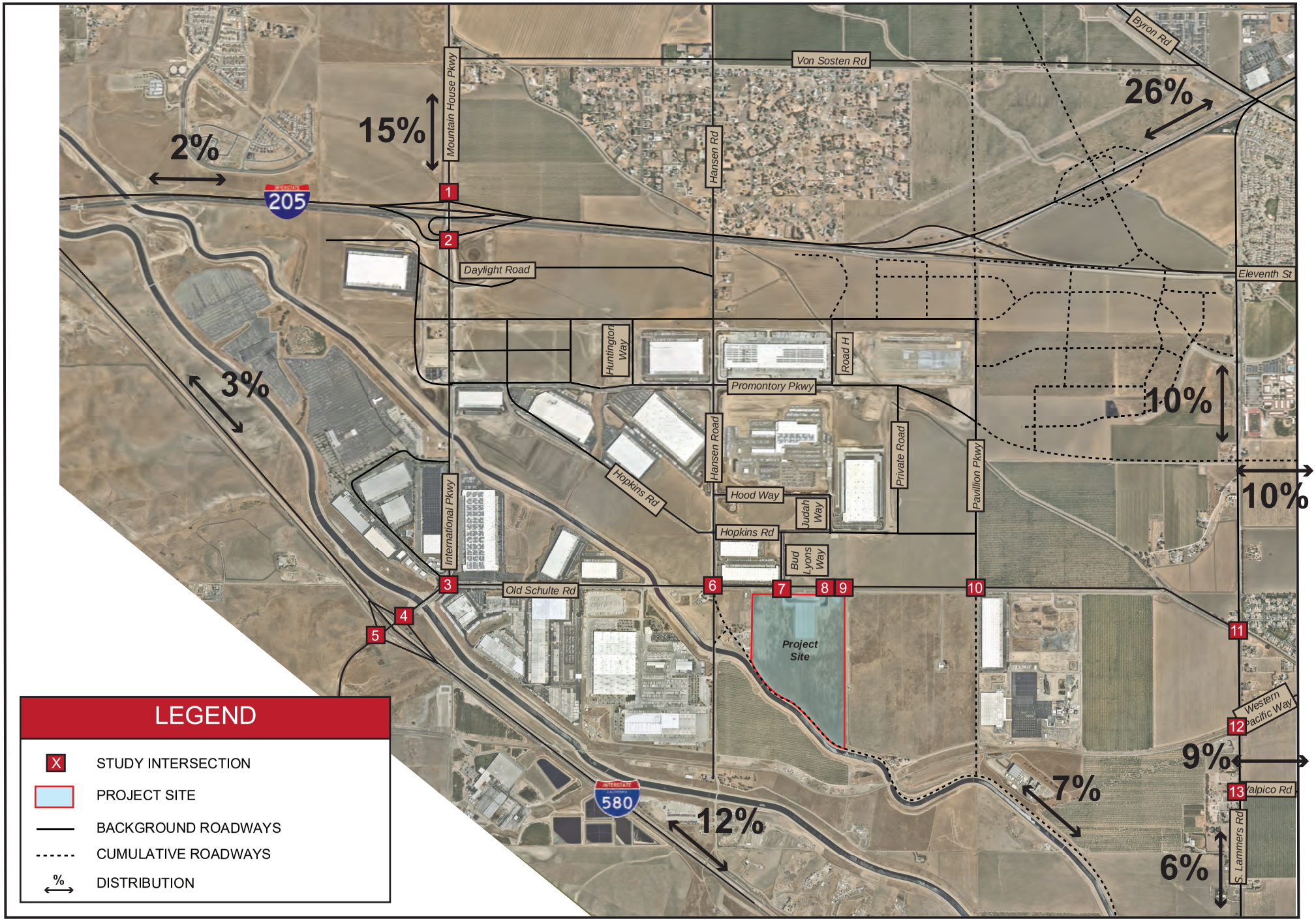
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Figure 9

Truck Background Project Assignment

Background Plus Project Conditions

Tracy Costco Direct Delivery Center



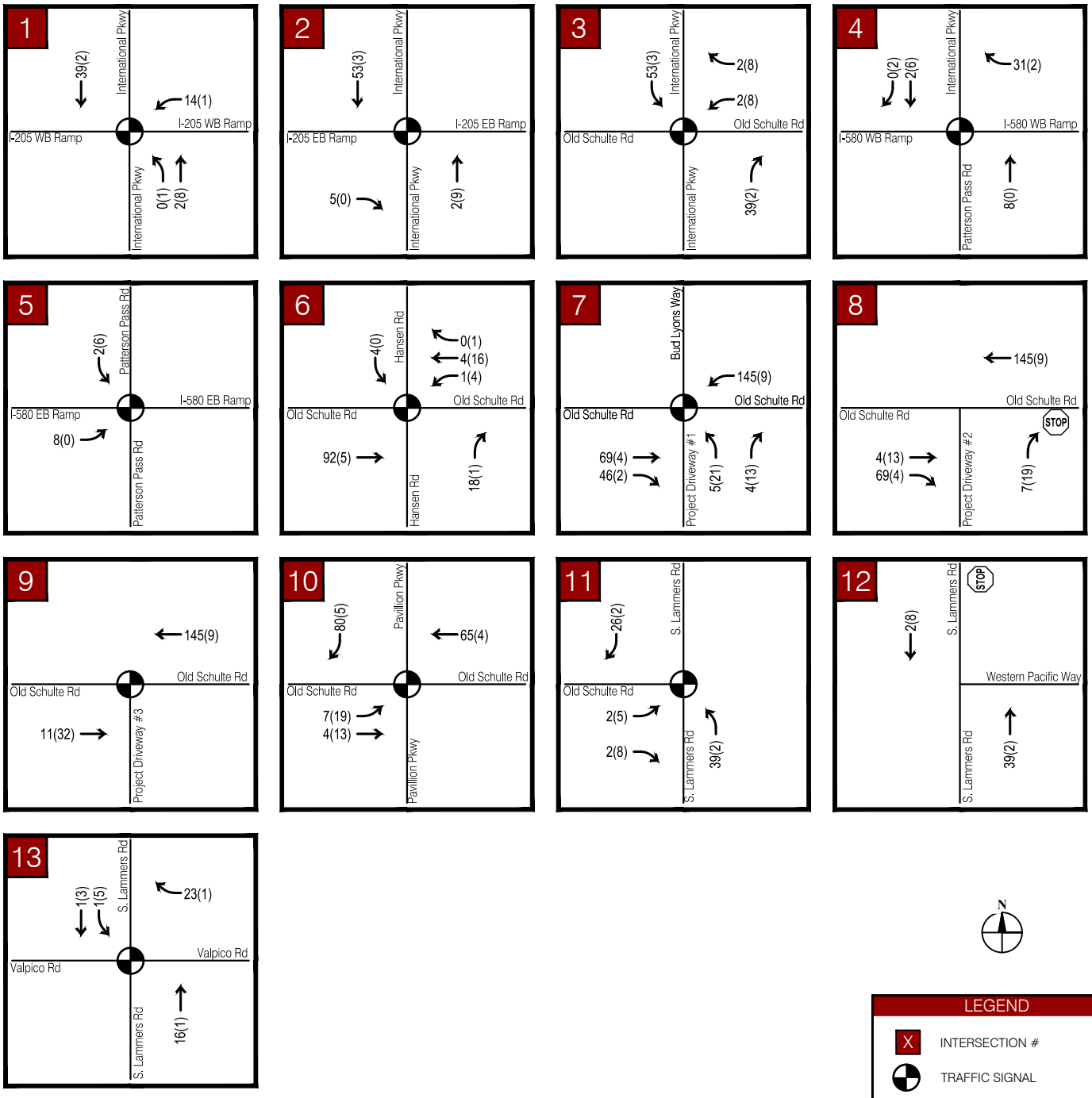
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Figure 10
Passenger Car Project Trip Distribution
Cumulative Plus Project Conditions

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Costco Depot Traffic Analysis



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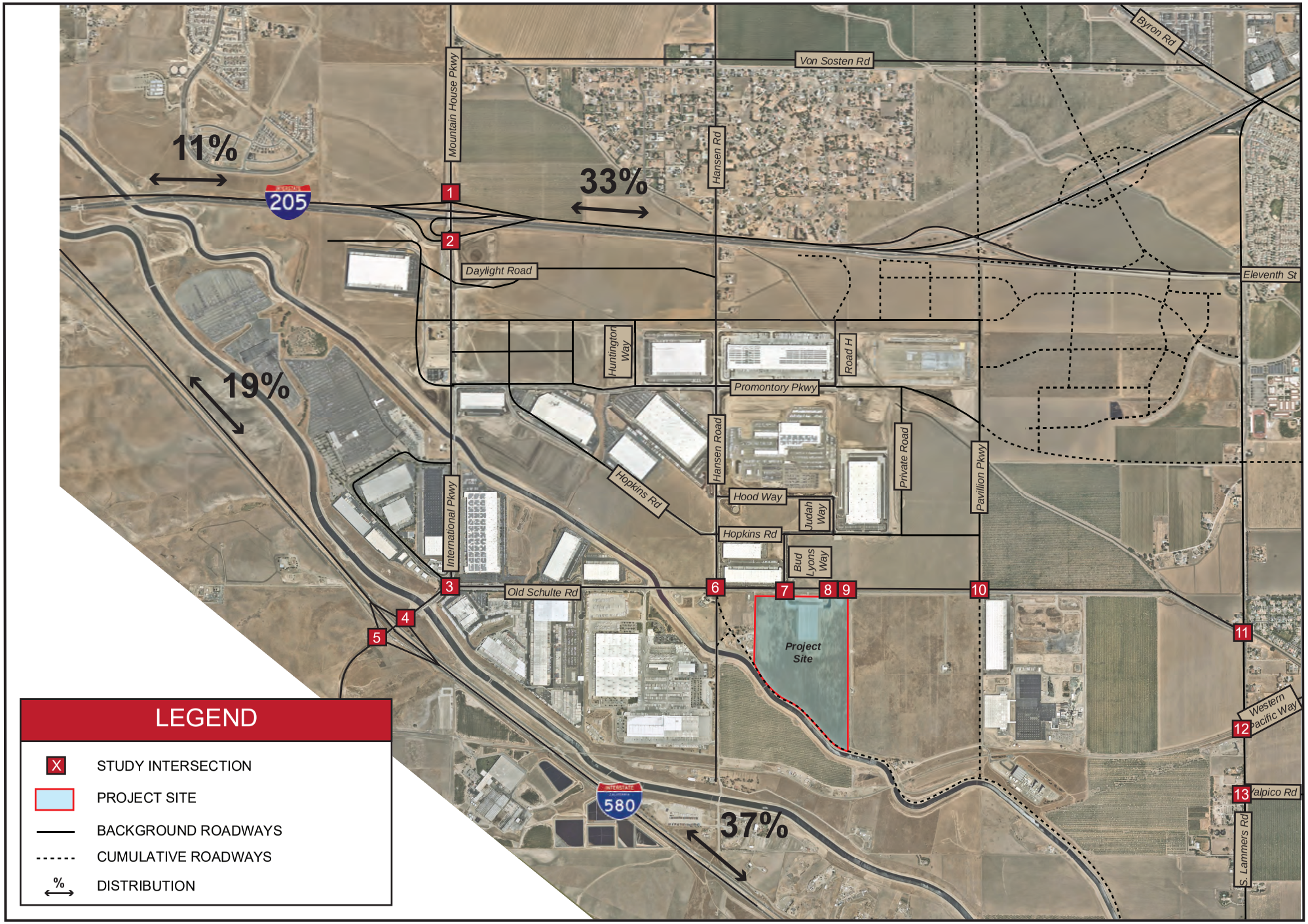
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Figure 11

Passenger Car Cumulative Project Assignment

Cumulative Plus Project Conditions

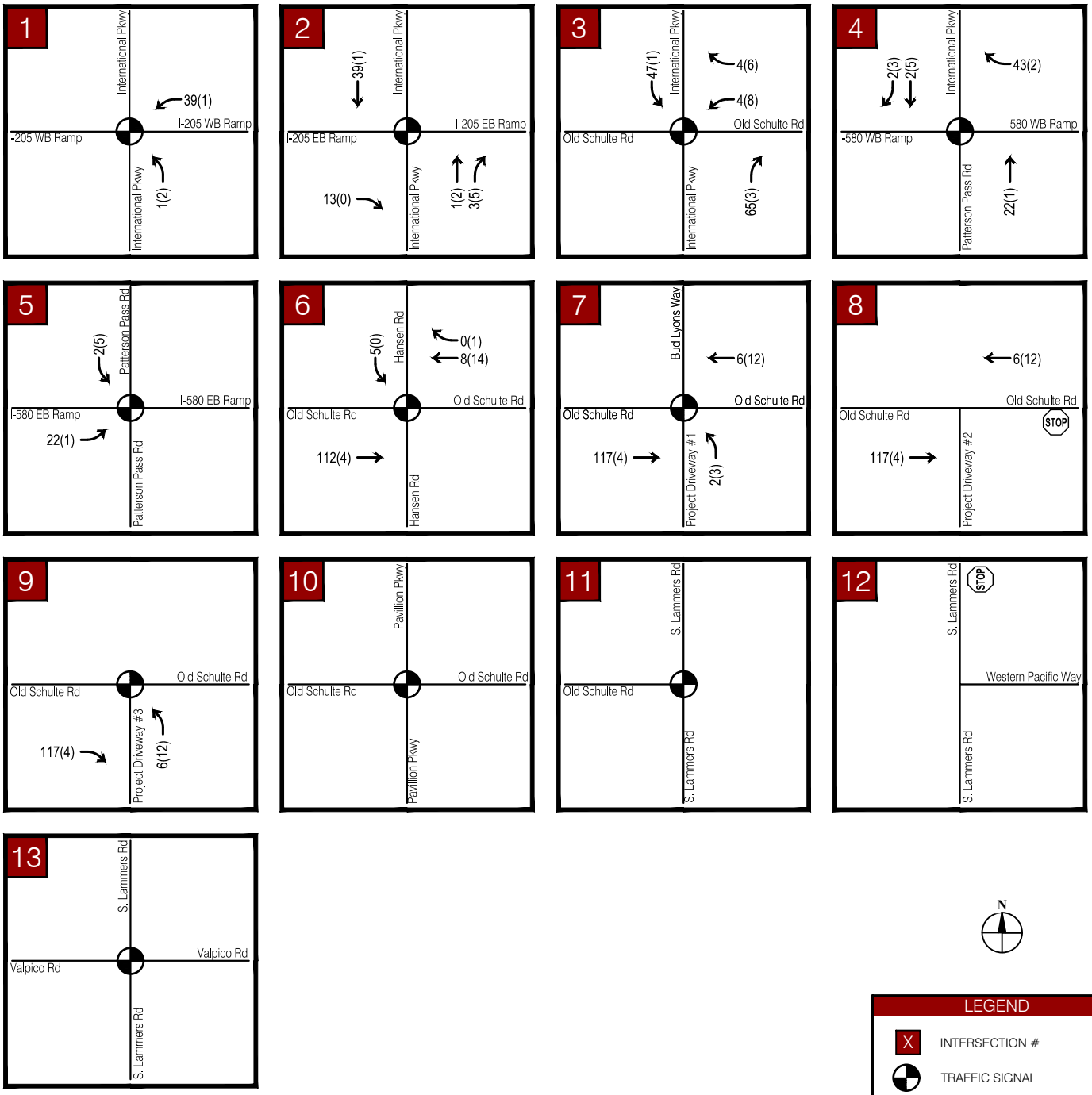
Tracy Costco Direct Delivery Center



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NOT TO SCALE

Figure 12
Truck Project Trip Distribution
Cumulative Plus Project Conditions



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Figure 13

Truck Cumulative Project Assignment

Cumulative Plus Project Conditions

Tracy Costco Direct Delivery Center

7. Background Plus Project Conditions

Background Plus Project Conditions are based on Background Conditions traffic volumes plus traffic generated by the proposed Project. The roadway network is based on Background Conditions plus improvements anticipated to be constructed by the Project:

- Widen Old Schulte Road to four through lanes along the Project's frontage
- Add south leg and eastbound right turn lane and westbound left turn lane at Project Driveway #1
- Add new signalized intersection, eastbound right turn lane and westbound left turn lane at Project Driveway #3

The Background Plus Project Conditions roadway network is shown in **Figure 14** and the volumes are shown in **Figure 15**.

Results of the Background Plus Project Conditions levels of service analysis are presented in **Table 7**. Travel patterns on Old Schulte Road are peak period based (i.e. westbound in the morning and eastbound in the evening). The Project primarily adds traffic in the opposing, non-peak, direction during the peak periods. The following intersections operated at unacceptable levels of service and recommended improvements have been provided:

- Intersection #1 - International Pkwy & I-205 WB Ramps (AM Peak Hour)
    - Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.
- Intersection #3 - International Pkwy & Old Schulte Rd (AM and PM Peak Hours)
    - Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.
- Intersection #4 - International Pkwy & I-580 WB Ramps (AM and PM Peak Hours)
    - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
- Intersection #5 - International Pkwy & I-580 EB Ramps (AM and PM Peak Hours)
    - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
- Intersection #6 - Hansen Rd & Old Schulte Rd (AM Peak Hour)
    - Add one additional westbound and eastbound through lane at the intersection to establish a four-lane facility to the Safeway driveway along Old Schulte Road. Based on SimTraffic microsimulation analysis, the 95th-percentile queue from the westbound lane merge between Intersection #6 and the Delta-Mendota Canal bridge backs up into the intersection. Therefore, the Project shall widen the bridge to continue the four lanes to the Safeway driveway.

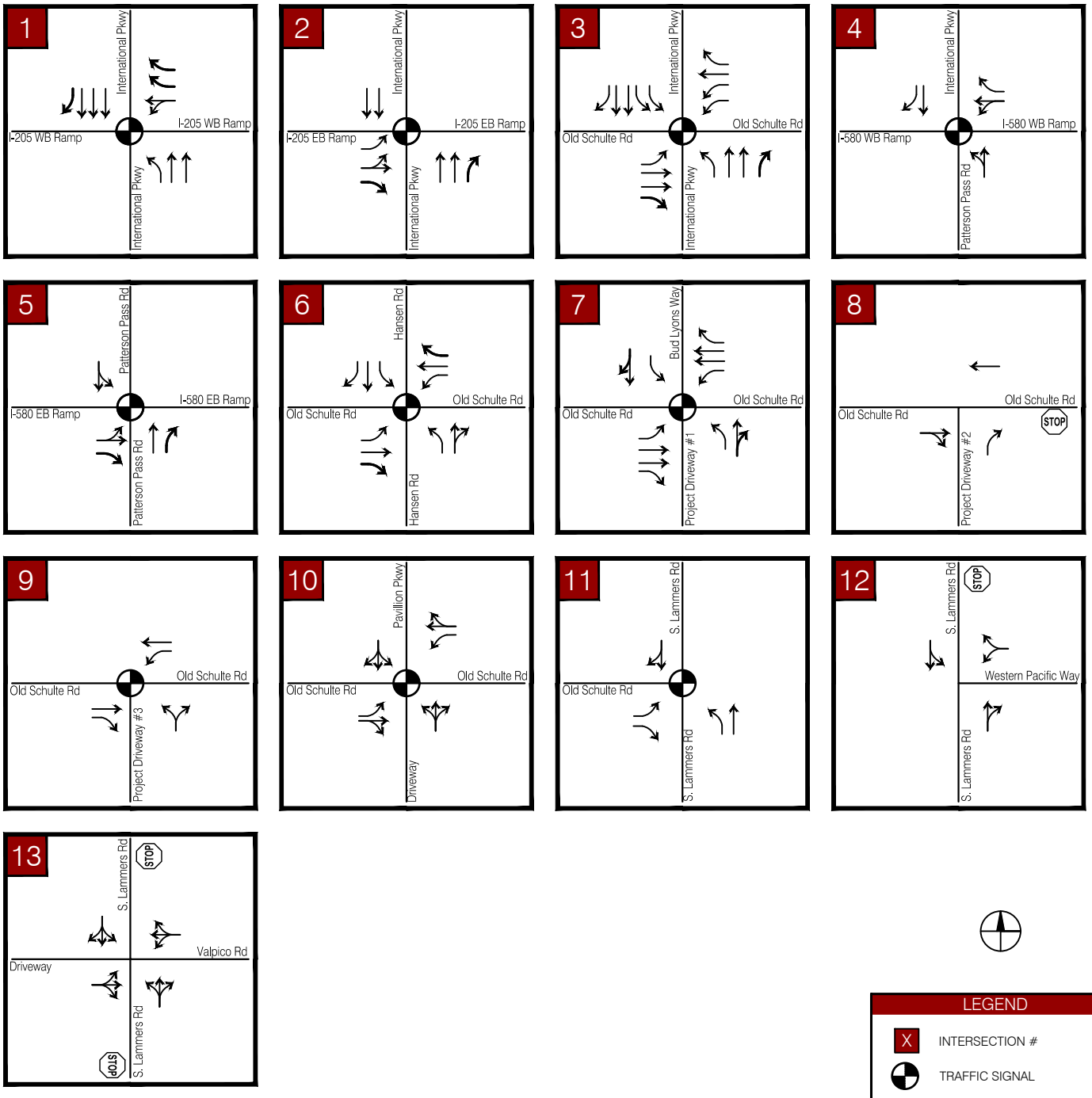
- Intersection #11 – Lammers Rd & Old Schulte Rd (AM Peak Hour)
    - Provide an overlap phase for the eastbound right turn.
- Intersection #12 - Lammers Rd & Western Pacific Wy (AM Peak Hour)
    - Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.
- Intersection #13 - Lammers Rd & Valpico Rd (AM Peak Hour)
    - Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.
- The above various intersection widening improvements along Old Schulte Road result in a continuous four lane facility between the easterly Project driveway and the Safeway driveway on the west side of the Delta-Mendota Canal. Subsequently, the bridge across the canal shall also be widened. If the bridge is not widened, the 95% queue will extend into the Old Schulte Rd/Hansen Rd intersection in the westbound direction during the AM peak period.
- The project shall, at a minimum, provide emergency access to the future Hansen Road. It is anticipated that the properties west of the Project site may develop in the near future and that Hansen Road will be extended to Old Schulte Road.

All recommended improvements match those from the Cordes Ranch 2nd Consistency Analysis (June, 2020) except at Intersection #11. No improvements were required at Intersection #11 in the Cordes Ranch 2nd Consistency Analysis during Background Conditions; therefore, the improvements provided for Intersection #11 would be an interim solution until the cumulative intersection geometry is constructed.

It should be noted that for some intersections, the reported delay improved with the addition of the project trips. The reason for this occurrence is because the trips were predominately added to the through lane movements, which had a lower movement delay than the average intersection delay, and thereby decreases the overall average delay.

Analysis output sheets for Background Plus Project and Background Plus Project (Improvements) are provided in the **Appendix**.

Table 9 provides Costco project obligations for the Background Plus Project Conditions.



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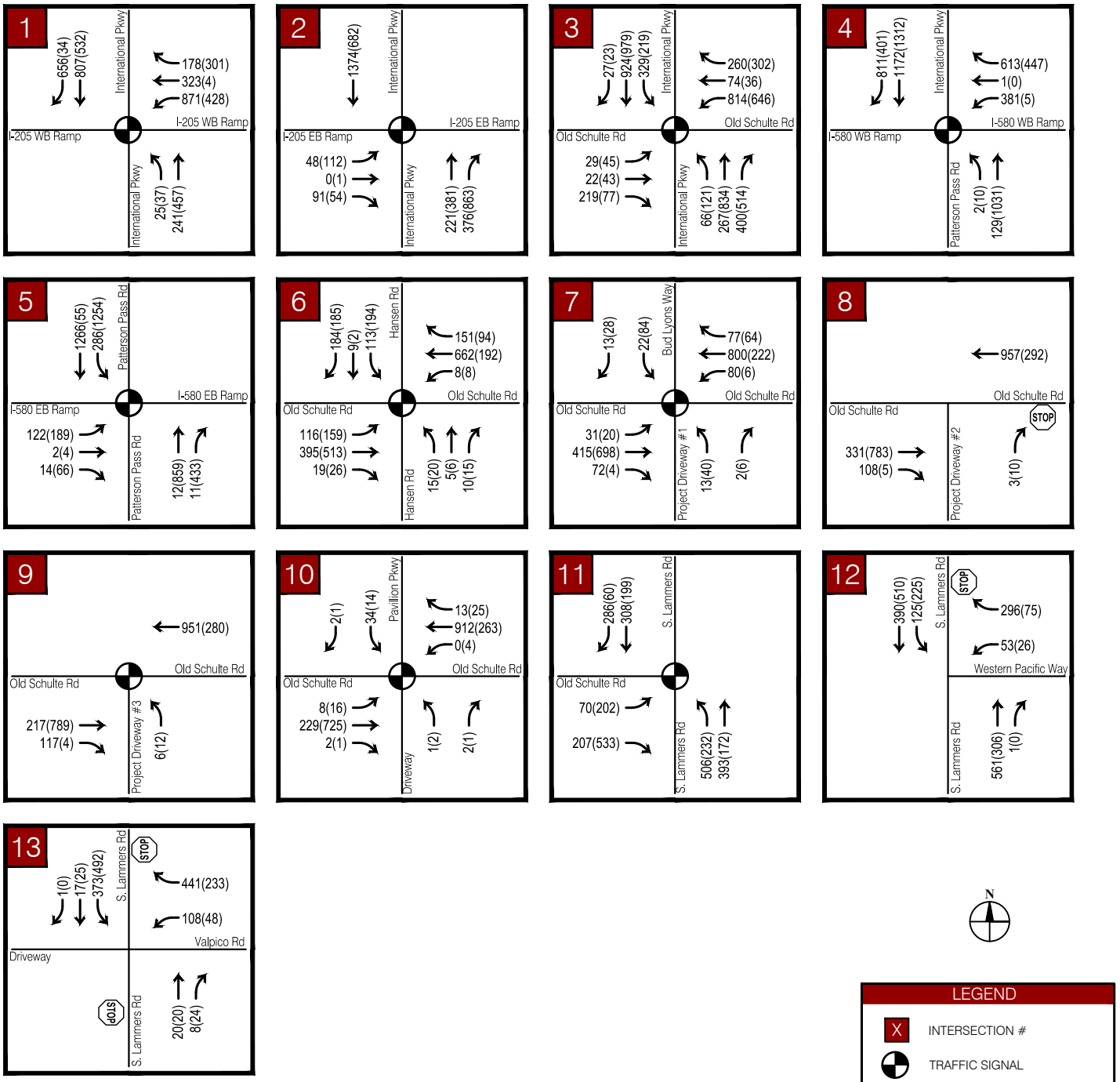
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Figure 14

Background Plus Project

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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Figure 15

Background Plus Project

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 7 – Background Plus Project Conditions LOS Summary

#	Intersection	Agency	Control	Background Conditions						Background Plus Project Conditions						Project Impact? (Y/N)
				AM Peak			PM Peak			AM Peak			PM Peak			
				MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	**229.2**	**F**	-	13.4	B	-	**268.9**	**F**	-	13.7	B	**Y**
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	6.1	A	-	12.5	B	-	6.8	A	-	13.5	B	-
3	International Pkwy & Old Schulte Rd	Tracy	Signal	-	**146.9**	**F**	-	**150.9**	**F**	-	**171.5**	**F**	-	**166.6**	**F**	**Y**
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	-	**369.7**	**F**	-	**427.4**	**F**	-	**369.6**	**F**	-	**437.1**	**F**	**Y**
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	-	**160.8**	**F**	-	**424.1**	**F**	-	**162.6**	**F**	-	**433.4**	**F**	**Y**
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	**58.0**	**E**	-	37.0	D	-	**56.5**	**E**	-	37.7	D	N
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	**91.4**	**F**	-	9.4	A	-	27.2	C	-	25.2	C	N
8	Project Dwy #2 & Old Schulte Rd	Tracy	TWSC	Intersection Does Not Exist						-	-	-	-	-	-	N
	Worst Approach									NB	9.7	A	NB	11.3	B	
9	Project Dwy #3 & Old Schulte Rd	Tracy	Signal	Intersection Does Not Exit						-	6.4	A	-	3.5	A	N
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	19.9	B	-	11.9	B	-	15.9	B	-	12.2	B	
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	52.9	D	-	32.6	C	-	**66.9**	**E**	-	34.7	C	**Y**
12	Western Pacific Wy & Old Schulte Rd	Tracy	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	**Y**
	Worst Approach			**WB**	**114.6**	**F**	WB	24.1	C	**WB**	**162.5**	**F**	WB	25.2	D	
13	Lammers Rd & Valpico Rd	Tracy	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	**Y**
	Worst Approach			**WB**	**92.3**	**F**	WB	26.8	D	**WB**	**122.4**	**F**	WB	29.0	D	

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

Table 8 – Background Plus Project (Improvements) Conditions LOS Summary

#	Intersection	Agency	Control	Background Plus Project Conditions						Improvement Control	Background Plus Project (Improvements) Conditions					
				AM Peak			PM Peak				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS		MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	**268.9**	**F**	-	13.7	B	Signal	-	9.8	A	-	7.2	A
3	International Pkwy & Old Schulte Rd	Tracy	Signal	-	**171.5**	**F**	-	**166.6**	**F**	-	**Refer to FTOAR for improvements**					
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	-	**369.6**	**F**	-	**437.1**	**F**							
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	-	**162.6**	**F**	-	**433.4**	**F**							
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	**56.5**	**E**	-	37.7	D	Signal	-	25.7	C	-	27.7	C
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	**66.9**	**E**	-	34.7	C	Signal	-	48.2	D	-	21.5	C
12	Western Pacific Way & W. Schulte Rd	Tracy	TWSC	-	-	-	-	-	-	Signal	-	24.2	C	-	8.6	A
	Worst Approach			**WB**	**162.5**	**F**	WB	25.2	D							
13	Lammers Rd & Valpico Rd	Tracy	TWSC	-	-	-	-	-	-	Signal	-	32.6	C	-	16.8	B
	Worst Approach			**WB**	**122.4**	**F**	WB	29.0	D							

Notes:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

Table 9 – Costco Obligations (Background Plus Project Conditions)

Costco Intersection #	Intersection /Location	Peak Hour	Background Plus Project Conditions		
			Improvement	Recommended Costco Improvement?	Costco Project Obligation
1	International Pkwy & I-205 WB Ramps	AM	Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
3	International Pkwy & Old Schulte Rd	AM & PM	Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
4	International Pkwy & I-580 WB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
5	International Pkwy & I-580 EB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
6[1]	Hansen Road & Old Schulte Rd	AM	Add one additional westbound and eastbound through lane at the intersection to establish a four-lane facility to the Safeway driveway along Old Schulte Road.	Y	Costco to implement
11	Lammers Rd & Old Schulte Rd	AM	Provide an overlap phase for the eastbound right turn.	Y	Costco to implement
12[1]	Lammers Rd & Western Pacific Way	AM	Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
13	Lammers Rd & Valpico Rd	AM	Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
-	Delta Mendota Bridge	-	Based on SimTraffic microsimulation analysis, the 95th-percentile queue from the westbound lane merge between Intersection #6 and the Delta-Mendota Canal bridge backs up into the intersection. Therefore, the Project shall widen the Delta-Mendota Canal bridge to continue the four lanes to the Safeway driveway. Old Schulte Road shall be a four-lane divided arterial from Hansen Road to the Safeway Driveway once this improvement is implemented. TIF credits will be due to Costco.	Y	Costco to implement

Notes:
1. Costco will construct improvement if not already implemented by another development. This improvement is anticipated to be included in the City of Tracy Transportation Master Plan (TMP) Fee Program Update. If included, Costco could receive reimbursement for improvements within the fee program.
2. Kimley-Horn traffic study identified TIF, this is not reflected in the conditions.

8. Cumulative Conditions

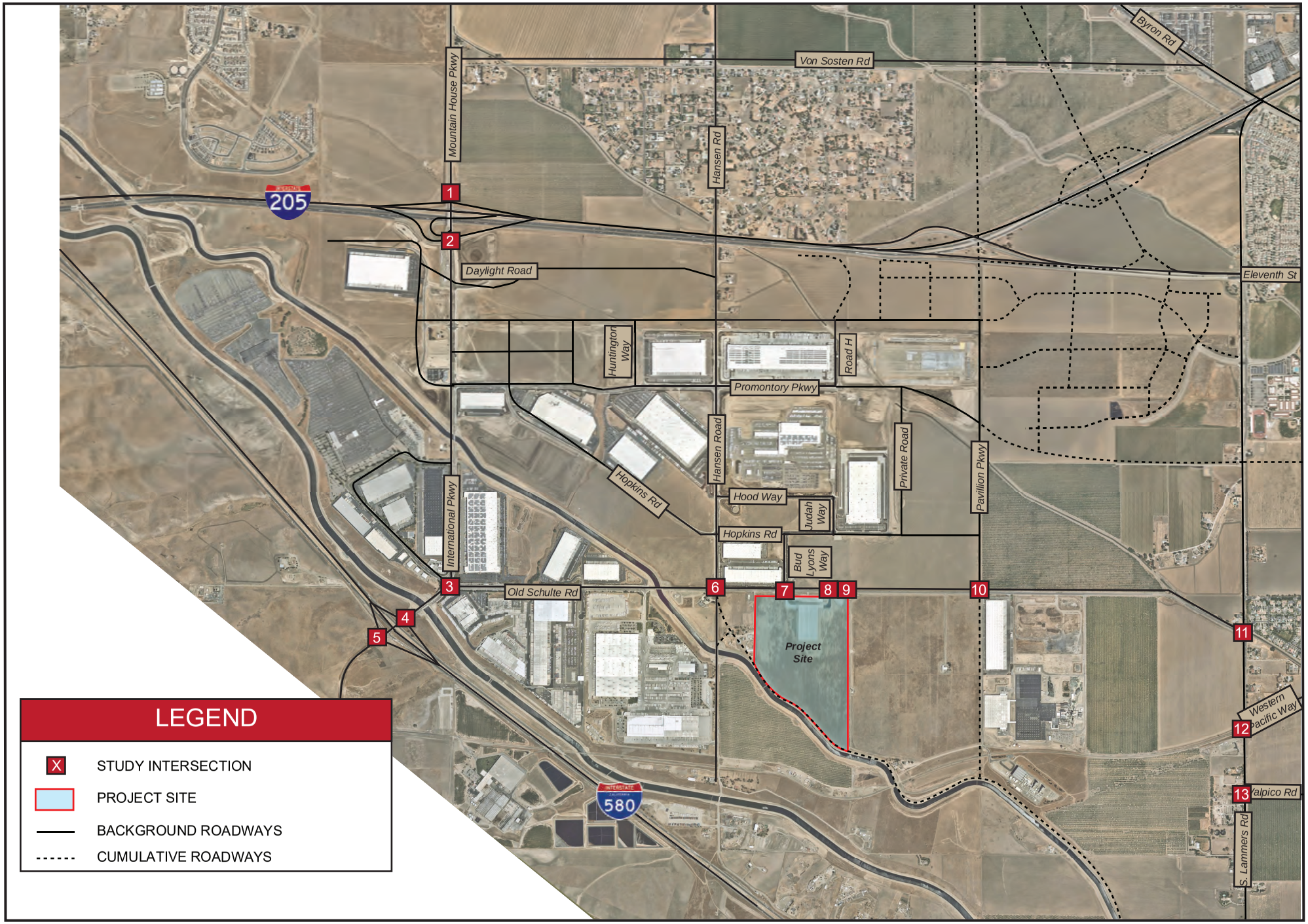
Cumulative Conditions represent 2035 conditions, aligning with the City of Tracy Transportation Master Plan's Horizon Year. The Cumulative Conditions roadway network is shown in **Figure 16**. Cumulative traffic volumes were developed based on recently updated model plots from City of Tracy travel demand forecast model, reflecting the latest development assumptions for the Cordes Ranch and Westside Specific Plan areas, but with the Project volumes removed from the network. Cumulative 2035 link volumes were converted to turning movement volumes using a traffic modeling standard process commonly referred to as the Furness method. The Furness method uses an iterative process to derive future turning movement volumes based on future year roadway link volumes an initial estimate of turning percentage, obtained from existing intersection turning movement counts if available. Intersection lane geometry was based on the Transportation Master Plan and the latest I-205/International Pkwy and I-580/International Pkwy interchange conceptual plans. The Cumulative Conditions lane geometry is shown in **Figure 17** and the volumes are shown in **Figure 18**.

Results of the Cumulative Conditions level of service analysis are presented in **Table 10.** The following intersections operated at unacceptable levels of service:

- Intersection #6 – Hansen Rd & Old Schulte Rd (PM Peak Hour)
- Intersection #10 – Pavilion Pkwy & Old Schulte Rd (PM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (PM Peak Hour)

Analysis output sheets for Cumulative Conditions are provided in the **Appendix**.

It should be noted that Intersections #3, #4 and #5 were not analyzed for Cumulative Conditions due to extensive analysis conducted and summarized in the FTOAR.



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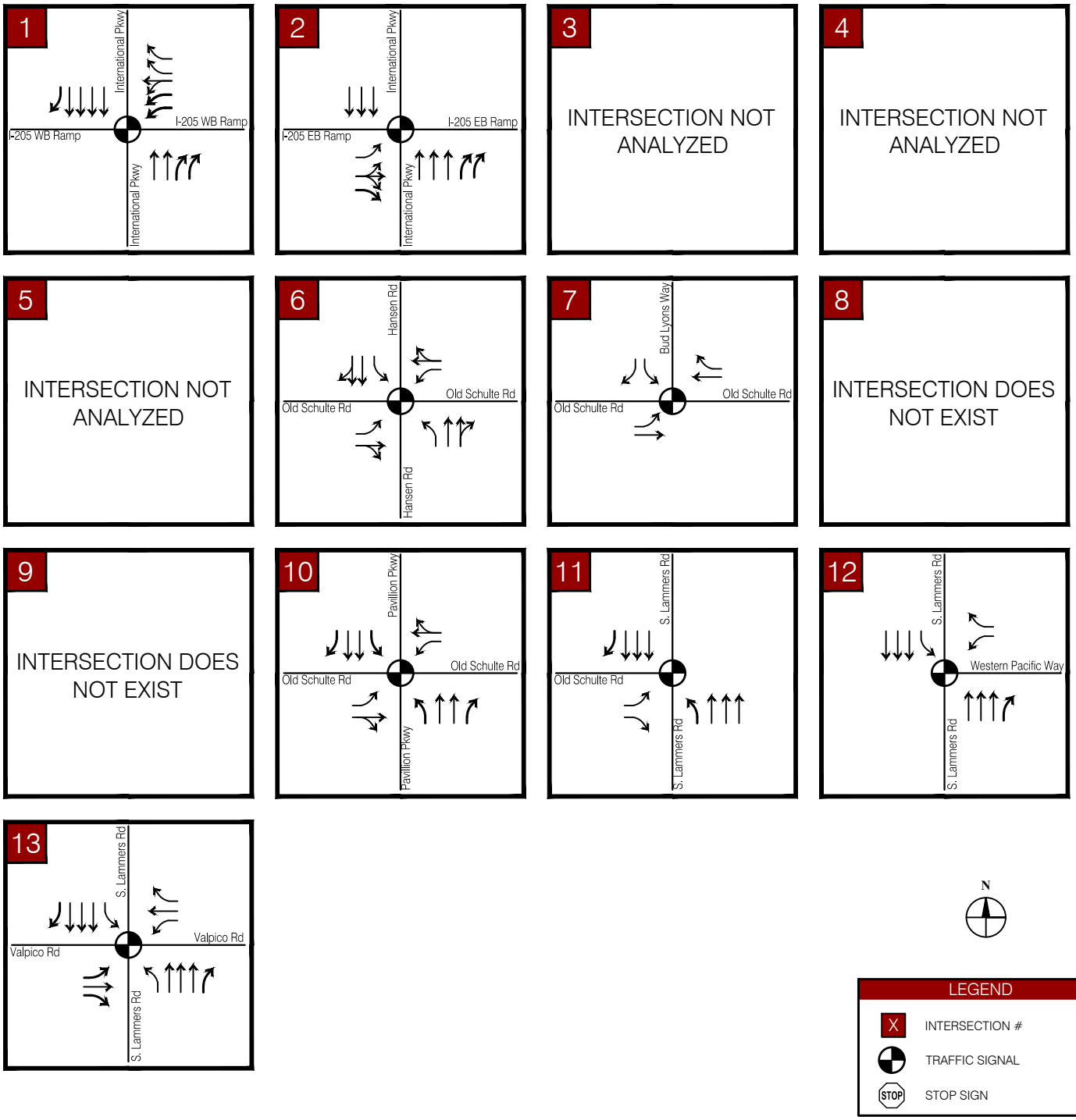
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Figure 16

Cumulative Conditions Overview Map

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Costco Depot Traffic Analysis



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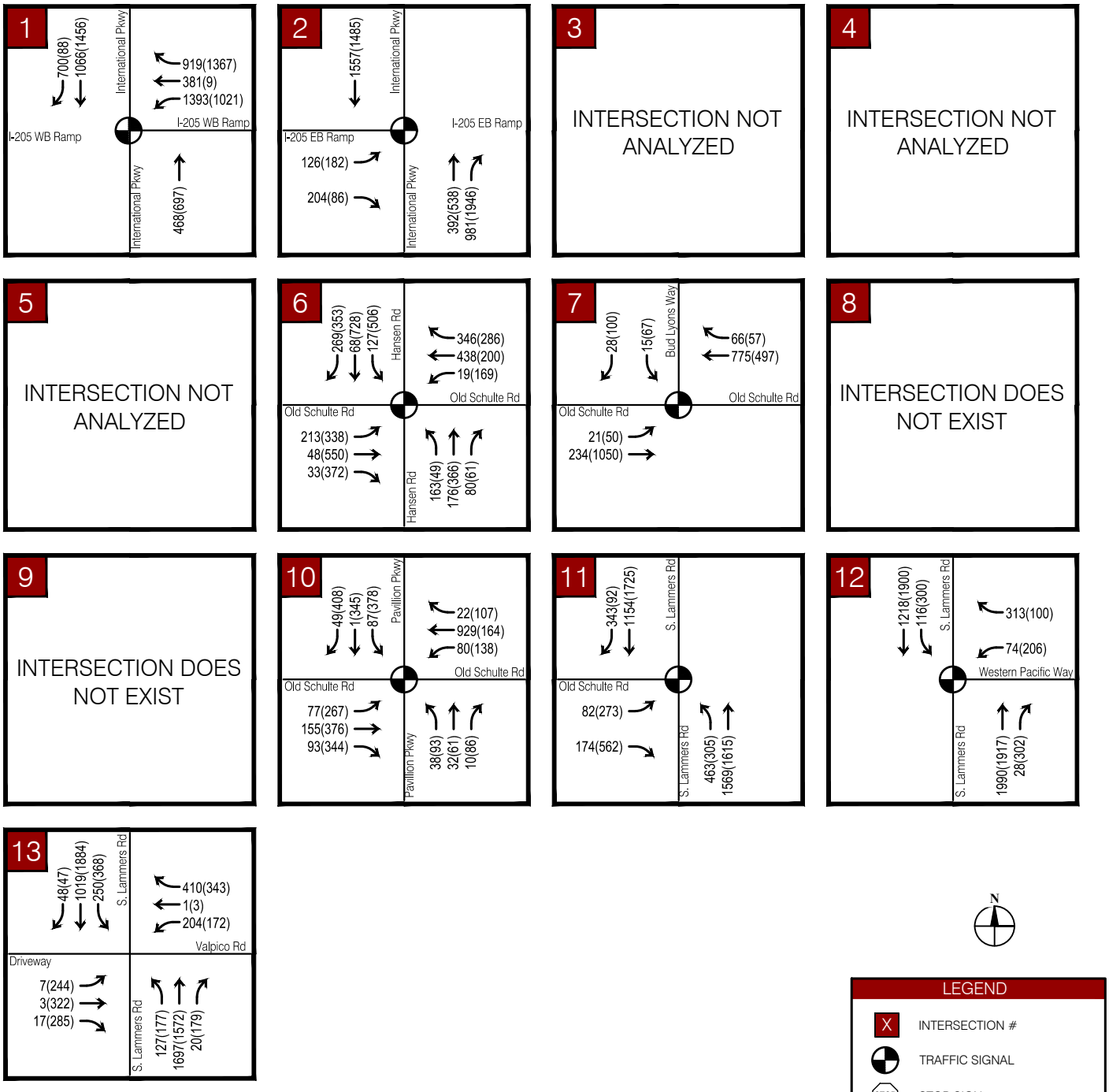
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Figure 17

Cumulative Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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Figure 18

Cumulative Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 10 – Cumulative Conditions LOS Summary

#	Intersection	Agency	Control	Cumulative Conditions					
				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	13.1	B	-	9.6	A
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	7.1	A	-	21.6	C
3	International Pkwy & Old Schulte Rd	**Refer to FTOAR analysis**							
4	International Pkwy & I-580 WB Ramps								
5	International Pkwy & I-580 EB Ramps								
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	46.1	D	**-**	**67.0**	**E**
7	Bud Lyons Way/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	22.2	C	-	52.0	D
8	Project Dwy #2 & Old Schulte Rd Worst Approach	Tracy	-	Intersection Does Not Exist					
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist					
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	36.3	D	**-**	**65.7**	**E**
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	15.1	B	-	37.9	D
12	Lammers Rd & Western Pacific Way	Tracy	Signal	-	16.4	B	-	14.4	B
13	Lammers Rd & Valpico Rd	Tracy	Signal	-	41.1	D	**-**	**64.1**	**E**

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

9. Cumulative Plus Project Conditions

Cumulative Plus Project Conditions are based on Cumulative Conditions traffic volumes plus traffic generated by the proposed Project.

Cumulative Plus Project geometries are shown in **Figure 14** and volumes are shown in **Figure 15**.

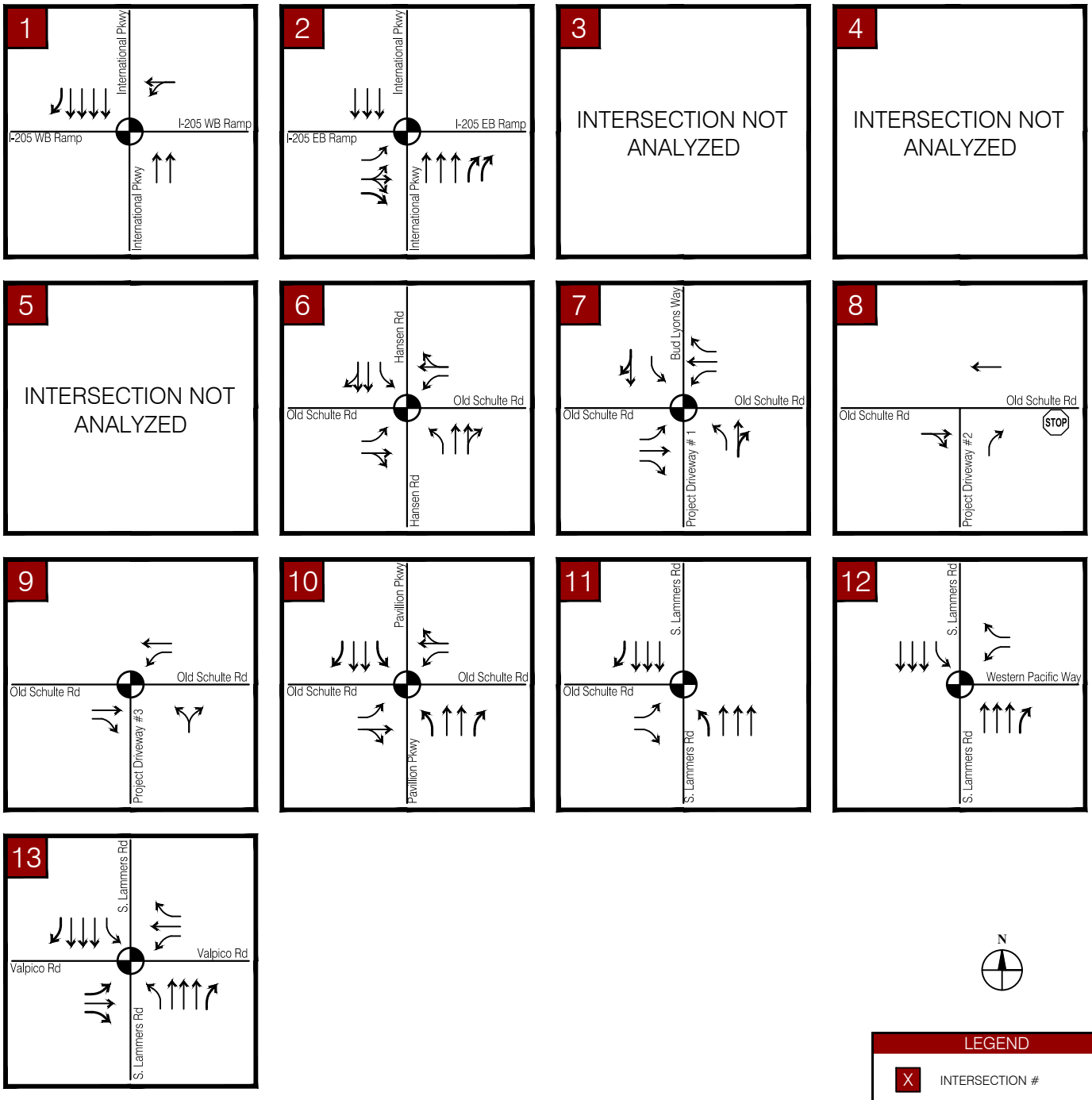
Results of the Cumulative Plus Project Conditions levels of service analysis are presented in **Table 11**. All intersections operated at acceptable levels of service except for the following intersections:

- Intersection #6 – Hansen Rd & Old Schulte Rd (PM Peak Hour)
- Intersection #10 – Pavilion Pkwy & Old Schulte Rd (PM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (PM Peak Hour)

The Cumulative Conditions analysis does not indicate that the Project deteriorates the LOS or causes delay to increase by more than 5 seconds per the City threshold at any study intersection, and thus, no project improvements are required over and above those identified in Background conditions. The project shall, however, pay the City Traffic Impact Fees to offset cumulative incremental deterioration of operating conditions on the City road network.

Analysis output sheets are provided in the **Appendix**.

It should be noted that Intersections #3, #4 and #5 were not analyzed for Cumulative Conditions due to extensive analysis conducted and summarized in the FTOAR.



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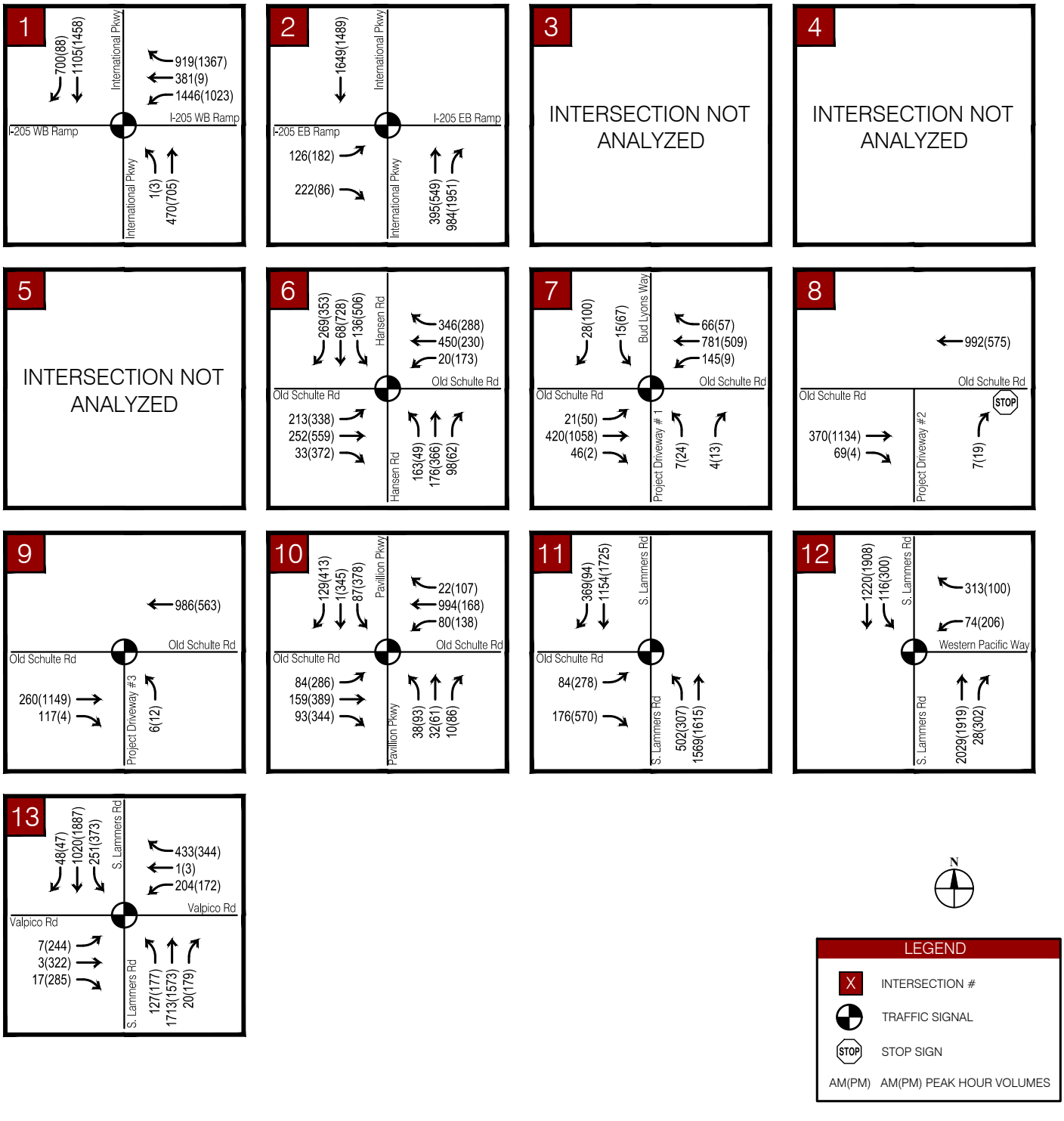
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Figure 19

Cumulative Plus Project Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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Figure 20

Cumulative Plus Project Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 11 – Cumulative Plus Project Conditions LOS Summary

#	Intersection	Agency	Control	Cumulative Conditions						Cumulative Plus Project Conditions						Project Impact?
				AM Peak			PM Peak			AM Peak			PM Peak			
				MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	13.1	B	-	9.6	A	-	13.9	B	-	9.6	A	-
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	7.1	A	-	21.6	C	-	7.4	A	-	21.9	C	-
3	International Pkwy & Old Schulte Rd	**Refer to FTOAR analysis**														
4	International Pkwy & I-580 WB Ramps															
5	International Pkwy & I-580 EB Ramps															
6	Hansen Rd & Old Schulte Rd	Tracy	Signal	-	46.1	D	**-**	**67.0**	**E**	-	46.3	D	**-**	**67.9**	**E**	N
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	22.2	C	-	52.0	D	-	32.2	C	-	17.1	B	-
8	Project Dwy #2 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist						-	-	-	-	-	-	-
	Worst Approach									NB	9.8	A	NB	13.8	B	
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist						-	4.7	A	-	3.2	A	-
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	36.3	D	**-**	**65.7**	**E**	-	44.6	D	**-**	**67.7**	**E**	N
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	15.1	B	-	37.9	D	-	16.9	B	-	38.6	D	-
12	Lammers Rd & Western Pacific Wy	Tracy	Signal	-	16.4	B	-	14.4	B	-	16.7	B	-	14.4	B	-
13	Lammers Rd & Valpico Rd	Tracy	Signal	-	41.1	D	**-**	**64.1**	**E**	-	46.0	D	**-**	**64.6**	**E**	N

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

10. Driveway Access Review

The Project proposes three driveways along Old Schulte Road. **Table 12** provides a summary of the recommendations for each driveway.

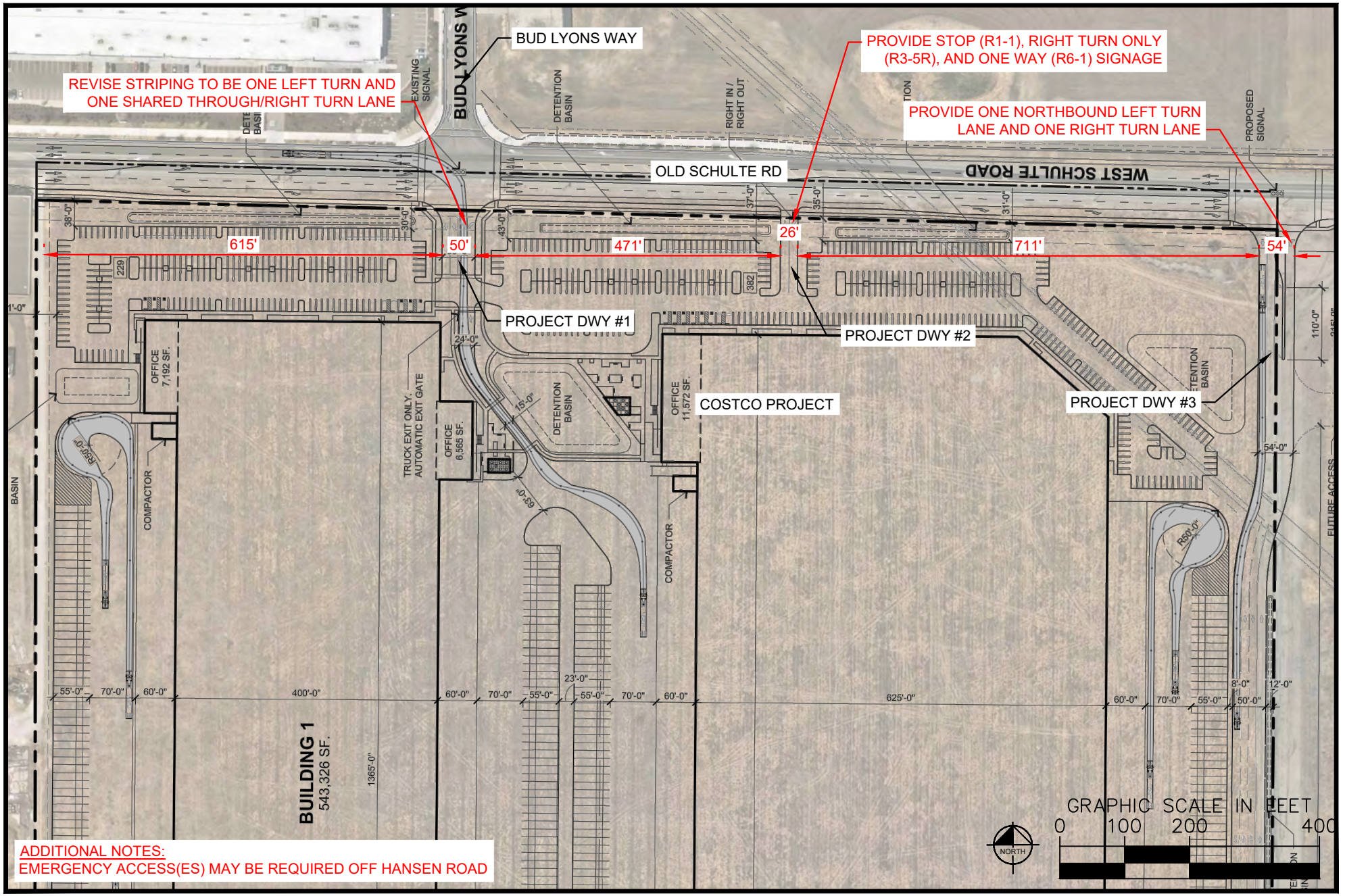
Table 12 – Driveway Access Review

#	Width	Proposed Control	Proposed Access	Proposed Vehicle Type	Recommendations/Comments
1	50’	Signal	Full	Cars & Trucks Out	• Revise striping to the following: 1 left turn and 1 through/right turn lane.
2	26’	SSSC	RIRO	Cars	• Provide Stop (R1-1), Right Turn Only (R3-5R), and One Way (R6-1) signage.
3	54’	Signal	Full	Trucks In & Out	• A left turn lane and a right turn pocket are needed for the signal.
Additional Notes					• Emergency vehicle access(es) may be required off Hansen Road.

Notes:
1. SSSC = Side Street Stop Control
2. RIRO = Right In / Right Out Access; Full = Full Access

Figure 21 illustrates the driveway spacing, widths, and recommendations. **Figure 22** shows the signal spacings along Old Schulte Road between existing and proposed signals. The proposed Project signals provide sufficient spacings.

See the Vehicle Turning Templates section for a review of passenger cars and trucks at the Project driveways and the External Network Review section for a review of the Project frontage and turn lanes required at Project driveways and intersections.

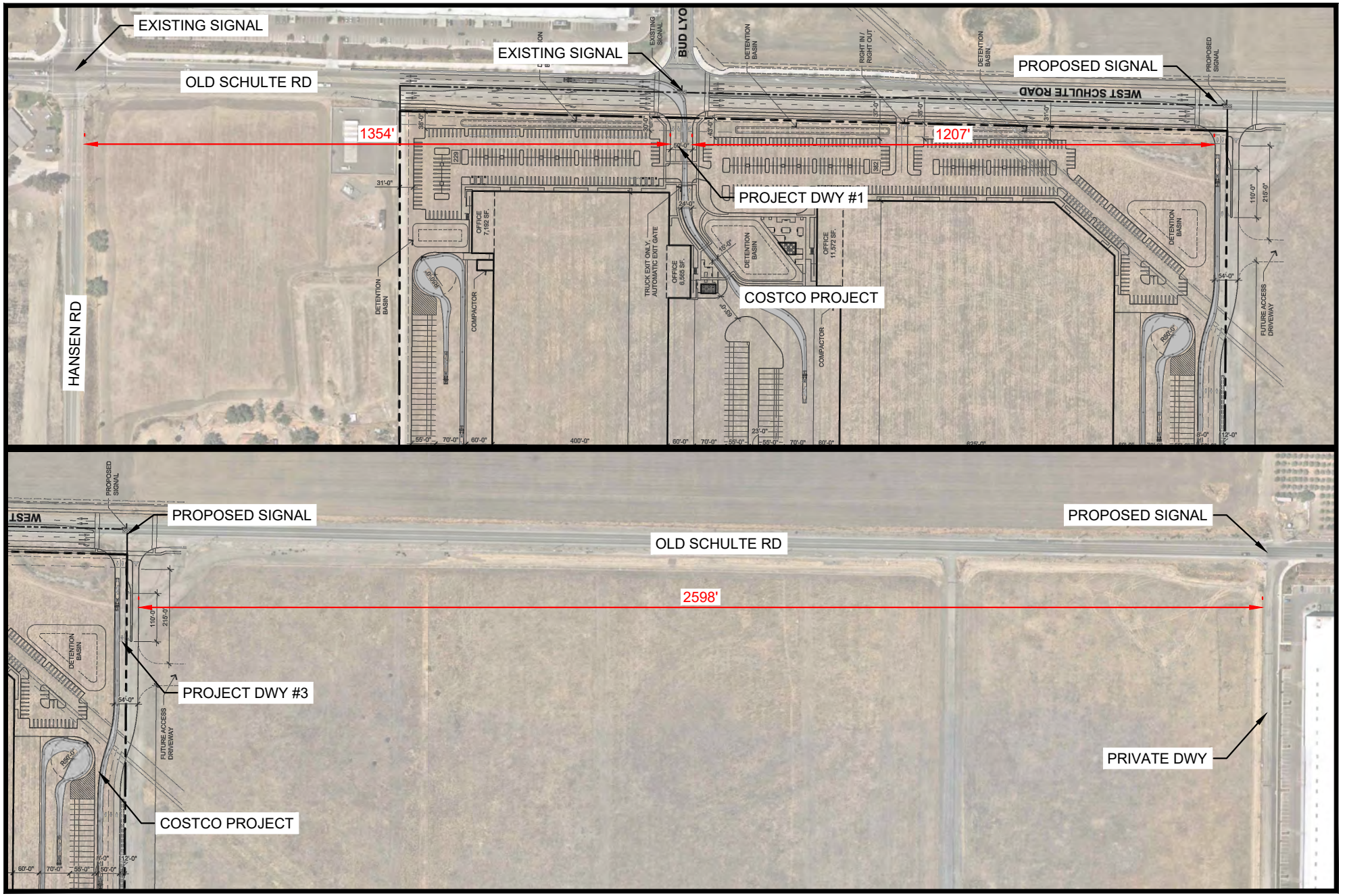


ADDITIONAL NOTES:
EMERGENCY ACCESS(ES) MAY BE REQUIRED OFF HANSEN ROAD

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Figure 21
Driveway Access Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center



GRAPHIC SCALE IN FEET
0 150 300 600

Figure 22
Signal Spacing Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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11. Internal Circulation Review

Truck Gate Queuing Review

An internal truck gate queuing analysis was performed to determine if the proposed truck entrance at Project Driveway #3 can adequately accommodate queuing on-site without spilling onto Old Schulte Road. The Project site proposes three entrance lanes and one exit lane. All trucks entering the site will enter at Project Driveway #3.

Two queueing analysis scenarios were analyzed:

1. All three lanes stopping at the security buildings
2. Two lanes stopping at the security buildings and one lane bypassing the security buildings.
    a. The expectation is that Costco Direct Delivery Center will have means of identifying certain trucks that will allow those trucks to avoid stopping at the security buildings when entering.

Operations at the existing Costco distribution warehouse located on Old Schulte Road west of the Project site were observed in November 2020 from 10:35 AM to 11:30 AM. The existing site has one bypass lane and two service lanes. From this observation, it was recorded that each truck was processed at a rate of 170 seconds per truck (approximately 3 minutes per truck). It was also recorded that approximately 50% of entering trucks use the bypass lane.

The following assumptions were used to calculate the truck entrance queuing:

- Uniform arrival rate
- 3-minute service time per truck that stops at a security building
- 2,300 feet per lane of available storage
- To determine an initial queue and off-peak hour queuing, ITE's Time of Day Distribution was utilized to estimate what percentage of the peak hour trips would occur during the off peaks. Trucks entering the site would be distributed as follows during the three peak hours of queue analysis:
    - 30% of the peak hour trips would arrive in the hour just before the peak hour
    - 70% of the peak hour trips would arrive in the hour just after the peak hour
    - 50% of the peak hour trips would arrive in the following hour
- 50% of truck trips will utilize the bypass lane (Scenario 2 only)

See the **Appendix** for queuing calculations. The expected queue per scenario is the following:

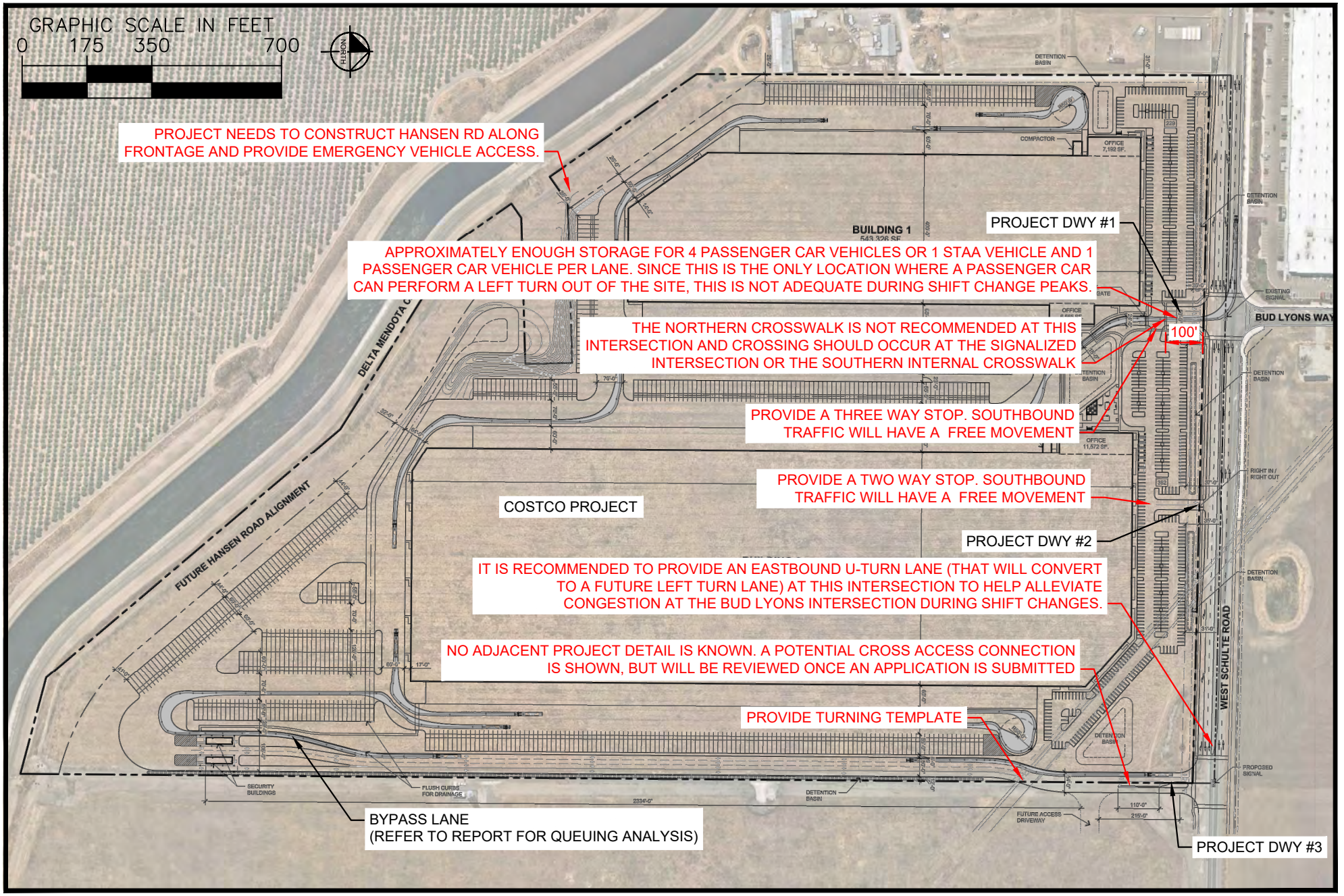
- Scenario 1 (no bypass lane) – 2,100 ft
- Scenario 2 (with bypass lane) – 750 ft

The analysis indicates that the vehicle storage for full gate control, Scenario 1, is marginally sufficient. If one bypass lane is provided, the storage is adequate.

Site Plan Comments

A review of the internal circulation has been provided in **Figure 23**. The following summarizes the comments:

- Approximately 100 feet is provided between Old Schulte Road and the internal drive aisle. This is only enough space for 4 passenger car vehicles or 1 STAA and 1 passenger car vehicle per lane. Since this is the only location where a passenger car can perform a left turn out of the site, this is not adequate during the shift change peaks. To alleviate congestion at this point, it is recommended to provide an eastbound U-turn lane (that could potentially convert to a future left turn lane) at the Old Schulte Road and Project Driveway #3 signalized intersection.
- At Project Driveway #1, the northern internal crosswalk should be removed as this will conflict with vehicles entering and exiting the Project. This crossing should occur at the signal instead or at the southern internal crosswalk.
- Provide a three way stop at the Project Driveway #1 internal intersection with the inbound movement as the free movement.
- No project detail is known for the eastern adjacent parcel that will share Project Driveway #3. The cross access shown will be reviewed in the future, once a development application is submitted for the adjacent parcel.
- Provide clear signage and/or pavement markings for trucks entering Project Driveway #3 that designates security versus bypass lanes.
- Provide truck turning templates at reverse curve within Project Driveway #3.



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Figure 23
Internal Circulation Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

12. Vehicle Turning Templates

The following design vehicles were analyzed at each Project driveway:

1. Passenger Car
2. STAA Truck

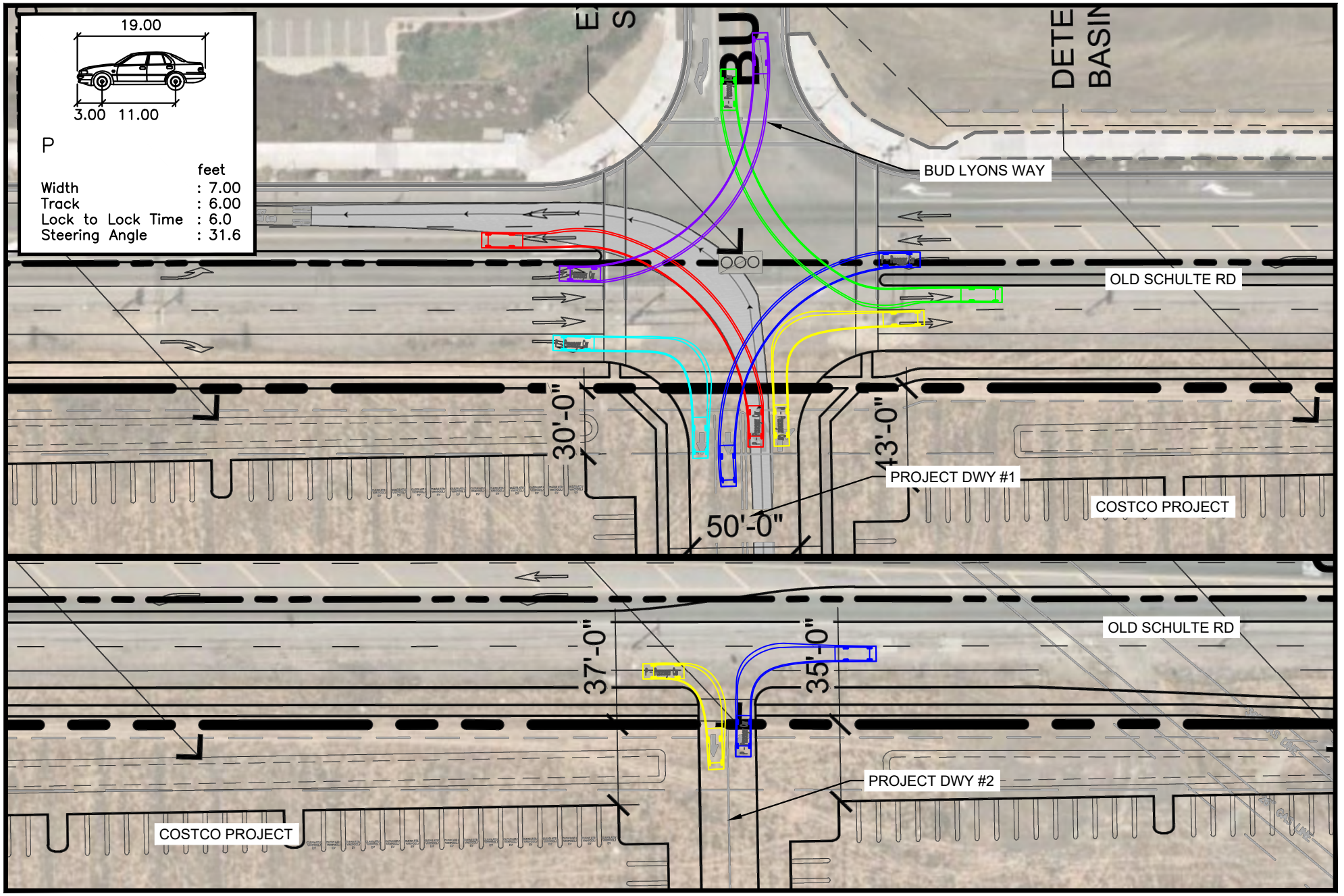
It is anticipated that passenger cars will only access the site from Driveways #1 and #2. It is anticipated that STAA trucks will only exit the site at Driveway #1 but can fully access the site at Driveway #3.

Figure 24 illustrates the passenger car turning templates and **Figure 25** illustrates the STAA truck turning templates.

It was determined that a passenger car can access the site with no turning conflicts.

The following comments have been provided for the STAA turning templates:

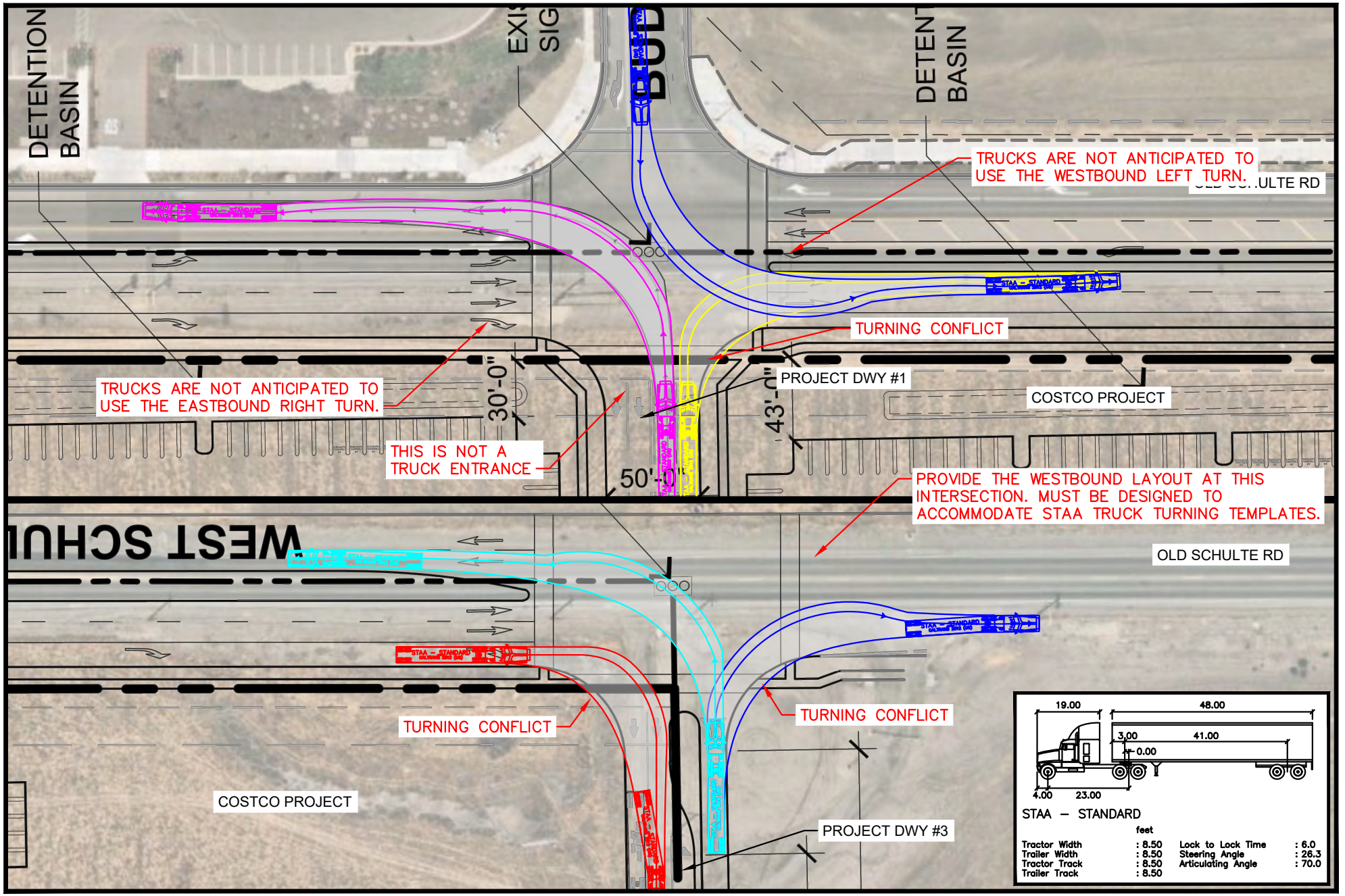
- STAA trucks are unable to perform northbound right turn at Driveway #1. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site.
- STAA trucks are unable to perform eastbound and northbound right turns at Driveway #3. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site.
- A westbound left turn must be provided at Driveway #3 and it must accommodate a STAA truck turning template.



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Figure 24
Passenger Car Turning Templates
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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NORTH

GRAPHIC SCALE IN FEET
0 35 70 140

Figure 25
STAA Truck Turning Template
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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13. External Network Review

The Project frontage was reviewed per the City of Tracy TMP 4-Lane Parkway cross section provided in **Figure 26**.

Figure 26 – 4-Lane Parkway TMP Cross Section

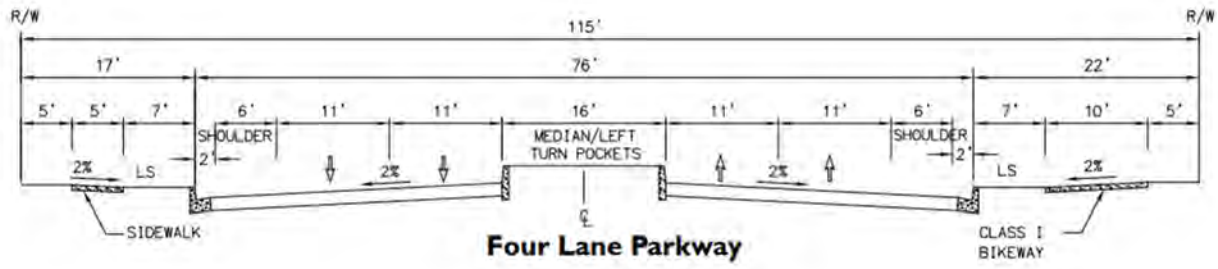
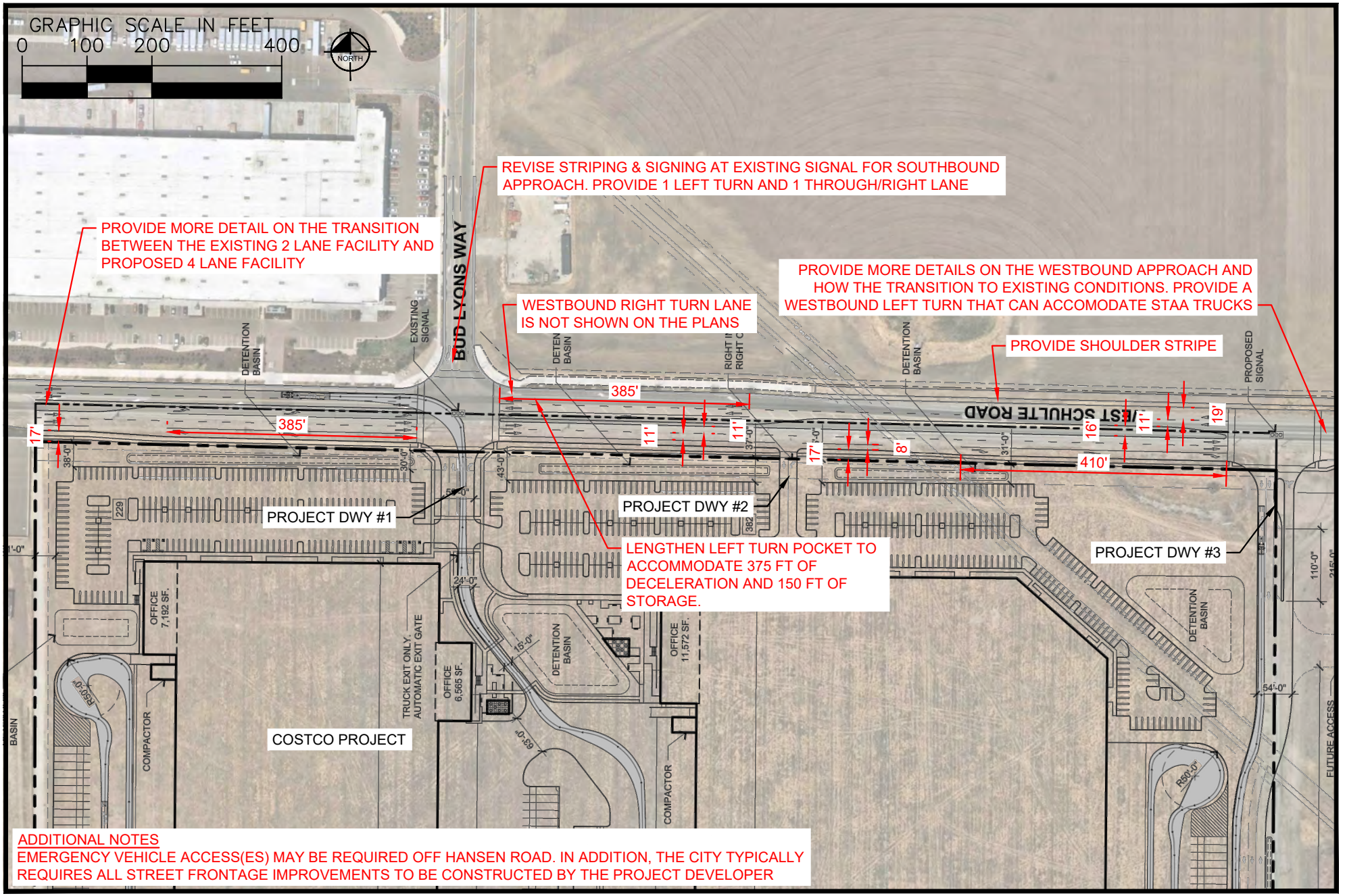


Figure 27 illustrates the external network comments. The following summarizes the comments:

- Provide more detail on the transitions between existing conditions on both the east and west end of the Project limits.
- Provide the striping at the intersection of Old Schulte Road and Project Driveway #3. This approach must include a westbound left turn pocket that can accommodate a CA-STAA truck.
- Revise the signing and striping for the southbound movement at Old Schulte Road and Bud Lyons Way. Provide one left turn and one through/right lane.
- The Westbound right turn lane at the intersection of Old Schulte Road and Bud Lyons is existing and should be shown on the plan set.
- Provide eastbound shoulder stripe.
- Lengthen the westbound left turn lane at Project Driveway #1 to accommodate 375 feet of deceleration and 150 feet of storage.
- Emergency vehicle access(es) may be required off Hansen Road. In addition, the City typically requires all street frontage improvements to be constructed but the Project developer.



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Figure 27
External Network Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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Appendix 3 – AERMOD Output File:

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**
****
**
** AERMOD Input Produced by:
** AERMOD View Ver. 10.2.1
** Lakes Environmental Software Inc.
** Date: 6/6/2022
** File: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\AERMOD\Tracy CostcoV2.ADI
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****
**
**
****
** AERMOD Control Pathway
****
**
**
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  AVERTIME 1 PERIOD
  POLLUTID OTHER
  RUNORNOT RUN
  ERRORFIL "Tracy CostcoV2.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 On-site Mobile
** PREFIX
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** Configuration = Adjacent
** Emission Rate = 1.0
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** End of LINE VOLUME Source ID = SLINE1
** ----------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE2
** DESCRSRC Off-site Mobile (Exit headed west)
** PREFIX
** Length of Side = 3.66
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.66
** SZINIT = 1.70
** Nodes = 2
** 631461.238, 4175990.714, 0.00, 1.83, 1.70
** 630318.270, 4175998.025, 0.00, 1.83, 1.70
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LOCATION L0001149 VOLUME 630438.960 4175997.253 0.0

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   LOCATION L0001152     VOLUME   630427.987 4175997.324 0.0
   LOCATION L0001153     VOLUME   630424.330 4175997.347 0.0
   LOCATION L0001154     VOLUME   630420.672 4175997.370 0.0
   LOCATION L0001155     VOLUME   630417.015 4175997.394 0.0
   LOCATION L0001156     VOLUME   630413.357 4175997.417 0.0
   LOCATION L0001157     VOLUME   630409.700 4175997.441 0.0
   LOCATION L0001158     VOLUME   630406.042 4175997.464 0.0
   LOCATION L0001159     VOLUME   630402.385 4175997.487 0.0
   LOCATION L0001160     VOLUME   630398.727 4175997.511 0.0
   LOCATION L0001161     VOLUME   630395.070 4175997.534 0.0
   LOCATION L0001162     VOLUME   630391.412 4175997.558 0.0
   LOCATION L0001163     VOLUME   630387.755 4175997.581 0.0
   LOCATION L0001164     VOLUME   630384.097 4175997.604 0.0
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   LOCATION L0001166     VOLUME   630376.782 4175997.651 0.0
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   LOCATION L0001168     VOLUME   630369.467 4175997.698 0.0
   LOCATION L0001169     VOLUME   630365.810 4175997.721 0.0
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   LOCATION L0001173     VOLUME   630351.179 4175997.815 0.0
   LOCATION L0001174     VOLUME   630347.522 4175997.838 0.0
   LOCATION L0001175     VOLUME   630343.864 4175997.862 0.0
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   LOCATION L0001178     VOLUME   630332.892 4175997.932 0.0
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   LOCATION L0001180     VOLUME   630325.577 4175997.979 0.0
   LOCATION L0001181     VOLUME   630321.919 4175998.002 0.0
** End of LINE VOLUME Source ID = SLINE2
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE3
** DESCRSRC Off-site Mobile (Exit headed east)
** PREFIX
** Length of Side = 3.66
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.66
** SZINIT = 1.70
** Nodes = 2
** 631461.812, 4175994.442, 0.00, 1.83, 1.70
** 632813.652, 4176000.177, 0.00, 1.83, 1.70
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   LOCATION L0001297     VOLUME   631467.298 4175994.466 0.0
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   LOCATION L0001302     VOLUME   631485.586 4175994.543 0.0
   LOCATION L0001303     VOLUME   631489.244 4175994.559 0.0
   LOCATION L0001304     VOLUME   631492.901 4175994.574 0.0
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** End of LINE VOLUME Source ID = SLINE3
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** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE4
** DESCRSRC Off-site Mobile (Entrance from east)
** PREFIX
** Length of Side = 3.66
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.66
** SZINIT = 1.70
** Nodes = 2
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** 631841.703, 4175993.009, 0.00, 1.83, 1.70
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   LOCATION L0001908     VOLUME   631928.142 4175993.645 0.0
   LOCATION L0001909     VOLUME   631924.484 4175993.618 0.0
   LOCATION L0001910     VOLUME   631920.827 4175993.592 0.0
   LOCATION L0001911     VOLUME   631917.169 4175993.565 0.0
   LOCATION L0001912     VOLUME   631913.512 4175993.538 0.0
   LOCATION L0001913     VOLUME   631909.854 4175993.511 0.0
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   LOCATION L0001920     VOLUME   631884.252 4175993.322 0.0
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   LOCATION L0001930     VOLUME   631847.676 4175993.053 0.0
   LOCATION L0001931     VOLUME   631844.019 4175993.026 0.0
** End of LINE VOLUME Source ID = SLINE4
** ----------------------------------------------------------------
** Line Source Represented by Adjacent Volume Sources
** LINE VOLUME Source ID = SLINE5
** DESCRSRC Off-site Mobile (Entrance from west)
** PREFIX
** Length of Side = 3.66
** Configuration = Adjacent
** Emission Rate = 1.0
** Vertical Dimension = 3.66
** SZINIT = 1.70
** Nodes = 2
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** 631840.270, 4175991.575, 0.00, 1.83, 1.70
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  LOCATION L0002341     VOLUME   631815.607 4175991.459 0.0
  LOCATION L0002342     VOLUME   631819.265 4175991.476 0.0
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** DESCRSRC Idling Point 2
  LOCATION STCK3       POINT     631780.630  4175600.440         0.0
** DESCRSRC Idling Point 3
  LOCATION STCK4       POINT     631780.630  4175500.440         0.0
** DESCRSRC Idling Point 4
  LOCATION STCK5       POINT     631780.630  4175400.440         0.0
** DESCRSRC Idling Point 5
  LOCATION STCK6       POINT     631550.630  4175800.440         0.0
** DESCRSRC Idling Point 6
  LOCATION STCK7       POINT     631550.630  4175700.440         0.0
** DESCRSRC Idling Point 7
  LOCATION STCK8       POINT     631550.630  4175600.440         0.0
** DESCRSRC Idling Point 8
  LOCATION STCK9       POINT     631550.630  4175500.440         0.0
** DESCRSRC Idling Point 9
  LOCATION STCK10      POINT     631550.630  4175400.440         0.0
** DESCRSRC Idling Point 10
  LOCATION STCK11      POINT     631480.630  4175700.440         0.0
** DESCRSRC Idling Point 11
  LOCATION STCK12      POINT     631480.630  4175600.440         0.0
** DESCRSRC Idling Point 12
  LOCATION STCK13      POINT     631360.630  4175700.440         0.0
** DESCRSRC Idling Point 13
  LOCATION STCK14      POINT     631360.630  4175600.440         0.0
** DESCRSRC Idling Point 14
  LOCATION STCK15      POINT     631780.630  4175800.440         0.0
** DESCRSRC TRU Idling Point 1
  LOCATION STCK16      POINT     631780.630  4175700.440         0.0
** DESCRSRC TRU Idling Point 2
  LOCATION STCK17      POINT     631780.630  4175600.440         0.0
** DESCRSRC TRU Idling Point 3
  LOCATION STCK18      POINT     631780.630  4175500.440         0.0
** DESCRSRC TRU Idling Point 4
  LOCATION STCK19      POINT     631780.630  4175400.440         0.0
** DESCRSRC TRU Idling Point 5
  LOCATION STCK20      POINT     631550.630  4175800.440         0.0
** DESCRSRC TRU Idling Point 6
  LOCATION STCK21      POINT     631550.630  4175700.440         0.0
** DESCRSRC TRUIdling Point 7
  LOCATION STCK22      POINT     631550.630  4175600.440         0.0
** DESCRSRC TRU Idling Point 8
  LOCATION STCK23      POINT     631550.630  4175500.440         0.0
** DESCRSRC TRU Idling Point 9
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  LOCATION STCK24      POINT     631550.630  4175400.440        0.0
** DESCRSRC TRU Idling Point 10
  LOCATION STCK25      POINT     631480.630  4175700.440        0.0
** DESCRSRC TRU Idling Point 11
  LOCATION STCK26      POINT     631480.630  4175600.440        0.0
** DESCRSRC TRY Idling Point 12
  LOCATION STCK27      POINT     631360.630  4175700.440        0.0
** DESCRSRC TRU Idling Point 13
  LOCATION STCK28      POINT     631360.630  4175600.440        0.0
** DESCRSRC TRU Idling Point 14
** Source Parameters **
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   SRCPARAM L0002346    0.0024038462     1.83     1.70     1.70
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   SRCPARAM STCK4          1.0    3.658   366.000  57.10000    0.100
   SRCPARAM STCK5          1.0    3.658   366.000  57.10000    0.100
   SRCPARAM STCK6          1.0    3.658   366.000  57.10000    0.100
   SRCPARAM STCK7          1.0    3.658   366.000  57.10000    0.100
   SRCPARAM STCK8          1.0    3.658   366.000  57.10000    0.100
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   SRCPARAM STCK11         1.0    3.658   366.000  57.10000    0.100
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   SRCPARAM STCK15         1.0    3.962   501.000  49.00000    0.044
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   SRCPARAM STCK27         1.0    3.962   501.000  49.00000    0.044
   SRCPARAM STCK28         1.0    3.962   501.000  49.00000    0.044

** Building Downwash **
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   BUILDHGT STCK1       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK1       6.10   6.10   6.10   6.10   6.10   0.00
   BUILDHGT STCK1       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK1       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK1       6.10   6.10   6.10   6.10   6.10   0.00

   BUILDHGT STCK2       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK2       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK2       6.10   6.10   6.10   6.10   6.10   0.00
   BUILDHGT STCK2       6.10   6.10   6.10   6.10   6.10   6.10
   BUILDHGT STCK2       6.10   6.10   6.10   6.10   6.10   6.10
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BUILDHGT STCK3	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK3	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK3	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK3	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK3	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK4	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK4	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK4	6.10	6.10	6.10	6.10	6.10	0.00
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BUILDHGT STCK4	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK4	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK5	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK6	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK6	6.10	6.10	6.10	6.10	6.10	6.10
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BUILDHGT STCK15	6.10	6.10	6.10	6.10	6.10	0.00
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BUILDHGT STCK16	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK16	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK16	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK16	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK16	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK17	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	6.10

BUILDHGT STCK18	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK19	6.10	6.10	6.10	6.10	6.10	0.00
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK20	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK21	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK22	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK23	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK24	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK25	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10

BUILDHGT STCK26	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK27	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDHGT STCK28	6.10	6.10	6.10	6.10	6.10	6.10
BUILDWID STCK1	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK1	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK1	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK1	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK1	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK1	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK2	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK2	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK2	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK2	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK2	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK2	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK3	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK3	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK3	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK3	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK3	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK3	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK4	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK4	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK4	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK4	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK4	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK4	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK5	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK5	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK5	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK5	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK5	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK5	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK6	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK6	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK6	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK6	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK6	675.75	666.89	642.57	658.55	654.51	630.59

BUILDWID STCK6 591.25 537.52 475.38 400.31 313.08 223.53

BUILDWID STCK7 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK7 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK7 591.25 537.52 475.38 400.31 313.08 223.53
BUILDWID STCK7 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK7 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK7 591.25 537.52 475.38 400.31 313.08 223.53

BUILDWID STCK8 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK8 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK8 591.25 537.52 475.38 400.31 313.08 223.53
BUILDWID STCK8 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK8 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK8 591.25 537.52 475.38 400.31 313.08 223.53

BUILDWID STCK9 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK9 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK9 591.25 537.52 475.38 400.31 313.08 223.53
BUILDWID STCK9 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK9 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK9 591.25 537.52 475.38 400.31 313.08 223.53

BUILDWID STCK10 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK10 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK10 591.25 537.52 475.38 400.31 313.08 223.53
BUILDWID STCK10 330.88 428.18 512.46 581.18 632.23 664.08
BUILDWID STCK10 675.75 666.89 642.57 658.55 654.51 630.59
BUILDWID STCK10 591.25 537.52 475.38 400.31 313.08 223.53

BUILDWID STCK11 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK11 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK11 401.91 355.51 306.25 247.68 181.59 120.40
BUILDWID STCK11 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK11 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK11 401.91 355.51 306.25 247.68 181.59 120.40

BUILDWID STCK12 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK12 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK12 401.91 355.51 306.25 247.68 181.59 120.40
BUILDWID STCK12 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK12 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK12 401.91 355.51 306.25 247.68 181.59 120.40

BUILDWID STCK13 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK13 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK13 401.91 355.51 306.25 247.68 181.59 120.40
BUILDWID STCK13 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK13 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK13 401.91 355.51 306.25 247.68 181.59 120.40

BUILDWID STCK14 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK14 476.34 476.96 468.31 472.86 463.03 439.14
BUILDWID STCK14 401.91 355.51 306.25 247.68 181.59 120.40
BUILDWID STCK14 198.99 271.53 335.81 389.90 432.14 461.25
BUILDWID STCK14 476.34 476.96 468.31 472.86 463.03 439.14

BUILDWID STCK14	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK15	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK15	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK15	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK15	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK15	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK15	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK16	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK16	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK16	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK16	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK16	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK16	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK17	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK17	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK17	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK17	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK17	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK17	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK18	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK18	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK18	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK18	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK18	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK18	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK19	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK19	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK19	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK19	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK19	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK19	591.25	537.52	475.38	400.31	313.08	0.00
BUILDWID STCK20	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK20	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK20	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK20	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK20	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK20	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK21	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK21	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK21	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK21	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK21	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK21	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK22	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK22	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK22	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK22	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK22	675.75	666.89	642.57	658.55	654.51	630.59

BUILDWID STCK22	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK23	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK23	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK23	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK23	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK23	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK23	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK24	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK24	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK24	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK24	330.88	428.18	512.46	581.18	632.23	664.08
BUILDWID STCK24	675.75	666.89	642.57	658.55	654.51	630.59
BUILDWID STCK24	591.25	537.52	475.38	400.31	313.08	223.53
BUILDWID STCK25	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK25	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK25	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK25	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK25	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK25	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK26	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK26	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK26	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK26	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK26	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK26	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK27	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK27	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK27	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK27	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK27	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK27	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK28	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK28	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK28	401.91	355.51	306.25	247.68	181.59	120.40
BUILDWID STCK28	198.99	271.53	335.81	389.90	432.14	461.25
BUILDWID STCK28	476.34	476.96	468.31	472.86	463.03	439.14
BUILDWID STCK28	401.91	355.51	306.25	247.68	181.59	120.40

BUILDLEN STCK1	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK1	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK1	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK1	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK1	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK1	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK2	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK2	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK2	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK2	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK2	400.31	313.08	223.53	330.88	428.18	512.46

BUILDLEN STCK2	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK3	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK3	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK3	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK3	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK3	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK3	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK4	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK4	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK4	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK4	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK4	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK4	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK5	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK5	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK5	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK5	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK5	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK5	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK6	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK6	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK6	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK6	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK6	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK6	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK7	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK7	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK7	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK7	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK7	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK7	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK8	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK8	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK8	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK8	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK8	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK8	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK9	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK9	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK9	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK9	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK9	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK9	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK10	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK10	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK10	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK10	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK10	400.31	313.08	223.53	330.88	428.18	512.46

BUILDLEN STCK10	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK11	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK11	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK11	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK11	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK11	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK11	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK12	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK12	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK12	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK12	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK12	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK12	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK13	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK13	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK13	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK13	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK13	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK13	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK14	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK14	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK14	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK14	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK14	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK14	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK15	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK15	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK15	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK15	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK15	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK15	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK16	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK16	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK16	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK16	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK16	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK16	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK17	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK17	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK17	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK17	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK17	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK17	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK18	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK18	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK18	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK18	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK18	400.31	313.08	223.53	330.88	428.18	512.46

BUILDLEN STCK18	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK19	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK19	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK19	581.18	632.23	664.08	675.75	666.89	0.00
BUILDLEN STCK19	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK19	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK19	581.18	632.24	664.08	675.75	666.89	0.00
BUILDLEN STCK20	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK20	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK20	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK20	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK20	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK20	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK21	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK21	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK21	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK21	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK21	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK21	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK22	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK22	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK22	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK22	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK22	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK22	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK23	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK23	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK23	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK23	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK23	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK23	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK24	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK24	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK24	581.18	632.23	664.08	675.75	666.89	642.57
BUILDLEN STCK24	658.55	654.51	630.59	591.25	537.52	475.38
BUILDLEN STCK24	400.31	313.08	223.53	330.88	428.18	512.46
BUILDLEN STCK24	581.18	632.24	664.08	675.75	666.89	642.57
BUILDLEN STCK25	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK25	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK25	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK25	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK25	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK25	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK26	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK26	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN STCK26	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN STCK26	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN STCK26	247.68	181.59	120.40	198.99	271.53	335.81

BUILDLEN	STCK26	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN	STCK27	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN	STCK27	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN	STCK27	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN	STCK27	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN	STCK27	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN	STCK27	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN	STCK28	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN	STCK28	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN	STCK28	389.90	432.14	461.25	476.34	476.96	468.31
BUILDLEN	STCK28	472.86	463.03	439.14	401.91	355.51	306.25
BUILDLEN	STCK28	247.68	181.59	120.40	198.99	271.53	335.81
BUILDLEN	STCK28	389.90	432.14	461.25	476.34	476.96	468.31
XBADJ	STCK1	-533.14	-542.44	-535.26	-515.55	-483.76	-437.28
XBADJ	STCK1	-377.50	-306.26	-228.11	-247.24	-258.86	-262.61
XBADJ	STCK1	-258.38	-246.30	-226.74	-200.29	-167.75	0.00
XBADJ	STCK1	-125.41	-112.07	-95.33	-75.70	-53.76	-38.11
XBADJ	STCK1	-22.81	-6.82	4.58	-83.64	-169.32	-249.85
XBADJ	STCK1	-322.80	-385.93	-437.34	-475.46	-499.13	0.00
XBADJ	STCK2	-434.66	-448.47	-448.66	-438.95	-419.48	-387.28
XBADJ	STCK2	-343.30	-288.89	-228.11	-264.60	-293.06	-312.61
XBADJ	STCK2	-322.66	-322.91	-313.34	-294.26	-266.23	0.00
XBADJ	STCK2	-223.89	-206.04	-181.94	-152.30	-118.04	-88.11
XBADJ	STCK2	-57.01	-24.18	4.58	-66.28	-135.12	-199.85
XBADJ	STCK2	-258.52	-309.33	-350.74	-381.49	-400.65	0.00
XBADJ	STCK3	-336.18	-354.50	-362.05	-362.34	-355.20	-337.28
XBADJ	STCK3	-309.10	-271.53	-228.11	-281.97	-327.26	-362.61
XBADJ	STCK3	-386.94	-399.51	-399.95	-388.23	-364.72	0.00
XBADJ	STCK3	-322.37	-300.01	-268.54	-228.91	-182.32	-138.11
XBADJ	STCK3	-91.21	-41.55	4.58	-48.91	-100.92	-149.85
XBADJ	STCK3	-194.24	-232.72	-264.13	-287.52	-302.17	0.00
XBADJ	STCK4	-237.70	-260.53	-275.45	-285.74	-290.93	-287.28
XBADJ	STCK4	-274.90	-254.16	-228.11	-299.33	-361.46	-412.61
XBADJ	STCK4	-451.22	-476.12	-486.55	-482.20	-463.20	0.00
XBADJ	STCK4	-420.85	-393.98	-355.14	-305.51	-246.60	-188.11
XBADJ	STCK4	-125.41	-58.91	4.58	-31.55	-66.71	-99.85
XBADJ	STCK4	-129.96	-156.12	-177.53	-193.55	-203.69	0.00
XBADJ	STCK5	-139.22	-166.56	-188.85	-209.13	-226.65	-237.28
XBADJ	STCK5	-240.69	-236.80	-228.11	-316.70	-395.67	-462.61
XBADJ	STCK5	-515.50	-552.72	-573.15	-576.17	-561.68	0.00
XBADJ	STCK5	-519.33	-487.95	-441.74	-382.11	-310.88	-238.11
XBADJ	STCK5	-159.62	-76.28	4.58	-14.18	-32.51	-49.85
XBADJ	STCK5	-65.68	-79.51	-90.93	-99.58	-105.21	0.00
XBADJ	STCK6	-493.20	-463.78	-420.26	-367.71	-307.57	-238.09
XBADJ	STCK6	-161.37	-79.75	1.89	-20.73	-42.73	-63.42
XBADJ	STCK6	-82.19	-98.46	-111.74	-121.63	-127.81	-134.93
XBADJ	STCK6	-165.35	-190.74	-210.33	-223.54	-229.95	-237.29
XBADJ	STCK6	-238.94	-233.32	-225.42	-310.15	-385.45	-449.04

XBADJ	STCK6	-498.99	-533.77	-552.34	-554.12	-539.07	-507.64
XBADJ	STCK7	-394.72	-369.81	-333.66	-291.10	-243.29	-188.09
XBADJ	STCK7	-127.17	-62.39	1.89	-38.10	-76.93	-113.42
XBADJ	STCK7	-146.47	-175.07	-198.34	-215.60	-226.30	-234.93
XBADJ	STCK7	-263.83	-284.71	-296.94	-300.14	-294.23	-287.29
XBADJ	STCK7	-273.14	-250.69	-225.42	-292.78	-351.25	-399.04
XBADJ	STCK7	-434.71	-457.17	-465.74	-460.15	-440.59	-407.64
XBADJ	STCK8	-296.24	-275.84	-247.05	-214.50	-179.01	-138.09
XBADJ	STCK8	-92.97	-45.02	1.89	-55.46	-111.13	-163.42
XBADJ	STCK8	-210.75	-251.67	-284.95	-309.56	-324.78	-334.93
XBADJ	STCK8	-362.31	-378.68	-383.54	-376.75	-358.51	-337.29
XBADJ	STCK8	-307.34	-268.05	-225.42	-275.42	-317.04	-349.04
XBADJ	STCK8	-370.43	-380.56	-379.13	-366.19	-342.11	-307.64
XBADJ	STCK9	-197.76	-181.87	-160.45	-137.90	-114.74	-88.09
XBADJ	STCK9	-58.77	-27.66	1.89	-72.83	-145.33	-213.42
XBADJ	STCK9	-275.03	-328.28	-371.55	-403.53	-423.26	-434.93
XBADJ	STCK9	-460.79	-472.64	-470.14	-453.35	-422.79	-387.29
XBADJ	STCK9	-341.54	-285.42	-225.42	-258.05	-282.84	-299.04
XBADJ	STCK9	-306.15	-303.96	-292.53	-272.22	-243.63	-207.64
XBADJ	STCK10	-99.28	-87.90	-73.85	-61.29	-50.46	-38.09
XBADJ	STCK10	-24.57	-10.29	1.89	-90.19	-179.54	-263.42
XBADJ	STCK10	-339.31	-404.88	-458.15	-497.50	-521.74	-534.93
XBADJ	STCK10	-559.27	-566.61	-556.74	-529.96	-487.07	-437.29
XBADJ	STCK10	-375.75	-302.78	-225.42	-240.69	-248.64	-249.04
XBADJ	STCK10	-241.87	-227.35	-205.93	-178.25	-145.15	-107.64
XBADJ	STCK11	-247.45	-249.09	-243.16	-229.84	-212.59	-196.81
XBADJ	STCK11	-175.06	-147.99	-118.74	-156.48	-189.46	-216.68
XBADJ	STCK11	-237.32	-250.75	-256.56	-254.58	-244.86	-230.02
XBADJ	STCK11	-225.41	-213.95	-195.98	-172.07	-142.92	-109.43
XBADJ	STCK11	-72.62	-33.60	-1.66	-42.51	-82.07	-119.13
XBADJ	STCK11	-152.58	-181.39	-204.68	-221.76	-232.10	-238.29
XBADJ	STCK12	-148.97	-155.12	-156.56	-153.24	-148.31	-146.81
XBADJ	STCK12	-140.86	-130.62	-118.74	-173.84	-223.66	-266.68
XBADJ	STCK12	-301.60	-327.36	-343.17	-348.55	-343.34	-330.02
XBADJ	STCK12	-323.89	-307.91	-282.59	-248.67	-207.20	-159.43
XBADJ	STCK12	-106.82	-50.97	-1.66	-25.15	-47.87	-69.13
XBADJ	STCK12	-88.30	-104.78	-118.08	-127.79	-133.62	-138.29
XBADJ	STCK13	-226.61	-208.05	-183.16	-152.71	-120.66	-92.89
XBADJ	STCK13	-62.30	-29.81	1.26	-38.30	-76.69	-112.76
XBADJ	STCK13	-145.40	-173.62	-196.56	-213.54	-224.02	-230.02
XBADJ	STCK13	-246.24	-254.99	-255.98	-249.20	-234.85	-213.36
XBADJ	STCK13	-185.38	-151.78	-121.66	-160.69	-194.83	-223.06
XBADJ	STCK13	-244.50	-258.52	-264.68	-262.80	-252.94	-238.29
XBADJ	STCK14	-128.13	-114.08	-96.56	-76.10	-56.38	-42.89
XBADJ	STCK14	-28.09	-12.45	1.26	-55.66	-110.90	-162.76
XBADJ	STCK14	-209.68	-250.22	-283.17	-307.51	-322.50	-330.02
XBADJ	STCK14	-344.73	-348.96	-342.59	-325.80	-299.12	-263.36
XBADJ	STCK14	-219.58	-169.14	-121.66	-143.32	-160.63	-173.06

XBADJ	STCK14	-180.22	-181.92	-178.08	-168.84	-154.46	-138.29
XBADJ	STCK15	-533.14	-542.44	-535.26	-515.55	-483.76	-437.28
XBADJ	STCK15	-377.50	-306.26	-228.11	-247.24	-258.86	-262.61
XBADJ	STCK15	-258.38	-246.30	-226.74	-200.29	-167.75	0.00
XBADJ	STCK15	-125.41	-112.07	-95.33	-75.70	-53.76	-38.11
XBADJ	STCK15	-22.81	-6.82	4.58	-83.64	-169.32	-249.85
XBADJ	STCK15	-322.80	-385.93	-437.34	-475.46	-499.13	0.00
XBADJ	STCK16	-434.66	-448.47	-448.66	-438.95	-419.48	-387.28
XBADJ	STCK16	-343.30	-288.89	-228.11	-264.60	-293.06	-312.61
XBADJ	STCK16	-322.66	-322.91	-313.34	-294.26	-266.23	0.00
XBADJ	STCK16	-223.89	-206.04	-181.94	-152.30	-118.04	-88.11
XBADJ	STCK16	-57.01	-24.18	4.58	-66.28	-135.12	-199.85
XBADJ	STCK16	-258.52	-309.33	-350.74	-381.49	-400.65	0.00
XBADJ	STCK17	-336.18	-354.50	-362.05	-362.34	-355.20	-337.28
XBADJ	STCK17	-309.10	-271.53	-228.11	-281.97	-327.26	-362.61
XBADJ	STCK17	-386.94	-399.51	-399.95	-388.23	-364.72	0.00
XBADJ	STCK17	-322.37	-300.01	-268.54	-228.91	-182.32	-138.11
XBADJ	STCK17	-91.21	-41.55	4.58	-48.91	-100.92	-149.85
XBADJ	STCK17	-194.24	-232.72	-264.13	-287.52	-302.17	0.00
XBADJ	STCK18	-237.70	-260.53	-275.45	-285.74	-290.93	-287.28
XBADJ	STCK18	-274.90	-254.16	-228.11	-299.33	-361.46	-412.61
XBADJ	STCK18	-451.22	-476.12	-486.55	-482.20	-463.20	0.00
XBADJ	STCK18	-420.85	-393.98	-355.14	-305.51	-246.60	-188.11
XBADJ	STCK18	-125.41	-58.91	4.58	-31.55	-66.71	-99.85
XBADJ	STCK18	-129.96	-156.12	-177.53	-193.55	-203.69	0.00
XBADJ	STCK19	-139.22	-166.56	-188.85	-209.13	-226.65	-237.28
XBADJ	STCK19	-240.69	-236.80	-228.11	-316.70	-395.67	-462.61
XBADJ	STCK19	-515.50	-552.72	-573.15	-576.17	-561.68	0.00
XBADJ	STCK19	-519.33	-487.95	-441.74	-382.11	-310.88	-238.11
XBADJ	STCK19	-159.62	-76.28	4.58	-14.18	-32.51	-49.85
XBADJ	STCK19	-65.68	-79.51	-90.93	-99.58	-105.21	0.00
XBADJ	STCK20	-493.20	-463.78	-420.26	-367.71	-307.57	-238.09
XBADJ	STCK20	-161.37	-79.75	1.89	-20.73	-42.73	-63.42
XBADJ	STCK20	-82.19	-98.46	-111.74	-121.63	-127.81	-134.93
XBADJ	STCK20	-165.35	-190.74	-210.33	-223.54	-229.95	-237.29
XBADJ	STCK20	-238.94	-233.32	-225.42	-310.15	-385.45	-449.04
XBADJ	STCK20	-498.99	-533.77	-552.34	-554.12	-539.07	-507.64
XBADJ	STCK21	-394.72	-369.81	-333.66	-291.10	-243.29	-188.09
XBADJ	STCK21	-127.17	-62.39	1.89	-38.10	-76.93	-113.42
XBADJ	STCK21	-146.47	-175.07	-198.34	-215.60	-226.30	-234.93
XBADJ	STCK21	-263.83	-284.71	-296.94	-300.14	-294.23	-287.29
XBADJ	STCK21	-273.14	-250.69	-225.42	-292.78	-351.25	-399.04
XBADJ	STCK21	-434.71	-457.17	-465.74	-460.15	-440.59	-407.64
XBADJ	STCK22	-296.24	-275.84	-247.05	-214.50	-179.01	-138.09
XBADJ	STCK22	-92.97	-45.02	1.89	-55.46	-111.13	-163.42
XBADJ	STCK22	-210.75	-251.67	-284.95	-309.56	-324.78	-334.93
XBADJ	STCK22	-362.31	-378.68	-383.54	-376.75	-358.51	-337.29
XBADJ	STCK22	-307.34	-268.05	-225.42	-275.42	-317.04	-349.04

XBADJ	STCK22	-370.43	-380.56	-379.13	-366.19	-342.11	-307.64
XBADJ	STCK23	-197.76	-181.87	-160.45	-137.90	-114.74	-88.09
XBADJ	STCK23	-58.77	-27.66	1.89	-72.83	-145.33	-213.42
XBADJ	STCK23	-275.03	-328.28	-371.55	-403.53	-423.26	-434.93
XBADJ	STCK23	-460.79	-472.64	-470.14	-453.35	-422.79	-387.29
XBADJ	STCK23	-341.54	-285.42	-225.42	-258.05	-282.84	-299.04
XBADJ	STCK23	-306.15	-303.96	-292.53	-272.22	-243.63	-207.64
XBADJ	STCK24	-99.28	-87.90	-73.85	-61.29	-50.46	-38.09
XBADJ	STCK24	-24.57	-10.29	1.89	-90.19	-179.54	-263.42
XBADJ	STCK24	-339.31	-404.88	-458.15	-497.50	-521.74	-534.93
XBADJ	STCK24	-559.27	-566.61	-556.74	-529.96	-487.07	-437.29
XBADJ	STCK24	-375.75	-302.78	-225.42	-240.69	-248.64	-249.04
XBADJ	STCK24	-241.87	-227.35	-205.93	-178.25	-145.15	-107.64
XBADJ	STCK25	-247.45	-249.09	-243.16	-229.84	-212.59	-196.81
XBADJ	STCK25	-175.06	-147.99	-118.74	-156.48	-189.46	-216.68
XBADJ	STCK25	-237.32	-250.75	-256.56	-254.58	-244.86	-230.02
XBADJ	STCK25	-225.41	-213.95	-195.98	-172.07	-142.92	-109.43
XBADJ	STCK25	-72.62	-33.60	-1.66	-42.51	-82.07	-119.13
XBADJ	STCK25	-152.58	-181.39	-204.68	-221.76	-232.10	-238.29
XBADJ	STCK26	-148.97	-155.12	-156.56	-153.24	-148.31	-146.81
XBADJ	STCK26	-140.86	-130.62	-118.74	-173.84	-223.66	-266.68
XBADJ	STCK26	-301.60	-327.36	-343.17	-348.55	-343.34	-330.02
XBADJ	STCK26	-323.89	-307.91	-282.59	-248.67	-207.20	-159.43
XBADJ	STCK26	-106.82	-50.97	-1.66	-25.15	-47.87	-69.13
XBADJ	STCK26	-88.30	-104.78	-118.08	-127.79	-133.62	-138.29
XBADJ	STCK27	-226.61	-208.05	-183.16	-152.71	-120.66	-92.89
XBADJ	STCK27	-62.30	-29.81	1.26	-38.30	-76.69	-112.76
XBADJ	STCK27	-145.40	-173.62	-196.56	-213.54	-224.02	-230.02
XBADJ	STCK27	-246.24	-254.99	-255.98	-249.20	-234.85	-213.36
XBADJ	STCK27	-185.38	-151.78	-121.66	-160.69	-194.83	-223.06
XBADJ	STCK27	-244.50	-258.52	-264.68	-262.80	-252.94	-238.29
XBADJ	STCK28	-128.13	-114.08	-96.56	-76.10	-56.38	-42.89
XBADJ	STCK28	-28.09	-12.45	1.26	-55.66	-110.90	-162.76
XBADJ	STCK28	-209.68	-250.22	-283.17	-307.51	-322.50	-330.02
XBADJ	STCK28	-344.73	-348.96	-342.59	-325.80	-299.12	-263.36
XBADJ	STCK28	-219.58	-169.14	-121.66	-143.32	-160.63	-173.06
XBADJ	STCK28	-180.22	-181.92	-178.08	-168.84	-154.46	-138.29
YBADJ	STCK1	81.80	44.77	6.38	-32.21	-69.81	-105.30
YBADJ	STCK1	-137.58	-165.69	-186.36	-203.87	-215.18	-219.96
YBADJ	STCK1	-219.93	-215.00	-199.58	-177.35	-149.72	0.00
YBADJ	STCK1	-81.80	-44.77	-6.38	32.21	69.81	105.30
YBADJ	STCK1	137.58	165.69	186.36	203.87	215.18	219.96
YBADJ	STCK1	219.93	215.00	199.58	177.35	149.72	0.00
YBADJ	STCK2	99.16	78.97	56.38	32.07	6.79	-18.70
YBADJ	STCK2	-43.61	-67.21	-86.36	-105.39	-121.21	-133.36
YBADJ	STCK2	-143.32	-150.72	-149.58	-143.14	-132.36	0.00
YBADJ	STCK2	-99.16	-78.97	-56.38	-32.07	-6.79	18.70
YBADJ	STCK2	43.61	67.21	86.36	105.39	121.21	133.36

YBADJ	STCK2	143.32	150.72	149.58	143.14	132.36	0.00
YBADJ	STCK3	116.53	113.17	106.38	96.35	83.40	67.91
YBADJ	STCK3	50.35	31.27	13.65	-6.91	-27.25	-46.76
YBADJ	STCK3	-66.72	-86.44	-99.58	-108.94	-114.99	0.00
YBADJ	STCK3	-116.53	-113.17	-106.38	-96.35	-83.40	-67.91
YBADJ	STCK3	-50.35	-31.27	-13.64	6.91	27.25	46.76
YBADJ	STCK3	66.72	86.44	99.58	108.94	114.99	0.00
YBADJ	STCK4	133.89	147.37	156.38	160.63	160.00	154.51
YBADJ	STCK4	144.32	129.75	113.65	91.58	66.72	39.84
YBADJ	STCK4	9.89	-22.16	-49.58	-74.74	-97.63	0.00
YBADJ	STCK4	-133.89	-147.37	-156.38	-160.63	-160.00	-154.51
YBADJ	STCK4	-144.32	-129.75	-113.64	-91.58	-66.72	-39.84
YBADJ	STCK4	-9.89	22.16	49.58	74.74	97.63	0.00
YBADJ	STCK5	151.26	181.58	206.38	224.91	236.60	241.11
YBADJ	STCK5	238.29	228.23	213.65	190.06	160.69	126.45
YBADJ	STCK5	86.49	42.11	0.42	-40.54	-80.26	0.00
YBADJ	STCK5	-151.26	-181.58	-206.38	-224.91	-236.60	-241.11
YBADJ	STCK5	-238.29	-228.23	-213.64	-190.06	-160.69	-126.45
YBADJ	STCK5	-86.49	-42.11	-0.42	40.54	80.26	0.00
YBADJ	STCK6	-144.71	-171.36	-192.81	-208.40	-217.65	-220.30
YBADJ	STCK6	-216.25	-205.63	-186.35	-163.93	-136.52	-104.96
YBADJ	STCK6	-72.09	-38.81	-0.40	38.78	76.79	113.66
YBADJ	STCK6	144.71	171.36	192.81	208.40	217.65	220.30
YBADJ	STCK6	216.25	205.63	186.35	163.93	136.52	104.96
YBADJ	STCK6	72.09	38.81	0.40	-38.78	-76.79	-113.66
YBADJ	STCK7	-127.34	-137.16	-142.81	-144.12	-141.05	-133.70
YBADJ	STCK7	-122.28	-107.15	-86.35	-65.45	-42.55	-18.36
YBADJ	STCK7	4.52	25.47	49.60	72.98	94.15	113.66
YBADJ	STCK7	127.34	137.16	142.81	144.12	141.05	133.70
YBADJ	STCK7	122.28	107.15	86.35	65.45	42.55	18.36
YBADJ	STCK7	-4.52	-25.47	-49.60	-72.98	-94.15	-113.66
YBADJ	STCK8	-109.98	-102.96	-92.81	-79.84	-64.45	-47.09
YBADJ	STCK8	-28.31	-8.67	13.65	33.03	51.42	68.24
YBADJ	STCK8	81.12	89.75	99.60	107.19	111.51	113.65
YBADJ	STCK8	109.98	102.96	92.81	79.84	64.45	47.09
YBADJ	STCK8	28.31	8.67	-13.65	-33.03	-51.42	-68.24
YBADJ	STCK8	-81.12	-89.75	-99.60	-107.19	-111.51	-113.65
YBADJ	STCK9	-92.61	-68.75	-42.81	-15.56	12.16	39.51
YBADJ	STCK9	65.66	89.81	113.65	131.51	145.39	154.84
YBADJ	STCK9	157.73	154.03	149.60	141.39	128.88	113.65
YBADJ	STCK9	92.61	68.75	42.81	15.56	-12.16	-39.51
YBADJ	STCK9	-65.66	-89.81	-113.65	-131.51	-145.39	-154.84
YBADJ	STCK9	-157.73	-154.03	-149.60	-141.39	-128.88	-113.65
YBADJ	STCK10	-75.25	-34.55	7.19	48.72	88.76	126.11
YBADJ	STCK10	159.63	188.29	213.65	230.00	239.36	241.45
YBADJ	STCK10	234.33	218.30	199.60	175.59	146.24	113.65
YBADJ	STCK10	75.25	34.55	-7.19	-48.72	-88.76	-126.11
YBADJ	STCK10	-159.63	-188.29	-213.65	-230.00	-239.36	-241.45

YBADJ	STCK10	-234.33	-218.30	-199.60	-175.59	-146.24	-113.65
YBADJ	STCK11	56.98	53.69	48.77	42.37	34.68	25.94
YBADJ	STCK11	16.41	6.38	-4.13	-11.02	-17.57	-23.59
YBADJ	STCK11	-28.89	-34.83	-43.69	-51.22	-57.19	-58.54
YBADJ	STCK11	-56.98	-53.69	-48.77	-42.37	-34.68	-25.94
YBADJ	STCK11	-16.41	-6.38	4.14	11.02	17.57	23.59
YBADJ	STCK11	28.89	34.83	43.69	51.22	57.19	58.54
YBADJ	STCK12	74.35	87.90	98.77	106.65	111.29	112.54
YBADJ	STCK12	110.38	104.86	95.86	87.46	76.40	63.01
YBADJ	STCK12	47.72	29.45	6.31	-17.02	-39.83	-58.54
YBADJ	STCK12	-74.35	-87.90	-98.77	-106.65	-111.29	-112.54
YBADJ	STCK12	-110.38	-104.86	-95.87	-87.46	-76.40	-63.01
YBADJ	STCK12	-47.72	-29.45	-6.31	17.02	39.83	58.54
YBADJ	STCK13	-61.19	-59.07	-55.15	-49.55	-42.45	-34.06
YBADJ	STCK13	-24.63	-14.46	-4.13	9.82	23.47	36.41
YBADJ	STCK13	48.25	57.09	60.23	61.54	60.98	61.46
YBADJ	STCK13	61.19	59.07	55.15	49.55	42.45	34.06
YBADJ	STCK13	24.63	14.46	4.13	-9.82	-23.47	-36.41
YBADJ	STCK13	-48.25	-57.09	-60.23	-61.54	-60.98	-61.46
YBADJ	STCK14	-43.83	-24.87	-5.15	14.73	34.15	52.54
YBADJ	STCK14	69.34	84.02	95.87	108.30	117.44	123.01
YBADJ	STCK14	124.85	121.37	110.23	95.75	78.35	61.46
YBADJ	STCK14	43.83	24.87	5.15	-14.73	-34.15	-52.54
YBADJ	STCK14	-69.34	-84.02	-95.87	-108.30	-117.44	-123.01
YBADJ	STCK14	-124.85	-121.37	-110.23	-95.74	-78.35	-61.46
YBADJ	STCK15	81.80	44.77	6.38	-32.21	-69.81	-105.30
YBADJ	STCK15	-137.58	-165.69	-186.36	-203.87	-215.18	-219.96
YBADJ	STCK15	-219.93	-215.00	-199.58	-177.35	-149.72	0.00
YBADJ	STCK15	-81.80	-44.77	-6.38	32.21	69.81	105.30
YBADJ	STCK15	137.58	165.69	186.36	203.87	215.18	219.96
YBADJ	STCK15	219.93	215.00	199.58	177.35	149.72	0.00
YBADJ	STCK16	99.16	78.97	56.38	32.07	6.79	-18.70
YBADJ	STCK16	-43.61	-67.21	-86.36	-105.39	-121.21	-133.36
YBADJ	STCK16	-143.32	-150.72	-149.58	-143.14	-132.36	0.00
YBADJ	STCK16	-99.16	-78.97	-56.38	-32.07	-6.79	18.70
YBADJ	STCK16	43.61	67.21	86.36	105.39	121.21	133.36
YBADJ	STCK16	143.32	150.72	149.58	143.14	132.36	0.00
YBADJ	STCK17	116.53	113.17	106.38	96.35	83.40	67.91
YBADJ	STCK17	50.35	31.27	13.65	-6.91	-27.25	-46.76
YBADJ	STCK17	-66.72	-86.44	-99.58	-108.94	-114.99	0.00
YBADJ	STCK17	-116.53	-113.17	-106.38	-96.35	-83.40	-67.91
YBADJ	STCK17	-50.35	-31.27	-13.64	6.91	27.25	46.76
YBADJ	STCK17	66.72	86.44	99.58	108.94	114.99	0.00
YBADJ	STCK18	133.89	147.37	156.38	160.63	160.00	154.51
YBADJ	STCK18	144.32	129.75	113.65	91.58	66.72	39.84
YBADJ	STCK18	9.89	-22.16	-49.58	-74.74	-97.63	0.00
YBADJ	STCK18	-133.89	-147.37	-156.38	-160.63	-160.00	-154.51
YBADJ	STCK18	-144.32	-129.75	-113.64	-91.58	-66.72	-39.84

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YBADJ   STCK18      -9.89   22.16   49.58   74.74   97.63    0.00

YBADJ   STCK19     151.26  181.58  206.38  224.91  236.60  241.11
YBADJ   STCK19     238.29  228.23  213.65  190.06  160.69  126.45
YBADJ   STCK19      86.49   42.11    0.42  -40.54  -80.26    0.00
YBADJ   STCK19    -151.26 -181.58 -206.38 -224.91 -236.60 -241.11
YBADJ   STCK19    -238.29 -228.23 -213.64 -190.06 -160.69 -126.45
YBADJ   STCK19     -86.49  -42.11   -0.42   40.54   80.26    0.00

YBADJ   STCK20    -144.71 -171.36 -192.81 -208.40 -217.65 -220.30
YBADJ   STCK20    -216.25 -205.63 -186.35 -163.93 -136.52 -104.96
YBADJ   STCK20     -72.09  -38.81   -0.40   38.78   76.79  113.66
YBADJ   STCK20     144.71  171.36  192.81  208.40  217.65  220.30
YBADJ   STCK20     216.25  205.63  186.35  163.93  136.52  104.96
YBADJ   STCK20      72.09   38.81    0.40  -38.78  -76.79 -113.66

YBADJ   STCK21    -127.34 -137.16 -142.81 -144.12 -141.05 -133.70
YBADJ   STCK21    -122.28 -107.15  -86.35  -65.45  -42.55  -18.36
YBADJ   STCK21       4.52   25.47   49.60   72.98   94.15  113.66
YBADJ   STCK21     127.34  137.16  142.81  144.12  141.05  133.70
YBADJ   STCK21     122.28  107.15   86.35   65.45   42.55   18.36
YBADJ   STCK21      -4.52  -25.47  -49.60  -72.98  -94.15 -113.66

YBADJ   STCK22    -109.98 -102.96  -92.81  -79.84  -64.45  -47.09
YBADJ   STCK22     -28.31   -8.67   13.65   33.03   51.42   68.24
YBADJ   STCK22      81.12   89.75   99.60  107.19  111.51  113.65
YBADJ   STCK22     109.98  102.96   92.81   79.84   64.45   47.09
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YBADJ   STCK23     -92.61  -68.75  -42.81  -15.56   12.16   39.51
YBADJ   STCK23      65.66   89.81  113.65  131.51  145.39  154.84
YBADJ   STCK23     157.73  154.03  149.60  141.39  128.88  113.65
YBADJ   STCK23      92.61   68.75   42.81   15.56  -12.16  -39.51
YBADJ   STCK23     -65.66  -89.81 -113.65 -131.51 -145.39 -154.84
YBADJ   STCK23    -157.73 -154.03 -149.60 -141.39 -128.88 -113.65

YBADJ   STCK24     -75.25  -34.55    7.19   48.72   88.76  126.11
YBADJ   STCK24     159.63  188.29  213.65  230.00  239.36  241.45
YBADJ   STCK24     234.33  218.30  199.60  175.59  146.24  113.65
YBADJ   STCK24      75.25   34.55   -7.19  -48.72  -88.76 -126.11
YBADJ   STCK24    -159.63 -188.29 -213.65 -230.00 -239.36 -241.45
YBADJ   STCK24    -234.33 -218.30 -199.60 -175.59 -146.24 -113.65

YBADJ   STCK25      56.98   53.69   48.77   42.37   34.68   25.94
YBADJ   STCK25      16.41    6.38   -4.13  -11.02  -17.57  -23.59
YBADJ   STCK25     -28.89  -34.83  -43.69  -51.22  -57.19  -58.54
YBADJ   STCK25     -56.98  -53.69  -48.77  -42.37  -34.68  -25.94
YBADJ   STCK25     -16.41   -6.38    4.14   11.02   17.57   23.59
YBADJ   STCK25      28.89   34.83   43.69   51.22   57.19   58.54

YBADJ   STCK26      74.35   87.90   98.77  106.65  111.29  112.54
YBADJ   STCK26     110.38  104.86   95.86   87.46   76.40   63.01
YBADJ   STCK26      47.72   29.45    6.31  -17.02  -39.83  -58.54
YBADJ   STCK26     -74.35  -87.90  -98.77 -106.65 -111.29 -112.54
YBADJ   STCK26    -110.38 -104.86  -95.87  -87.46  -76.40  -63.01
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YBADJ   STCK27      -24.63  -14.46   -4.13    9.82   23.47   36.41
YBADJ   STCK27       48.25   57.09   60.23   61.54   60.98   61.46
YBADJ   STCK27       61.19   59.07   55.15   49.55   42.45   34.06
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YBADJ   STCK27      -48.25  -57.09  -60.23  -61.54  -60.98  -61.46

YBADJ   STCK28      -43.83  -24.87   -5.15   14.73   34.15   52.54
YBADJ   STCK28       69.34   84.02   95.87  108.30  117.44  123.01
YBADJ   STCK28      124.85  121.37  110.23   95.75   78.35   61.46
YBADJ   STCK28       43.83   24.87    5.15  -14.73  -34.15  -52.54
YBADJ   STCK28      -69.34  -84.02  -95.87 -108.30 -117.44 -123.01
YBADJ   STCK28     -124.85 -121.37 -110.23  -95.74  -78.35  -61.46

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SRCGROUP SLINE4 L0001666 L0001667 L0001668 L0001669 L0001670 L0001671
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SRCGROUP SLINE5 L0002022 L0002023 L0002024 L0002025 L0002026 L0002027

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SRCGROUP SLINE5 L0002304 L0002305 L0002306 L0002307 L0002308 L0002309
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SRCGROUP SLINE5 L0002340 L0002341 L0002342 L0002343 L0002344 L0002345
SRCGROUP SLINE5 L0002346 L0002347
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SRCGROUP STCK10 STCK10

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   SRCGROUP STCK12   STCK12
   SRCGROUP STCK13   STCK13
   SRCGROUP STCK14   STCK14
   SRCGROUP STCK15   STCK15
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   SRCGROUP STCK17   STCK17
   SRCGROUP STCK18   STCK18
   SRCGROUP STCK19   STCK19
   SRCGROUP STCK2    STCK2
   SRCGROUP STCK20   STCK20
   SRCGROUP STCK21   STCK21
   SRCGROUP STCK22   STCK22
   SRCGROUP STCK23   STCK23
   SRCGROUP STCK24   STCK24
   SRCGROUP STCK25   STCK25
   SRCGROUP STCK26   STCK26
   SRCGROUP STCK27   STCK27
   SRCGROUP STCK28   STCK28
   SRCGROUP STCK3    STCK3
   SRCGROUP STCK4    STCK4
   SRCGROUP STCK5    STCK5
   SRCGROUP STCK6    STCK6
   SRCGROUP STCK7    STCK7
   SRCGROUP STCK8    STCK8
   SRCGROUP STCK9    STCK9
SO FINISHED
**
****************************************
** AERMOD Receptor Pathway
****************************************
**
**
RE STARTING
** DESCRREC "" ""
   DISCCART    632121.21   4174952.36
   DISCCART    632304.44   4174354.52
   DISCCART    632192.15   4174956.32
   DISCCART    632420.62   4175510.15
   DISCCART    632418.97   4175552.92
   DISCCART    631187.00   4175727.00
   DISCCART    631166.00   4175729.00
   DISCCART    631121.00   4175719.00
   DISCCART    631035.00   4174830.00
   DISCCART    631106.00   4174825.00
   DISCCART    631937.00   4174528.00
   DISCCART    631322.00   4174522.00
** DESCRREC "UCART1" "Receptors generated from Uniform Cartesian Grid"
   DISCCART    629800.63   4173850.44
   DISCCART    630150.63   4173850.44
   DISCCART    630500.63   4173850.44
   DISCCART    630850.63   4173850.44
   DISCCART    631200.63   4173850.44
   DISCCART    631550.63   4173850.44
   DISCCART    631900.63   4173850.44
   DISCCART    632250.63   4173850.44
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DISCCART 632600.63 4173850.44
DISCCART 632950.63 4173850.44
DISCCART 633300.63 4173850.44
DISCCART 629800.63 4174200.44
DISCCART 630150.63 4174200.44
DISCCART 630500.63 4174200.44
DISCCART 630850.63 4174200.44
DISCCART 631200.63 4174200.44
DISCCART 631550.63 4174200.44
DISCCART 631900.63 4174200.44
DISCCART 632250.63 4174200.44
DISCCART 632600.63 4174200.44
DISCCART 632950.63 4174200.44
DISCCART 633300.63 4174200.44
DISCCART 629800.63 4174550.44
DISCCART 630150.63 4174550.44
DISCCART 630500.63 4174550.44
DISCCART 630850.63 4174550.44
DISCCART 631200.63 4174550.44
DISCCART 631550.63 4174550.44
DISCCART 631900.63 4174550.44
DISCCART 632250.63 4174550.44
DISCCART 632600.63 4174550.44
DISCCART 632950.63 4174550.44
DISCCART 633300.63 4174550.44
DISCCART 629800.63 4174900.44
DISCCART 630150.63 4174900.44
DISCCART 630500.63 4174900.44
DISCCART 630850.63 4174900.44
DISCCART 631200.63 4174900.44
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DISCCART 633300.63 4174900.44
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DISCCART 630150.63 4177000.44
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DISCCART 630850.63 4177350.44
DISCCART 631200.63 4177350.44
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DISCCART 632950.63 4177350.44

DISCCART 633300.63 4177350.44
** DESCRREC "" ""
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DISCCART 631669.80 4175641.41
DISCCART 631665.32 4175796.39
DISCCART 631417.17 4175826.85
DISCCART 631417.17 4175673.66
DISCCART 631422.55 4175484.63
** DESCRREC "FENCEPRI" "Cartesian plant boundary Primary Receptors"
DISCCART 631268.42 4175983.74
DISCCART 631275.69 4175523.99
DISCCART 631345.65 4175419.50
DISCCART 631384.72 4175441.30
DISCCART 631491.93 4175442.21
DISCCART 631491.93 4175414.95
DISCCART 631385.63 4175413.14
DISCCART 631358.37 4175395.87
DISCCART 631409.25 4175336.81
DISCCART 631567.35 4175235.96
DISCCART 631756.33 4175028.80
DISCCART 631807.22 4175003.36
DISCCART 631867.18 4174987.91
DISCCART 631849.92 4175988.28
** DESCRREC "FENCEINT" "Cartesian plant boundary Intermediate Receptors"
DISCCART 631268.74 4175963.75
DISCCART 631269.05 4175943.76
DISCCART 631269.37 4175923.77
DISCCART 631269.68 4175903.78
DISCCART 631270.00 4175883.79
DISCCART 631270.32 4175863.81
DISCCART 631270.63 4175843.82
DISCCART 631270.95 4175823.83
DISCCART 631271.26 4175803.84
DISCCART 631271.58 4175783.85
DISCCART 631271.90 4175763.86
DISCCART 631272.21 4175743.87
DISCCART 631272.53 4175723.88
DISCCART 631272.85 4175703.89
DISCCART 631273.16 4175683.90
DISCCART 631273.48 4175663.91
DISCCART 631273.79 4175643.92
DISCCART 631274.11 4175623.94
DISCCART 631274.43 4175603.95
DISCCART 631274.74 4175583.96
DISCCART 631275.06 4175563.97
DISCCART 631275.37 4175543.98
DISCCART 631285.68 4175509.06
DISCCART 631295.68 4175494.14
DISCCART 631305.67 4175479.21
DISCCART 631315.67 4175464.28
DISCCART 631325.66 4175449.35
DISCCART 631335.66 4175434.43
DISCCART 631358.67 4175426.77
DISCCART 631371.70 4175434.03
DISCCART 631402.59 4175441.45
DISCCART 631420.46 4175441.60

DISCCART	631438.33	4175441.76
DISCCART	631456.19	4175441.91
DISCCART	631474.06	4175442.06
DISCCART	631491.93	4175428.58
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DISCCART	631456.50	4175414.35
DISCCART	631438.78	4175414.05
DISCCART	631421.06	4175413.74
DISCCART	631403.35	4175413.44
DISCCART	631372.00	4175404.51
DISCCART	631371.09	4175381.11
DISCCART	631383.81	4175366.34
DISCCART	631396.53	4175351.58
DISCCART	631425.06	4175326.73
DISCCART	631440.87	4175316.64
DISCCART	631456.68	4175306.56
DISCCART	631472.49	4175296.47
DISCCART	631488.30	4175286.39
DISCCART	631504.11	4175276.30
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DISCCART	631535.73	4175256.13
DISCCART	631551.54	4175246.05
DISCCART	631579.95	4175222.15
DISCCART	631592.55	4175208.34
DISCCART	631605.15	4175194.53
DISCCART	631617.74	4175180.72
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DISCCART	631642.94	4175153.10
DISCCART	631655.54	4175139.29
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DISCCART	631866.84	4175007.53
DISCCART	631866.50	4175027.14
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DISCCART	631864.13	4175164.45
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DISCCART	631863.46	4175203.68
DISCCART	631863.12	4175223.29
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DISCCART	631862.44	4175262.52
DISCCART	631862.10	4175282.14

DISCCART	631861.77	4175301.75
DISCCART	631861.43	4175321.37
DISCCART	631861.09	4175340.98
DISCCART	631860.75	4175360.60
DISCCART	631860.41	4175380.21
DISCCART	631860.07	4175399.83
DISCCART	631859.73	4175419.44
DISCCART	631859.40	4175439.06
DISCCART	631859.06	4175458.67
DISCCART	631858.72	4175478.29
DISCCART	631858.38	4175497.90
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DISCCART	631857.37	4175556.75
DISCCART	631857.03	4175576.36
DISCCART	631856.69	4175595.98
DISCCART	631856.35	4175615.59
DISCCART	631856.01	4175635.21
DISCCART	631855.67	4175654.82
DISCCART	631855.33	4175674.44
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DISCCART	631791.77	4175987.83
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DISCCART	631733.62	4175987.37
DISCCART	631714.24	4175987.22
DISCCART	631694.85	4175987.07
DISCCART	631675.47	4175986.92
DISCCART	631656.09	4175986.77
DISCCART	631636.70	4175986.62
DISCCART	631617.32	4175986.46
DISCCART	631597.94	4175986.31
DISCCART	631578.55	4175986.16
DISCCART	631559.17	4175986.01
DISCCART	631539.79	4175985.86
DISCCART	631520.40	4175985.71
DISCCART	631501.02	4175985.56
DISCCART	631481.64	4175985.40
DISCCART	631462.25	4175985.25
DISCCART	631442.87	4175985.10

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  DISCCART    631423.49   4175984.95
  DISCCART    631404.10   4175984.80
  DISCCART    631384.72   4175984.65
  DISCCART    631365.34   4175984.50
  DISCCART    631345.95   4175984.35
  DISCCART    631326.57   4175984.19
  DISCCART    631307.19   4175984.04
  DISCCART    631287.80   4175983.89
RE FINISHED
**
****************************************
** AERMOD Meteorology Pathway
****************************************
**
**
ME STARTING
  SURFFILE AERMET\Tracy_2004-2008.SFC
  PROFFILE AERMET\Tracy_2004-2008.PFL
  SURFDATA 99008 2004 Tracy,CA
  UAIRDATA 66666 2004
  PROFBASE 158.0 METERS
ME FINISHED
**
****************************************
** AERMOD Output Pathway
****************************************
**
**
OU STARTING
  RECTABLE ALLAVE 1ST
  RECTABLE 1 1ST
** Auto-Generated Plotfiles
  PLOTFILE 1 SLINE1 1ST "TRACY COSTCOV2.AD\01H1G001.PLT" 31
  PLOTFILE 1 SLINE2 1ST "TRACY COSTCOV2.AD\01H1G002.PLT" 32
  PLOTFILE 1 SLINE3 1ST "TRACY COSTCOV2.AD\01H1G003.PLT" 33
  PLOTFILE 1 SLINE4 1ST "TRACY COSTCOV2.AD\01H1G004.PLT" 34
  PLOTFILE 1 SLINE5 1ST "TRACY COSTCOV2.AD\01H1G005.PLT" 35
  PLOTFILE 1 STCK1 1ST "TRACY COSTCOV2.AD\01H1G006.PLT" 36
  PLOTFILE 1 STCK10 1ST "TRACY COSTCOV2.AD\01H1G007.PLT" 37
  PLOTFILE 1 STCK11 1ST "TRACY COSTCOV2.AD\01H1G008.PLT" 38
  PLOTFILE 1 STCK12 1ST "TRACY COSTCOV2.AD\01H1G009.PLT" 39
  PLOTFILE 1 STCK13 1ST "TRACY COSTCOV2.AD\01H1G010.PLT" 40
  PLOTFILE 1 STCK14 1ST "TRACY COSTCOV2.AD\01H1G011.PLT" 41
  PLOTFILE 1 STCK15 1ST "TRACY COSTCOV2.AD\01H1G012.PLT" 42
  PLOTFILE 1 STCK16 1ST "TRACY COSTCOV2.AD\01H1G013.PLT" 43
  PLOTFILE 1 STCK17 1ST "TRACY COSTCOV2.AD\01H1G014.PLT" 44
  PLOTFILE 1 STCK18 1ST "TRACY COSTCOV2.AD\01H1G015.PLT" 45
  PLOTFILE 1 STCK19 1ST "TRACY COSTCOV2.AD\01H1G016.PLT" 46
  PLOTFILE 1 STCK2 1ST "TRACY COSTCOV2.AD\01H1G017.PLT" 47
  PLOTFILE 1 STCK20 1ST "TRACY COSTCOV2.AD\01H1G018.PLT" 48
  PLOTFILE 1 STCK21 1ST "TRACY COSTCOV2.AD\01H1G019.PLT" 49
  PLOTFILE 1 STCK22 1ST "TRACY COSTCOV2.AD\01H1G020.PLT" 50
  PLOTFILE 1 STCK23 1ST "TRACY COSTCOV2.AD\01H1G021.PLT" 51
  PLOTFILE 1 STCK24 1ST "TRACY COSTCOV2.AD\01H1G022.PLT" 52
  PLOTFILE 1 STCK25 1ST "TRACY COSTCOV2.AD\01H1G023.PLT" 53
  PLOTFILE 1 STCK26 1ST "TRACY COSTCOV2.AD\01H1G024.PLT" 54
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  PLOTFILE 1 STCK27 1ST "TRACY COSTCOV2.AD\01H1G025.PLT" 55
  PLOTFILE 1 STCK28 1ST "TRACY COSTCOV2.AD\01H1G026.PLT" 56
  PLOTFILE 1 STCK3 1ST "TRACY COSTCOV2.AD\01H1G027.PLT" 57
  PLOTFILE 1 STCK4 1ST "TRACY COSTCOV2.AD\01H1G028.PLT" 58
  PLOTFILE 1 STCK5 1ST "TRACY COSTCOV2.AD\01H1G029.PLT" 59
  PLOTFILE 1 STCK6 1ST "TRACY COSTCOV2.AD\01H1G030.PLT" 60
  PLOTFILE 1 STCK7 1ST "TRACY COSTCOV2.AD\01H1G031.PLT" 61
  PLOTFILE 1 STCK8 1ST "TRACY COSTCOV2.AD\01H1G032.PLT" 62
  PLOTFILE 1 STCK9 1ST "TRACY COSTCOV2.AD\01H1G033.PLT" 63
  PLOTFILE PERIOD SLINE1 "TRACY COSTCOV2.AD\PE00G001.PLT" 64
  PLOTFILE PERIOD SLINE2 "TRACY COSTCOV2.AD\PE00G002.PLT" 65
  PLOTFILE PERIOD SLINE3 "TRACY COSTCOV2.AD\PE00G003.PLT" 66
  PLOTFILE PERIOD SLINE4 "TRACY COSTCOV2.AD\PE00G004.PLT" 67
  PLOTFILE PERIOD SLINE5 "TRACY COSTCOV2.AD\PE00G005.PLT" 68
  PLOTFILE PERIOD STCK1 "TRACY COSTCOV2.AD\PE00G006.PLT" 69
  PLOTFILE PERIOD STCK10 "TRACY COSTCOV2.AD\PE00G007.PLT" 70
  PLOTFILE PERIOD STCK11 "TRACY COSTCOV2.AD\PE00G008.PLT" 71
  PLOTFILE PERIOD STCK12 "TRACY COSTCOV2.AD\PE00G009.PLT" 72
  PLOTFILE PERIOD STCK13 "TRACY COSTCOV2.AD\PE00G010.PLT" 73
  PLOTFILE PERIOD STCK14 "TRACY COSTCOV2.AD\PE00G011.PLT" 74
  PLOTFILE PERIOD STCK15 "TRACY COSTCOV2.AD\PE00G012.PLT" 75
  PLOTFILE PERIOD STCK16 "TRACY COSTCOV2.AD\PE00G013.PLT" 76
  PLOTFILE PERIOD STCK17 "TRACY COSTCOV2.AD\PE00G014.PLT" 77
  PLOTFILE PERIOD STCK18 "TRACY COSTCOV2.AD\PE00G015.PLT" 78
  PLOTFILE PERIOD STCK19 "TRACY COSTCOV2.AD\PE00G016.PLT" 79
  PLOTFILE PERIOD STCK2 "TRACY COSTCOV2.AD\PE00G017.PLT" 80
  PLOTFILE PERIOD STCK20 "TRACY COSTCOV2.AD\PE00G018.PLT" 81
  PLOTFILE PERIOD STCK21 "TRACY COSTCOV2.AD\PE00G019.PLT" 82
  PLOTFILE PERIOD STCK22 "TRACY COSTCOV2.AD\PE00G020.PLT" 83
  PLOTFILE PERIOD STCK23 "TRACY COSTCOV2.AD\PE00G021.PLT" 84
  PLOTFILE PERIOD STCK24 "TRACY COSTCOV2.AD\PE00G022.PLT" 85
  PLOTFILE PERIOD STCK25 "TRACY COSTCOV2.AD\PE00G023.PLT" 86
  PLOTFILE PERIOD STCK26 "TRACY COSTCOV2.AD\PE00G024.PLT" 87
  PLOTFILE PERIOD STCK27 "TRACY COSTCOV2.AD\PE00G025.PLT" 88
  PLOTFILE PERIOD STCK28 "TRACY COSTCOV2.AD\PE00G026.PLT" 89
  PLOTFILE PERIOD STCK3 "TRACY COSTCOV2.AD\PE00G027.PLT" 90
  PLOTFILE PERIOD STCK4 "TRACY COSTCOV2.AD\PE00G028.PLT" 91
  PLOTFILE PERIOD STCK5 "TRACY COSTCOV2.AD\PE00G029.PLT" 92
  PLOTFILE PERIOD STCK6 "TRACY COSTCOV2.AD\PE00G030.PLT" 93
  PLOTFILE PERIOD STCK7 "TRACY COSTCOV2.AD\PE00G031.PLT" 94
  PLOTFILE PERIOD STCK8 "TRACY COSTCOV2.AD\PE00G032.PLT" 95
  PLOTFILE PERIOD STCK9 "TRACY COSTCOV2.AD\PE00G033.PLT" 96
  SUMMFILE "Tracy CostcoV2.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of         0 Fatal Error Message(s)
 A Total of        15 Warning Message(s)
 A Total of         0 Informational Message(s)


   ******** FATAL ERROR MESSAGES ********
```

*** NONE ***

******** WARNING MESSAGES ********

SO W320	4660	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4661	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4662	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4663	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4664	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4665	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4666	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4667	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4668	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4669	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4670	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4671	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4672	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4673	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
ME W187	6403	MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET	

****
*** SETUP Finishes Successfully ***
****

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22
*** AERMET - VERSION 18081 *** *** *** 12:14:02

*** MODELOPTs: NonDFAULT CONC FLAT RURAL 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 RURAL Dispersion Only.

**Model Allows User-Specified Options:
1. Stack-tip Downwash.
2. Model Assumes Receptors on FLAT Terrain.
3. Use Calms Processing Routine.
4. Use Missing Data Processing Routine.
5. No Exponential Decay.

**Other Options Specified:
ADJ_U* - Use ADJ_U* option for SBL in AERMET
CCVR_Sub - Meteorological data includes CCVR substitutions
TEMP_Sub - Meteorological data includes TEMP substitutions

**Model Assumes No FLAGPOLE Receptor Heights.

**The User Specified a Pollutant Type of: OTHER

**Model Calculates 1 Short Term Average(s) of: 1-HR
and Calculates PERIOD Averages

**This Run Includes: 2261 Source(s); 33 Source Group(s); and 305 Receptor(s)

with: 28 POINT(s), including
0 POINTCAP(s) and 0 POINTHOR(s)
and: 2233 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 0 line(s)

**Model Set To Continue RUNning After the Setup Testing.

**The AERMET Input Meteorological Data Version Date: 18081

**Output Options Selected:
Model Outputs Tables of PERIOD Averages by Receptor
Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE Keyword)
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) = 158.00 ; 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 = 8.3 MB of RAM.

**Input Runstream File: aermod.inp
**Output Print File: aermod.out

**Detailed Error/Message File: Tracy CostcoV2.err
**File for Summary of Results: Tracy CostcoV2.sum
*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22
*** AERMET - VERSION 18081 *** *** *** 12:14:02
PAGE 2
*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** POINT SOURCE DATA ***

SOURCE	NUMBER PART.	EMISSION RATE (GRAMS/SEC)	X	Y	BASE ELEV.	STACK HEIGHT	STACK TEMP.	STACK EXIT VEL.	STACK DIAMETER	BLDG EXISTS	URBAN SOURCE	CAP/ HOR	EMIS RATE SCALAR

ID	CATS.	(METERS)	(METERS)	(METERS)	(METERS)	(DEG.K)	(M/SEC)	(METERS)			VARY BY
STCK1	0	0.10000E+01	631780.6	4175800.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK2	0	0.10000E+01	631780.6	4175700.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK3	0	0.10000E+01	631780.6	4175600.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK4	0	0.10000E+01	631780.6	4175500.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK5	0	0.10000E+01	631780.6	4175400.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK6	0	0.10000E+01	631550.6	4175800.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK7	0	0.10000E+01	631550.6	4175700.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK8	0	0.10000E+01	631550.6	4175600.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK9	0	0.10000E+01	631550.6	4175500.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK10	0	0.10000E+01	631550.6	4175400.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK11	0	0.10000E+01	631480.6	4175700.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK12	0	0.10000E+01	631480.6	4175600.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK13	0	0.10000E+01	631360.6	4175700.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK14	0	0.10000E+01	631360.6	4175600.4	158.0	3.66	366.00	57.10	0.10	YES	NO	NO
STCK15	0	0.10000E+01	631780.6	4175800.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK16	0	0.10000E+01	631780.6	4175700.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK17	0	0.10000E+01	631780.6	4175600.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK18	0	0.10000E+01	631780.6	4175500.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK19	0	0.10000E+01	631780.6	4175400.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK20	0	0.10000E+01	631550.6	4175800.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK21	0	0.10000E+01	631550.6	4175700.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK22	0	0.10000E+01	631550.6	4175600.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK23	0	0.10000E+01	631550.6	4175500.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK24	0	0.10000E+01	631550.6	4175400.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK25	0	0.10000E+01	631480.6	4175700.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK26	0	0.10000E+01	631480.6	4175600.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK27	0	0.10000E+01	631360.6	4175700.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO
STCK28	0	0.10000E+01	631360.6	4175600.4	158.0	3.96	501.00	49.00	0.04	YES	NO	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000001	0	0.11507E-02	631842.6	4175984.0	158.0	1.83	1.70	1.70	NO	
L0000002	0	0.11507E-02	631842.6	4175980.4	158.0	1.83	1.70	1.70	NO	
L0000003	0	0.11507E-02	631842.6	4175976.7	158.0	1.83	1.70	1.70	NO	
L0000004	0	0.11507E-02	631842.6	4175973.0	158.0	1.83	1.70	1.70	NO	
L0000005	0	0.11507E-02	631842.6	4175969.4	158.0	1.83	1.70	1.70	NO	
L0000006	0	0.11507E-02	631842.6	4175965.7	158.0	1.83	1.70	1.70	NO	
L0000007	0	0.11507E-02	631842.6	4175962.1	158.0	1.83	1.70	1.70	NO	
L0000008	0	0.11507E-02	631842.6	4175958.4	158.0	1.83	1.70	1.70	NO	
L0000009	0	0.11507E-02	631842.6	4175954.8	158.0	1.83	1.70	1.70	NO	
L0000010	0	0.11507E-02	631842.6	4175951.1	158.0	1.83	1.70	1.70	NO	

L0000011	0	0.11507E-02	631842.6	4175947.4	158.0	1.83	1.70	1.70	NO
L0000012	0	0.11507E-02	631842.6	4175943.8	158.0	1.83	1.70	1.70	NO
L0000013	0	0.11507E-02	631842.6	4175940.1	158.0	1.83	1.70	1.70	NO
L0000014	0	0.11507E-02	631842.6	4175936.5	158.0	1.83	1.70	1.70	NO
L0000015	0	0.11507E-02	631842.6	4175932.8	158.0	1.83	1.70	1.70	NO
L0000016	0	0.11507E-02	631842.6	4175929.1	158.0	1.83	1.70	1.70	NO
L0000017	0	0.11507E-02	631842.6	4175925.5	158.0	1.83	1.70	1.70	NO
L0000018	0	0.11507E-02	631842.6	4175921.8	158.0	1.83	1.70	1.70	NO
L0000019	0	0.11507E-02	631842.6	4175918.2	158.0	1.83	1.70	1.70	NO
L0000020	0	0.11507E-02	631842.7	4175914.5	158.0	1.83	1.70	1.70	NO
L0000021	0	0.11507E-02	631842.8	4175910.9	158.0	1.83	1.70	1.70	NO
L0000022	0	0.11507E-02	631842.8	4175907.2	158.0	1.83	1.70	1.70	NO
L0000023	0	0.11507E-02	631842.9	4175903.5	158.0	1.83	1.70	1.70	NO
L0000024	0	0.11507E-02	631842.9	4175899.9	158.0	1.83	1.70	1.70	NO
L0000025	0	0.11507E-02	631843.0	4175896.2	158.0	1.83	1.70	1.70	NO
L0000026	0	0.11507E-02	631843.1	4175892.6	158.0	1.83	1.70	1.70	NO
L0000027	0	0.11507E-02	631843.1	4175888.9	158.0	1.83	1.70	1.70	NO
L0000028	0	0.11507E-02	631843.2	4175885.3	158.0	1.83	1.70	1.70	NO
L0000029	0	0.11507E-02	631843.3	4175881.6	158.0	1.83	1.70	1.70	NO
L0000030	0	0.11507E-02	631843.3	4175877.9	158.0	1.83	1.70	1.70	NO
L0000031	0	0.11507E-02	631843.4	4175874.3	158.0	1.83	1.70	1.70	NO
L0000032	0	0.11507E-02	631843.4	4175870.6	158.0	1.83	1.70	1.70	NO
L0000033	0	0.11507E-02	631843.5	4175867.0	158.0	1.83	1.70	1.70	NO
L0000034	0	0.11507E-02	631843.6	4175863.3	158.0	1.83	1.70	1.70	NO
L0000035	0	0.11507E-02	631843.6	4175859.7	158.0	1.83	1.70	1.70	NO
L0000036	0	0.11507E-02	631843.7	4175856.0	158.0	1.83	1.70	1.70	NO
L0000037	0	0.11507E-02	631843.7	4175852.3	158.0	1.83	1.70	1.70	NO
L0000038	0	0.11507E-02	631843.8	4175848.7	158.0	1.83	1.70	1.70	NO
L0000039	0	0.11507E-02	631843.9	4175845.0	158.0	1.83	1.70	1.70	NO
L0000040	0	0.11507E-02	631843.9	4175841.4	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000041	0	0.11507E-02	631844.0	4175837.7	158.0	1.83	1.70	1.70	NO	
L0000042	0	0.11507E-02	631844.0	4175834.1	158.0	1.83	1.70	1.70	NO	
L0000043	0	0.11507E-02	631844.1	4175830.4	158.0	1.83	1.70	1.70	NO	
L0000044	0	0.11507E-02	631844.2	4175826.7	158.0	1.83	1.70	1.70	NO	
L0000045	0	0.11507E-02	631844.2	4175823.1	158.0	1.83	1.70	1.70	NO	
L0000046	0	0.11507E-02	631844.3	4175819.4	158.0	1.83	1.70	1.70	NO	
L0000047	0	0.11507E-02	631844.3	4175815.8	158.0	1.83	1.70	1.70	NO	
L0000048	0	0.11507E-02	631844.4	4175812.1	158.0	1.83	1.70	1.70	NO	
L0000049	0	0.11507E-02	631844.5	4175808.5	158.0	1.83	1.70	1.70	NO	
L0000050	0	0.11507E-02	631844.5	4175804.8	158.0	1.83	1.70	1.70	NO	
L0000051	0	0.11507E-02	631844.6	4175801.1	158.0	1.83	1.70	1.70	NO	
L0000052	0	0.11507E-02	631844.6	4175797.5	158.0	1.83	1.70	1.70	NO	

L0000053	0	0.11507E-02	631844.7	4175793.8	158.0	1.83	1.70	1.70	NO
L0000054	0	0.11507E-02	631844.8	4175790.2	158.0	1.83	1.70	1.70	NO
L0000055	0	0.11507E-02	631844.8	4175786.5	158.0	1.83	1.70	1.70	NO
L0000056	0	0.11507E-02	631844.9	4175782.9	158.0	1.83	1.70	1.70	NO
L0000057	0	0.11507E-02	631844.9	4175779.2	158.0	1.83	1.70	1.70	NO
L0000058	0	0.11507E-02	631845.0	4175775.5	158.0	1.83	1.70	1.70	NO
L0000059	0	0.11507E-02	631845.1	4175771.9	158.0	1.83	1.70	1.70	NO
L0000060	0	0.11507E-02	631845.1	4175768.2	158.0	1.83	1.70	1.70	NO
L0000061	0	0.11507E-02	631845.2	4175764.6	158.0	1.83	1.70	1.70	NO
L0000062	0	0.11507E-02	631845.3	4175760.9	158.0	1.83	1.70	1.70	NO
L0000063	0	0.11507E-02	631845.3	4175757.3	158.0	1.83	1.70	1.70	NO
L0000064	0	0.11507E-02	631845.4	4175753.6	158.0	1.83	1.70	1.70	NO
L0000065	0	0.11507E-02	631845.4	4175749.9	158.0	1.83	1.70	1.70	NO
L0000066	0	0.11507E-02	631845.5	4175746.3	158.0	1.83	1.70	1.70	NO
L0000067	0	0.11507E-02	631845.6	4175742.6	158.0	1.83	1.70	1.70	NO
L0000068	0	0.11507E-02	631845.6	4175739.0	158.0	1.83	1.70	1.70	NO
L0000069	0	0.11507E-02	631845.7	4175735.3	158.0	1.83	1.70	1.70	NO
L0000070	0	0.11507E-02	631845.7	4175731.7	158.0	1.83	1.70	1.70	NO
L0000071	0	0.11507E-02	631845.8	4175728.0	158.0	1.83	1.70	1.70	NO
L0000072	0	0.11507E-02	631845.9	4175724.3	158.0	1.83	1.70	1.70	NO
L0000073	0	0.11507E-02	631845.9	4175720.7	158.0	1.83	1.70	1.70	NO
L0000074	0	0.11507E-02	631846.0	4175717.0	158.0	1.83	1.70	1.70	NO
L0000075	0	0.11507E-02	631846.0	4175713.4	158.0	1.83	1.70	1.70	NO
L0000076	0	0.11507E-02	631846.1	4175709.7	158.0	1.83	1.70	1.70	NO
L0000077	0	0.11507E-02	631846.2	4175706.1	158.0	1.83	1.70	1.70	NO
L0000078	0	0.11507E-02	631846.2	4175702.4	158.0	1.83	1.70	1.70	NO
L0000079	0	0.11507E-02	631846.3	4175698.7	158.0	1.83	1.70	1.70	NO
L0000080	0	0.11507E-02	631846.3	4175695.1	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000081	0	0.11507E-02	631846.4	4175691.4	158.0	1.83	1.70	1.70	NO	
L0000082	0	0.11507E-02	631846.5	4175687.8	158.0	1.83	1.70	1.70	NO	
L0000083	0	0.11507E-02	631846.5	4175684.1	158.0	1.83	1.70	1.70	NO	
L0000084	0	0.11507E-02	631846.6	4175680.5	158.0	1.83	1.70	1.70	NO	
L0000085	0	0.11507E-02	631846.6	4175676.8	158.0	1.83	1.70	1.70	NO	
L0000086	0	0.11507E-02	631846.7	4175673.1	158.0	1.83	1.70	1.70	NO	
L0000087	0	0.11507E-02	631846.8	4175669.5	158.0	1.83	1.70	1.70	NO	
L0000088	0	0.11507E-02	631846.8	4175665.8	158.0	1.83	1.70	1.70	NO	
L0000089	0	0.11507E-02	631846.9	4175662.2	158.0	1.83	1.70	1.70	NO	
L0000090	0	0.11507E-02	631846.9	4175658.5	158.0	1.83	1.70	1.70	NO	
L0000091	0	0.11507E-02	631847.0	4175654.9	158.0	1.83	1.70	1.70	NO	
L0000092	0	0.11507E-02	631847.1	4175651.2	158.0	1.83	1.70	1.70	NO	
L0000093	0	0.11507E-02	631847.1	4175647.5	158.0	1.83	1.70	1.70	NO	
L0000094	0	0.11507E-02	631847.2	4175643.9	158.0	1.83	1.70	1.70	NO	

L0000095	0	0.11507E-02	631847.3	4175640.2	158.0	1.83	1.70	1.70	NO
L0000096	0	0.11507E-02	631847.3	4175636.6	158.0	1.83	1.70	1.70	NO
L0000097	0	0.11507E-02	631847.4	4175632.9	158.0	1.83	1.70	1.70	NO
L0000098	0	0.11507E-02	631847.4	4175629.3	158.0	1.83	1.70	1.70	NO
L0000099	0	0.11507E-02	631847.5	4175625.6	158.0	1.83	1.70	1.70	NO
L0000100	0	0.11507E-02	631847.6	4175621.9	158.0	1.83	1.70	1.70	NO
L0000101	0	0.11507E-02	631847.6	4175618.3	158.0	1.83	1.70	1.70	NO
L0000102	0	0.11507E-02	631847.7	4175614.6	158.0	1.83	1.70	1.70	NO
L0000103	0	0.11507E-02	631847.7	4175611.0	158.0	1.83	1.70	1.70	NO
L0000104	0	0.11507E-02	631847.8	4175607.3	158.0	1.83	1.70	1.70	NO
L0000105	0	0.11507E-02	631847.9	4175603.7	158.0	1.83	1.70	1.70	NO
L0000106	0	0.11507E-02	631847.9	4175600.0	158.0	1.83	1.70	1.70	NO
L0000107	0	0.11507E-02	631848.0	4175596.3	158.0	1.83	1.70	1.70	NO
L0000108	0	0.11507E-02	631848.0	4175592.7	158.0	1.83	1.70	1.70	NO
L0000109	0	0.11507E-02	631848.1	4175589.0	158.0	1.83	1.70	1.70	NO
L0000110	0	0.11507E-02	631848.2	4175585.4	158.0	1.83	1.70	1.70	NO
L0000111	0	0.11507E-02	631848.2	4175581.7	158.0	1.83	1.70	1.70	NO
L0000112	0	0.11507E-02	631848.3	4175578.1	158.0	1.83	1.70	1.70	NO
L0000113	0	0.11507E-02	631848.3	4175574.4	158.0	1.83	1.70	1.70	NO
L0000114	0	0.11507E-02	631848.4	4175570.8	158.0	1.83	1.70	1.70	NO
L0000115	0	0.11507E-02	631848.5	4175567.1	158.0	1.83	1.70	1.70	NO
L0000116	0	0.11507E-02	631848.5	4175563.4	158.0	1.83	1.70	1.70	NO
L0000117	0	0.11507E-02	631848.6	4175559.8	158.0	1.83	1.70	1.70	NO
L0000118	0	0.11507E-02	631848.6	4175556.1	158.0	1.83	1.70	1.70	NO
L0000119	0	0.11507E-02	631848.7	4175552.5	158.0	1.83	1.70	1.70	NO
L0000120	0	0.11507E-02	631848.8	4175548.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000121	0	0.11507E-02	631848.8	4175545.2	158.0	1.83	1.70	1.70	NO	
L0000122	0	0.11507E-02	631848.9	4175541.5	158.0	1.83	1.70	1.70	NO	
L0000123	0	0.11507E-02	631848.9	4175537.8	158.0	1.83	1.70	1.70	NO	
L0000124	0	0.11507E-02	631849.0	4175534.2	158.0	1.83	1.70	1.70	NO	
L0000125	0	0.11507E-02	631849.1	4175530.5	158.0	1.83	1.70	1.70	NO	
L0000126	0	0.11507E-02	631849.1	4175526.9	158.0	1.83	1.70	1.70	NO	
L0000127	0	0.11507E-02	631849.2	4175523.2	158.0	1.83	1.70	1.70	NO	
L0000128	0	0.11507E-02	631849.3	4175519.6	158.0	1.83	1.70	1.70	NO	
L0000129	0	0.11507E-02	631849.3	4175515.9	158.0	1.83	1.70	1.70	NO	
L0000130	0	0.11507E-02	631849.4	4175512.2	158.0	1.83	1.70	1.70	NO	
L0000131	0	0.11507E-02	631849.4	4175508.6	158.0	1.83	1.70	1.70	NO	
L0000132	0	0.11507E-02	631849.5	4175504.9	158.0	1.83	1.70	1.70	NO	
L0000133	0	0.11507E-02	631849.6	4175501.3	158.0	1.83	1.70	1.70	NO	
L0000134	0	0.11507E-02	631849.6	4175497.6	158.0	1.83	1.70	1.70	NO	
L0000135	0	0.11507E-02	631849.7	4175494.0	158.0	1.83	1.70	1.70	NO	
L0000136	0	0.11507E-02	631849.7	4175490.3	158.0	1.83	1.70	1.70	NO	

L0000137	0	0.11507E-02	631849.8	4175486.6	158.0	1.83	1.70	1.70	NO
L0000138	0	0.11507E-02	631849.9	4175483.0	158.0	1.83	1.70	1.70	NO
L0000139	0	0.11507E-02	631849.9	4175479.3	158.0	1.83	1.70	1.70	NO
L0000140	0	0.11507E-02	631850.0	4175475.7	158.0	1.83	1.70	1.70	NO
L0000141	0	0.11507E-02	631850.0	4175472.0	158.0	1.83	1.70	1.70	NO
L0000142	0	0.11507E-02	631850.1	4175468.4	158.0	1.83	1.70	1.70	NO
L0000143	0	0.11507E-02	631850.2	4175464.7	158.0	1.83	1.70	1.70	NO
L0000144	0	0.11507E-02	631850.2	4175461.0	158.0	1.83	1.70	1.70	NO
L0000145	0	0.11507E-02	631850.3	4175457.4	158.0	1.83	1.70	1.70	NO
L0000146	0	0.11507E-02	631850.3	4175453.7	158.0	1.83	1.70	1.70	NO
L0000147	0	0.11507E-02	631850.4	4175450.1	158.0	1.83	1.70	1.70	NO
L0000148	0	0.11507E-02	631850.5	4175446.4	158.0	1.83	1.70	1.70	NO
L0000149	0	0.11507E-02	631850.5	4175442.8	158.0	1.83	1.70	1.70	NO
L0000150	0	0.11507E-02	631850.6	4175439.1	158.0	1.83	1.70	1.70	NO
L0000151	0	0.11507E-02	631850.6	4175435.4	158.0	1.83	1.70	1.70	NO
L0000152	0	0.11507E-02	631850.7	4175431.8	158.0	1.83	1.70	1.70	NO
L0000153	0	0.11507E-02	631850.8	4175428.1	158.0	1.83	1.70	1.70	NO
L0000154	0	0.11507E-02	631850.8	4175424.5	158.0	1.83	1.70	1.70	NO
L0000155	0	0.11507E-02	631850.9	4175420.8	158.0	1.83	1.70	1.70	NO
L0000156	0	0.11507E-02	631850.9	4175417.2	158.0	1.83	1.70	1.70	NO
L0000157	0	0.11507E-02	631851.0	4175413.5	158.0	1.83	1.70	1.70	NO
L0000158	0	0.11507E-02	631851.1	4175409.8	158.0	1.83	1.70	1.70	NO
L0000159	0	0.11507E-02	631851.1	4175406.2	158.0	1.83	1.70	1.70	NO
L0000160	0	0.11507E-02	631851.2	4175402.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000161	0	0.11507E-02	631851.3	4175398.9	158.0	1.83	1.70	1.70	NO	
L0000162	0	0.11507E-02	631851.3	4175395.2	158.0	1.83	1.70	1.70	NO	
L0000163	0	0.11507E-02	631851.4	4175391.6	158.0	1.83	1.70	1.70	NO	
L0000164	0	0.11507E-02	631851.4	4175387.9	158.0	1.83	1.70	1.70	NO	
L0000165	0	0.11507E-02	631851.5	4175384.2	158.0	1.83	1.70	1.70	NO	
L0000166	0	0.11507E-02	631851.6	4175380.6	158.0	1.83	1.70	1.70	NO	
L0000167	0	0.11507E-02	631851.6	4175376.9	158.0	1.83	1.70	1.70	NO	
L0000168	0	0.11507E-02	631851.7	4175373.3	158.0	1.83	1.70	1.70	NO	
L0000169	0	0.11507E-02	631851.7	4175369.6	158.0	1.83	1.70	1.70	NO	
L0000170	0	0.11507E-02	631851.8	4175366.0	158.0	1.83	1.70	1.70	NO	
L0000171	0	0.11507E-02	631851.9	4175362.3	158.0	1.83	1.70	1.70	NO	
L0000172	0	0.11507E-02	631851.9	4175358.6	158.0	1.83	1.70	1.70	NO	
L0000173	0	0.11507E-02	631852.0	4175355.0	158.0	1.83	1.70	1.70	NO	
L0000174	0	0.11507E-02	631852.0	4175351.3	158.0	1.83	1.70	1.70	NO	
L0000175	0	0.11507E-02	631852.1	4175347.7	158.0	1.83	1.70	1.70	NO	
L0000176	0	0.11507E-02	631852.2	4175344.0	158.0	1.83	1.70	1.70	NO	
L0000177	0	0.11507E-02	631852.2	4175340.4	158.0	1.83	1.70	1.70	NO	
L0000178	0	0.11507E-02	631852.3	4175336.7	158.0	1.83	1.70	1.70	NO	

L0000179	0	0.11507E-02	631852.3	4175333.0	158.0	1.83	1.70	1.70	NO
L0000180	0	0.11507E-02	631852.4	4175329.4	158.0	1.83	1.70	1.70	NO
L0000181	0	0.11507E-02	631852.5	4175325.7	158.0	1.83	1.70	1.70	NO
L0000182	0	0.11507E-02	631852.5	4175322.1	158.0	1.83	1.70	1.70	NO
L0000183	0	0.11507E-02	631852.6	4175318.4	158.0	1.83	1.70	1.70	NO
L0000184	0	0.11507E-02	631852.6	4175314.8	158.0	1.83	1.70	1.70	NO
L0000185	0	0.11507E-02	631852.7	4175311.1	158.0	1.83	1.70	1.70	NO
L0000186	0	0.11507E-02	631852.8	4175307.4	158.0	1.83	1.70	1.70	NO
L0000187	0	0.11507E-02	631852.8	4175303.8	158.0	1.83	1.70	1.70	NO
L0000188	0	0.11507E-02	631852.9	4175300.1	158.0	1.83	1.70	1.70	NO
L0000189	0	0.11507E-02	631852.9	4175296.5	158.0	1.83	1.70	1.70	NO
L0000190	0	0.11507E-02	631853.0	4175292.8	158.0	1.83	1.70	1.70	NO
L0000191	0	0.11507E-02	631853.1	4175289.2	158.0	1.83	1.70	1.70	NO
L0000192	0	0.11507E-02	631853.1	4175285.5	158.0	1.83	1.70	1.70	NO
L0000193	0	0.11507E-02	631853.2	4175281.8	158.0	1.83	1.70	1.70	NO
L0000194	0	0.11507E-02	631853.3	4175278.2	158.0	1.83	1.70	1.70	NO
L0000195	0	0.11507E-02	631853.3	4175274.5	158.0	1.83	1.70	1.70	NO
L0000196	0	0.11507E-02	631853.4	4175270.9	158.0	1.83	1.70	1.70	NO
L0000197	0	0.11507E-02	631853.4	4175267.2	158.0	1.83	1.70	1.70	NO
L0000198	0	0.11507E-02	631853.5	4175263.6	158.0	1.83	1.70	1.70	NO
L0000199	0	0.11507E-02	631853.6	4175259.9	158.0	1.83	1.70	1.70	NO
L0000200	0	0.11507E-02	631853.2	4175256.3	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000201	0	0.11507E-02	631851.5	4175253.1	158.0	1.83	1.70	1.70	NO	
L0000202	0	0.11507E-02	631849.8	4175249.8	158.0	1.83	1.70	1.70	NO	
L0000203	0	0.11507E-02	631848.1	4175246.6	158.0	1.83	1.70	1.70	NO	
L0000204	0	0.11507E-02	631846.5	4175243.3	158.0	1.83	1.70	1.70	NO	
L0000205	0	0.11507E-02	631844.8	4175240.1	158.0	1.83	1.70	1.70	NO	
L0000206	0	0.11507E-02	631843.1	4175236.9	158.0	1.83	1.70	1.70	NO	
L0000207	0	0.11507E-02	631841.4	4175233.6	158.0	1.83	1.70	1.70	NO	
L0000208	0	0.11507E-02	631839.7	4175230.4	158.0	1.83	1.70	1.70	NO	
L0000209	0	0.11507E-02	631838.1	4175227.1	158.0	1.83	1.70	1.70	NO	
L0000210	0	0.11507E-02	631836.4	4175223.9	158.0	1.83	1.70	1.70	NO	
L0000211	0	0.11507E-02	631835.3	4175220.5	158.0	1.83	1.70	1.70	NO	
L0000212	0	0.11507E-02	631835.4	4175216.8	158.0	1.83	1.70	1.70	NO	
L0000213	0	0.11507E-02	631835.4	4175213.1	158.0	1.83	1.70	1.70	NO	
L0000214	0	0.11507E-02	631835.5	4175209.5	158.0	1.83	1.70	1.70	NO	
L0000215	0	0.11507E-02	631835.5	4175205.8	158.0	1.83	1.70	1.70	NO	
L0000216	0	0.11507E-02	631835.6	4175202.2	158.0	1.83	1.70	1.70	NO	
L0000217	0	0.11507E-02	631835.6	4175198.5	158.0	1.83	1.70	1.70	NO	
L0000218	0	0.11507E-02	631835.7	4175194.9	158.0	1.83	1.70	1.70	NO	
L0000219	0	0.11507E-02	631835.7	4175191.2	158.0	1.83	1.70	1.70	NO	
L0000220	0	0.11507E-02	631835.8	4175187.5	158.0	1.83	1.70	1.70	NO	

L0000221	0	0.11507E-02	631835.8	4175183.9	158.0	1.83	1.70	1.70	NO
L0000222	0	0.11507E-02	631835.9	4175180.2	158.0	1.83	1.70	1.70	NO
L0000223	0	0.11507E-02	631835.9	4175176.6	158.0	1.83	1.70	1.70	NO
L0000224	0	0.11507E-02	631836.0	4175172.9	158.0	1.83	1.70	1.70	NO
L0000225	0	0.11507E-02	631836.0	4175169.3	158.0	1.83	1.70	1.70	NO
L0000226	0	0.11507E-02	631836.1	4175165.6	158.0	1.83	1.70	1.70	NO
L0000227	0	0.11507E-02	631836.1	4175161.9	158.0	1.83	1.70	1.70	NO
L0000228	0	0.11507E-02	631836.2	4175158.3	158.0	1.83	1.70	1.70	NO
L0000229	0	0.11507E-02	631836.2	4175154.6	158.0	1.83	1.70	1.70	NO
L0000230	0	0.11507E-02	631836.3	4175151.0	158.0	1.83	1.70	1.70	NO
L0000231	0	0.11507E-02	631836.3	4175147.3	158.0	1.83	1.70	1.70	NO
L0000232	0	0.11507E-02	631836.4	4175143.7	158.0	1.83	1.70	1.70	NO
L0000233	0	0.11507E-02	631836.4	4175140.0	158.0	1.83	1.70	1.70	NO
L0000234	0	0.11507E-02	631836.5	4175136.3	158.0	1.83	1.70	1.70	NO
L0000235	0	0.11507E-02	631836.3	4175132.9	158.0	1.83	1.70	1.70	NO
L0000236	0	0.11507E-02	631832.7	4175132.9	158.0	1.83	1.70	1.70	NO
L0000237	0	0.11507E-02	631829.0	4175132.9	158.0	1.83	1.70	1.70	NO
L0000238	0	0.11507E-02	631825.4	4175132.9	158.0	1.83	1.70	1.70	NO
L0000239	0	0.11507E-02	631821.7	4175132.9	158.0	1.83	1.70	1.70	NO
L0000240	0	0.11507E-02	631818.1	4175132.9	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000241	0	0.11507E-02	631814.4	4175132.9	158.0	1.83	1.70	1.70	NO	
L0000242	0	0.11507E-02	631810.7	4175132.9	158.0	1.83	1.70	1.70	NO	
L0000243	0	0.11507E-02	631807.1	4175132.9	158.0	1.83	1.70	1.70	NO	
L0000244	0	0.11507E-02	631803.4	4175132.9	158.0	1.83	1.70	1.70	NO	
L0000245	0	0.11507E-02	631800.0	4175133.1	158.0	1.83	1.70	1.70	NO	
L0000246	0	0.11507E-02	631799.9	4175136.8	158.0	1.83	1.70	1.70	NO	
L0000247	0	0.11507E-02	631799.8	4175140.4	158.0	1.83	1.70	1.70	NO	
L0000248	0	0.11507E-02	631799.7	4175144.1	158.0	1.83	1.70	1.70	NO	
L0000249	0	0.11507E-02	631799.6	4175147.7	158.0	1.83	1.70	1.70	NO	
L0000250	0	0.11507E-02	631799.5	4175151.4	158.0	1.83	1.70	1.70	NO	
L0000251	0	0.11507E-02	631799.4	4175155.0	158.0	1.83	1.70	1.70	NO	
L0000252	0	0.11507E-02	631799.4	4175158.7	158.0	1.83	1.70	1.70	NO	
L0000253	0	0.11507E-02	631799.3	4175162.4	158.0	1.83	1.70	1.70	NO	
L0000254	0	0.11507E-02	631799.2	4175166.0	158.0	1.83	1.70	1.70	NO	
L0000255	0	0.11507E-02	631799.1	4175169.7	158.0	1.83	1.70	1.70	NO	
L0000256	0	0.11507E-02	631799.0	4175173.3	158.0	1.83	1.70	1.70	NO	
L0000257	0	0.11507E-02	631798.9	4175177.0	158.0	1.83	1.70	1.70	NO	
L0000258	0	0.11507E-02	631798.8	4175180.6	158.0	1.83	1.70	1.70	NO	
L0000259	0	0.11507E-02	631798.7	4175184.3	158.0	1.83	1.70	1.70	NO	
L0000260	0	0.11507E-02	631798.6	4175187.9	158.0	1.83	1.70	1.70	NO	
L0000261	0	0.11507E-02	631798.5	4175191.6	158.0	1.83	1.70	1.70	NO	
L0000262	0	0.11507E-02	631798.5	4175195.3	158.0	1.83	1.70	1.70	NO	

L0000263	0	0.11507E-02	631798.4	4175198.9	158.0	1.83	1.70	1.70	NO
L0000264	0	0.11507E-02	631798.3	4175202.6	158.0	1.83	1.70	1.70	NO
L0000265	0	0.11507E-02	631798.2	4175206.2	158.0	1.83	1.70	1.70	NO
L0000266	0	0.11507E-02	631798.1	4175209.9	158.0	1.83	1.70	1.70	NO
L0000267	0	0.11507E-02	631798.0	4175213.5	158.0	1.83	1.70	1.70	NO
L0000268	0	0.11507E-02	631797.9	4175217.2	158.0	1.83	1.70	1.70	NO
L0000269	0	0.11507E-02	631797.8	4175220.9	158.0	1.83	1.70	1.70	NO
L0000270	0	0.11507E-02	631797.7	4175224.5	158.0	1.83	1.70	1.70	NO
L0000271	0	0.11507E-02	631797.6	4175228.2	158.0	1.83	1.70	1.70	NO
L0000272	0	0.11507E-02	631797.6	4175231.8	158.0	1.83	1.70	1.70	NO
L0000273	0	0.11507E-02	631797.5	4175235.5	158.0	1.83	1.70	1.70	NO
L0000274	0	0.11507E-02	631797.4	4175239.1	158.0	1.83	1.70	1.70	NO
L0000275	0	0.11507E-02	631797.3	4175242.8	158.0	1.83	1.70	1.70	NO
L0000276	0	0.11507E-02	631797.2	4175246.5	158.0	1.83	1.70	1.70	NO
L0000277	0	0.11507E-02	631797.1	4175250.1	158.0	1.83	1.70	1.70	NO
L0000278	0	0.11507E-02	631797.0	4175253.8	158.0	1.83	1.70	1.70	NO
L0000279	0	0.11507E-02	631796.9	4175257.4	158.0	1.83	1.70	1.70	NO
L0000280	0	0.11507E-02	631796.8	4175261.1	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000281	0	0.11507E-02	631796.8	4175264.7	158.0	1.83	1.70	1.70	NO	
L0000282	0	0.11507E-02	631796.7	4175268.4	158.0	1.83	1.70	1.70	NO	
L0000283	0	0.11507E-02	631796.6	4175272.0	158.0	1.83	1.70	1.70	NO	
L0000284	0	0.11507E-02	631796.5	4175275.7	158.0	1.83	1.70	1.70	NO	
L0000285	0	0.11507E-02	631796.4	4175279.4	158.0	1.83	1.70	1.70	NO	
L0000286	0	0.11507E-02	631796.3	4175283.0	158.0	1.83	1.70	1.70	NO	
L0000287	0	0.11507E-02	631796.2	4175286.7	158.0	1.83	1.70	1.70	NO	
L0000288	0	0.11507E-02	631796.1	4175290.3	158.0	1.83	1.70	1.70	NO	
L0000289	0	0.11507E-02	631796.0	4175294.0	158.0	1.83	1.70	1.70	NO	
L0000290	0	0.11507E-02	631795.9	4175297.6	158.0	1.83	1.70	1.70	NO	
L0000291	0	0.11507E-02	631795.9	4175301.3	158.0	1.83	1.70	1.70	NO	
L0000292	0	0.11507E-02	631795.8	4175305.0	158.0	1.83	1.70	1.70	NO	
L0000293	0	0.11507E-02	631795.7	4175308.6	158.0	1.83	1.70	1.70	NO	
L0000294	0	0.11507E-02	631795.6	4175312.3	158.0	1.83	1.70	1.70	NO	
L0000295	0	0.11507E-02	631795.5	4175315.9	158.0	1.83	1.70	1.70	NO	
L0000296	0	0.11507E-02	631795.4	4175319.6	158.0	1.83	1.70	1.70	NO	
L0000297	0	0.11507E-02	631795.3	4175323.2	158.0	1.83	1.70	1.70	NO	
L0000298	0	0.11507E-02	631795.2	4175326.9	158.0	1.83	1.70	1.70	NO	
L0000299	0	0.11507E-02	631795.1	4175330.5	158.0	1.83	1.70	1.70	NO	
L0000300	0	0.11507E-02	631792.4	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000301	0	0.11507E-02	631788.7	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000302	0	0.11507E-02	631785.1	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000303	0	0.11507E-02	631781.4	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000304	0	0.11507E-02	631777.8	4175331.5	158.0	1.83	1.70	1.70	NO	

L0000305	0	0.11507E-02	631774.1	4175331.5	158.0	1.83	1.70	1.70	NO
L0000306	0	0.11507E-02	631770.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000307	0	0.11507E-02	631766.8	4175331.5	158.0	1.83	1.70	1.70	NO
L0000308	0	0.11507E-02	631763.1	4175331.5	158.0	1.83	1.70	1.70	NO
L0000309	0	0.11507E-02	631759.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000310	0	0.11507E-02	631755.8	4175331.5	158.0	1.83	1.70	1.70	NO
L0000311	0	0.11507E-02	631752.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000312	0	0.11507E-02	631748.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000313	0	0.11507E-02	631744.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000314	0	0.11507E-02	631741.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000315	0	0.11507E-02	631737.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000316	0	0.11507E-02	631733.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000317	0	0.11507E-02	631730.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000318	0	0.11507E-02	631726.6	4175331.5	158.0	1.83	1.70	1.70	NO
L0000319	0	0.11507E-02	631722.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000320	0	0.11507E-02	631719.2	4175331.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
			X Y					
L0000321	0	0.11507E-02	631715.6 4175331.5	158.0	1.83	1.70	1.70	NO
L0000322	0	0.11507E-02	631711.9 4175331.5	158.0	1.83	1.70	1.70	NO
L0000323	0	0.11507E-02	631708.3 4175331.5	158.0	1.83	1.70	1.70	NO
L0000324	0	0.11507E-02	631704.6 4175331.5	158.0	1.83	1.70	1.70	NO
L0000325	0	0.11507E-02	631701.0 4175331.5	158.0	1.83	1.70	1.70	NO
L0000326	0	0.11507E-02	631697.3 4175331.5	158.0	1.83	1.70	1.70	NO
L0000327	0	0.11507E-02	631693.6 4175331.5	158.0	1.83	1.70	1.70	NO
L0000328	0	0.11507E-02	631690.0 4175331.5	158.0	1.83	1.70	1.70	NO
L0000329	0	0.11507E-02	631686.3 4175331.5	158.0	1.83	1.70	1.70	NO
L0000330	0	0.11507E-02	631682.7 4175331.5	158.0	1.83	1.70	1.70	NO
L0000331	0	0.11507E-02	631679.0 4175331.5	158.0	1.83	1.70	1.70	NO
L0000332	0	0.11507E-02	631675.4 4175331.5	158.0	1.83	1.70	1.70	NO
L0000333	0	0.11507E-02	631671.7 4175331.5	158.0	1.83	1.70	1.70	NO
L0000334	0	0.11507E-02	631668.0 4175331.5	158.0	1.83	1.70	1.70	NO
L0000335	0	0.11507E-02	631664.4 4175331.5	158.0	1.83	1.70	1.70	NO
L0000336	0	0.11507E-02	631660.7 4175331.5	158.0	1.83	1.70	1.70	NO
L0000337	0	0.11507E-02	631657.1 4175331.5	158.0	1.83	1.70	1.70	NO
L0000338	0	0.11507E-02	631653.4 4175331.5	158.0	1.83	1.70	1.70	NO
L0000339	0	0.11507E-02	631649.8 4175331.5	158.0	1.83	1.70	1.70	NO
L0000340	0	0.11507E-02	631646.1 4175331.5	158.0	1.83	1.70	1.70	NO
L0000341	0	0.11507E-02	631642.4 4175331.5	158.0	1.83	1.70	1.70	NO
L0000342	0	0.11507E-02	631638.8 4175331.5	158.0	1.83	1.70	1.70	NO
L0000343	0	0.11507E-02	631635.1 4175331.5	158.0	1.83	1.70	1.70	NO
L0000344	0	0.11507E-02	631631.5 4175331.5	158.0	1.83	1.70	1.70	NO
L0000345	0	0.11507E-02	631627.8 4175331.5	158.0	1.83	1.70	1.70	NO
L0000346	0	0.11507E-02	631624.2 4175331.5	158.0	1.83	1.70	1.70	NO

L0000347	0	0.11507E-02	631620.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000348	0	0.11507E-02	631616.8	4175331.5	158.0	1.83	1.70	1.70	NO
L0000349	0	0.11507E-02	631613.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000350	0	0.11507E-02	631609.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000351	0	0.11507E-02	631605.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000352	0	0.11507E-02	631602.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000353	0	0.11507E-02	631598.5	4175331.5	158.0	1.83	1.70	1.70	NO
L0000354	0	0.11507E-02	631594.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000355	0	0.11507E-02	631591.2	4175331.5	158.0	1.83	1.70	1.70	NO
L0000356	0	0.11507E-02	631587.6	4175331.5	158.0	1.83	1.70	1.70	NO
L0000357	0	0.11507E-02	631583.9	4175331.5	158.0	1.83	1.70	1.70	NO
L0000358	0	0.11507E-02	631580.3	4175331.5	158.0	1.83	1.70	1.70	NO
L0000359	0	0.11507E-02	631576.6	4175331.5	158.0	1.83	1.70	1.70	NO
L0000360	0	0.11507E-02	631572.9	4175331.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000361	0	0.11507E-02	631569.3	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000362	0	0.11507E-02	631565.6	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000363	0	0.11507E-02	631562.0	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000364	0	0.11507E-02	631558.3	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000365	0	0.11507E-02	631554.7	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000366	0	0.11507E-02	631551.0	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000367	0	0.11507E-02	631547.3	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000368	0	0.11507E-02	631543.7	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000369	0	0.11507E-02	631540.0	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000370	0	0.11507E-02	631536.4	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000371	0	0.11507E-02	631532.7	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000372	0	0.11507E-02	631529.1	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000373	0	0.11507E-02	631525.4	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000374	0	0.11507E-02	631521.7	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000375	0	0.11507E-02	631518.1	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000376	0	0.11507E-02	631514.4	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000377	0	0.11507E-02	631510.8	4175331.5	158.0	1.83	1.70	1.70	NO	
L0000378	0	0.11507E-02	631508.8	4175333.1	158.0	1.83	1.70	1.70	NO	
L0000379	0	0.11507E-02	631509.0	4175336.8	158.0	1.83	1.70	1.70	NO	
L0000380	0	0.11507E-02	631509.1	4175340.5	158.0	1.83	1.70	1.70	NO	
L0000381	0	0.11507E-02	631509.3	4175344.1	158.0	1.83	1.70	1.70	NO	
L0000382	0	0.11507E-02	631509.4	4175347.8	158.0	1.83	1.70	1.70	NO	
L0000383	0	0.11507E-02	631509.5	4175351.4	158.0	1.83	1.70	1.70	NO	
L0000384	0	0.11507E-02	631509.7	4175355.1	158.0	1.83	1.70	1.70	NO	
L0000385	0	0.11507E-02	631509.8	4175358.7	158.0	1.83	1.70	1.70	NO	
L0000386	0	0.11507E-02	631510.0	4175362.4	158.0	1.83	1.70	1.70	NO	
L0000387	0	0.11507E-02	631510.1	4175366.0	158.0	1.83	1.70	1.70	NO	
L0000388	0	0.11507E-02	631510.3	4175369.7	158.0	1.83	1.70	1.70	NO	

L0000389	0	0.11507E-02	631510.4	4175373.4	158.0	1.83	1.70	1.70	NO
L0000390	0	0.11507E-02	631510.5	4175377.0	158.0	1.83	1.70	1.70	NO
L0000391	0	0.11507E-02	631510.7	4175380.7	158.0	1.83	1.70	1.70	NO
L0000392	0	0.11507E-02	631510.8	4175384.3	158.0	1.83	1.70	1.70	NO
L0000393	0	0.11507E-02	631511.0	4175388.0	158.0	1.83	1.70	1.70	NO
L0000394	0	0.11507E-02	631511.1	4175391.6	158.0	1.83	1.70	1.70	NO
L0000395	0	0.11507E-02	631511.3	4175395.3	158.0	1.83	1.70	1.70	NO
L0000396	0	0.11507E-02	631511.4	4175398.9	158.0	1.83	1.70	1.70	NO
L0000397	0	0.11507E-02	631511.5	4175402.6	158.0	1.83	1.70	1.70	NO
L0000398	0	0.11507E-02	631511.7	4175406.2	158.0	1.83	1.70	1.70	NO
L0000399	0	0.11507E-02	631511.8	4175409.9	158.0	1.83	1.70	1.70	NO
L0000400	0	0.11507E-02	631512.0	4175413.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000401	0	0.11507E-02	631512.1	4175417.2	158.0	1.83	1.70	1.70	NO	
L0000402	0	0.11507E-02	631512.3	4175420.9	158.0	1.83	1.70	1.70	NO	
L0000403	0	0.11507E-02	631512.4	4175424.5	158.0	1.83	1.70	1.70	NO	
L0000404	0	0.11507E-02	631512.6	4175428.2	158.0	1.83	1.70	1.70	NO	
L0000405	0	0.11507E-02	631512.7	4175431.8	158.0	1.83	1.70	1.70	NO	
L0000406	0	0.11507E-02	631512.8	4175435.5	158.0	1.83	1.70	1.70	NO	
L0000407	0	0.11507E-02	631513.0	4175439.1	158.0	1.83	1.70	1.70	NO	
L0000408	0	0.11507E-02	631513.1	4175442.8	158.0	1.83	1.70	1.70	NO	
L0000409	0	0.11507E-02	631513.3	4175446.4	158.0	1.83	1.70	1.70	NO	
L0000410	0	0.11507E-02	631513.4	4175450.1	158.0	1.83	1.70	1.70	NO	
L0000411	0	0.11507E-02	631513.6	4175453.8	158.0	1.83	1.70	1.70	NO	
L0000412	0	0.11507E-02	631512.0	4175455.8	158.0	1.83	1.70	1.70	NO	
L0000413	0	0.11507E-02	631508.4	4175455.7	158.0	1.83	1.70	1.70	NO	
L0000414	0	0.11507E-02	631504.7	4175455.6	158.0	1.83	1.70	1.70	NO	
L0000415	0	0.11507E-02	631501.0	4175455.6	158.0	1.83	1.70	1.70	NO	
L0000416	0	0.11507E-02	631497.4	4175455.5	158.0	1.83	1.70	1.70	NO	
L0000417	0	0.11507E-02	631493.7	4175455.5	158.0	1.83	1.70	1.70	NO	
L0000418	0	0.11507E-02	631490.1	4175455.4	158.0	1.83	1.70	1.70	NO	
L0000419	0	0.11507E-02	631486.4	4175455.4	158.0	1.83	1.70	1.70	NO	
L0000420	0	0.11507E-02	631482.8	4175455.3	158.0	1.83	1.70	1.70	NO	
L0000421	0	0.11507E-02	631479.1	4175455.2	158.0	1.83	1.70	1.70	NO	
L0000422	0	0.11507E-02	631475.4	4175455.2	158.0	1.83	1.70	1.70	NO	
L0000423	0	0.11507E-02	631471.8	4175455.1	158.0	1.83	1.70	1.70	NO	
L0000424	0	0.11507E-02	631468.1	4175455.1	158.0	1.83	1.70	1.70	NO	
L0000425	0	0.11507E-02	631464.5	4175455.0	158.0	1.83	1.70	1.70	NO	
L0000426	0	0.11507E-02	631460.8	4175455.0	158.0	1.83	1.70	1.70	NO	
L0000427	0	0.11507E-02	631457.2	4175454.9	158.0	1.83	1.70	1.70	NO	
L0000428	0	0.11507E-02	631453.5	4175454.9	158.0	1.83	1.70	1.70	NO	
L0000429	0	0.11507E-02	631449.8	4175454.8	158.0	1.83	1.70	1.70	NO	
L0000430	0	0.11507E-02	631446.2	4175454.7	158.0	1.83	1.70	1.70	NO	

L0000431	0	0.11507E-02	631442.5	4175454.7	158.0	1.83	1.70	1.70	NO
L0000432	0	0.11507E-02	631438.9	4175454.6	158.0	1.83	1.70	1.70	NO
L0000433	0	0.11507E-02	631435.2	4175454.6	158.0	1.83	1.70	1.70	NO
L0000434	0	0.11507E-02	631431.6	4175454.5	158.0	1.83	1.70	1.70	NO
L0000435	0	0.11507E-02	631427.9	4175454.5	158.0	1.83	1.70	1.70	NO
L0000436	0	0.11507E-02	631424.2	4175454.4	158.0	1.83	1.70	1.70	NO
L0000437	0	0.11507E-02	631420.6	4175454.3	158.0	1.83	1.70	1.70	NO
L0000438	0	0.11507E-02	631416.9	4175454.3	158.0	1.83	1.70	1.70	NO
L0000439	0	0.11507E-02	631413.3	4175454.2	158.0	1.83	1.70	1.70	NO
L0000440	0	0.11507E-02	631409.6	4175454.2	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000441	0	0.11507E-02	631406.0	4175454.1	158.0	1.83	1.70	1.70	NO	
L0000442	0	0.11507E-02	631402.3	4175454.1	158.0	1.83	1.70	1.70	NO	
L0000443	0	0.11507E-02	631398.6	4175454.0	158.0	1.83	1.70	1.70	NO	
L0000444	0	0.11507E-02	631395.0	4175453.9	158.0	1.83	1.70	1.70	NO	
L0000445	0	0.11507E-02	631391.3	4175453.9	158.0	1.83	1.70	1.70	NO	
L0000446	0	0.11507E-02	631387.7	4175453.8	158.0	1.83	1.70	1.70	NO	
L0000447	0	0.11507E-02	631384.0	4175453.8	158.0	1.83	1.70	1.70	NO	
L0000448	0	0.11507E-02	631380.4	4175453.7	158.0	1.83	1.70	1.70	NO	
L0000449	0	0.11507E-02	631376.7	4175453.7	158.0	1.83	1.70	1.70	NO	
L0000450	0	0.11507E-02	631373.0	4175453.6	158.0	1.83	1.70	1.70	NO	
L0000451	0	0.11507E-02	631369.4	4175453.5	158.0	1.83	1.70	1.70	NO	
L0000452	0	0.11507E-02	631365.7	4175453.5	158.0	1.83	1.70	1.70	NO	
L0000453	0	0.11507E-02	631362.1	4175453.4	158.0	1.83	1.70	1.70	NO	
L0000454	0	0.11507E-02	631358.4	4175453.4	158.0	1.83	1.70	1.70	NO	
L0000455	0	0.11507E-02	631355.6	4175454.8	158.0	1.83	1.70	1.70	NO	
L0000456	0	0.11507E-02	631353.7	4175457.9	158.0	1.83	1.70	1.70	NO	
L0000457	0	0.11507E-02	631351.8	4175461.1	158.0	1.83	1.70	1.70	NO	
L0000458	0	0.11507E-02	631349.9	4175464.2	158.0	1.83	1.70	1.70	NO	
L0000459	0	0.11507E-02	631348.1	4175467.4	158.0	1.83	1.70	1.70	NO	
L0000460	0	0.11507E-02	631346.2	4175470.5	158.0	1.83	1.70	1.70	NO	
L0000461	0	0.11507E-02	631344.3	4175473.6	158.0	1.83	1.70	1.70	NO	
L0000462	0	0.11507E-02	631342.4	4175476.8	158.0	1.83	1.70	1.70	NO	
L0000463	0	0.11507E-02	631340.6	4175479.9	158.0	1.83	1.70	1.70	NO	
L0000464	0	0.11507E-02	631338.7	4175483.1	158.0	1.83	1.70	1.70	NO	
L0000465	0	0.11507E-02	631336.8	4175486.2	158.0	1.83	1.70	1.70	NO	
L0000466	0	0.11507E-02	631334.9	4175489.3	158.0	1.83	1.70	1.70	NO	
L0000467	0	0.11507E-02	631333.1	4175492.5	158.0	1.83	1.70	1.70	NO	
L0000468	0	0.11507E-02	631331.2	4175495.6	158.0	1.83	1.70	1.70	NO	
L0000469	0	0.11507E-02	631329.3	4175498.8	158.0	1.83	1.70	1.70	NO	
L0000470	0	0.11507E-02	631327.4	4175501.9	158.0	1.83	1.70	1.70	NO	
L0000471	0	0.11507E-02	631325.6	4175505.0	158.0	1.83	1.70	1.70	NO	
L0000472	0	0.11507E-02	631323.7	4175508.2	158.0	1.83	1.70	1.70	NO	

L0000473	0	0.11507E-02	631321.8	4175511.3	158.0	1.83	1.70	1.70	NO
L0000474	0	0.11507E-02	631319.9	4175514.5	158.0	1.83	1.70	1.70	NO
L0000475	0	0.11507E-02	631318.1	4175517.6	158.0	1.83	1.70	1.70	NO
L0000476	0	0.11507E-02	631316.2	4175520.7	158.0	1.83	1.70	1.70	NO
L0000477	0	0.11507E-02	631314.3	4175523.9	158.0	1.83	1.70	1.70	NO
L0000478	0	0.11507E-02	631312.4	4175527.0	158.0	1.83	1.70	1.70	NO
L0000479	0	0.11507E-02	631310.6	4175530.2	158.0	1.83	1.70	1.70	NO
L0000480	0	0.11507E-02	631308.7	4175533.3	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000481	0	0.11507E-02	631306.8	4175536.4	158.0	1.83	1.70	1.70	NO	
L0000482	0	0.11507E-02	631304.9	4175539.6	158.0	1.83	1.70	1.70	NO	
L0000483	0	0.11507E-02	631303.1	4175542.7	158.0	1.83	1.70	1.70	NO	
L0000484	0	0.11507E-02	631301.2	4175545.9	158.0	1.83	1.70	1.70	NO	
L0000485	0	0.11507E-02	631300.3	4175549.3	158.0	1.83	1.70	1.70	NO	
L0000486	0	0.11507E-02	631300.2	4175553.0	158.0	1.83	1.70	1.70	NO	
L0000487	0	0.11507E-02	631300.1	4175556.6	158.0	1.83	1.70	1.70	NO	
L0000488	0	0.11507E-02	631300.0	4175560.3	158.0	1.83	1.70	1.70	NO	
L0000489	0	0.11507E-02	631299.9	4175563.9	158.0	1.83	1.70	1.70	NO	
L0000490	0	0.11507E-02	631299.8	4175567.6	158.0	1.83	1.70	1.70	NO	
L0000491	0	0.11507E-02	631299.7	4175571.2	158.0	1.83	1.70	1.70	NO	
L0000492	0	0.11507E-02	631299.6	4175574.9	158.0	1.83	1.70	1.70	NO	
L0000493	0	0.11507E-02	631299.5	4175578.6	158.0	1.83	1.70	1.70	NO	
L0000494	0	0.11507E-02	631299.4	4175582.2	158.0	1.83	1.70	1.70	NO	
L0000495	0	0.11507E-02	631299.3	4175585.9	158.0	1.83	1.70	1.70	NO	
L0000496	0	0.11507E-02	631299.2	4175589.5	158.0	1.83	1.70	1.70	NO	
L0000497	0	0.11507E-02	631299.1	4175593.2	158.0	1.83	1.70	1.70	NO	
L0000498	0	0.11507E-02	631299.0	4175596.8	158.0	1.83	1.70	1.70	NO	
L0000499	0	0.11507E-02	631298.9	4175600.5	158.0	1.83	1.70	1.70	NO	
L0000500	0	0.11507E-02	631298.8	4175604.1	158.0	1.83	1.70	1.70	NO	
L0000501	0	0.11507E-02	631298.7	4175607.8	158.0	1.83	1.70	1.70	NO	
L0000502	0	0.11507E-02	631298.6	4175611.5	158.0	1.83	1.70	1.70	NO	
L0000503	0	0.11507E-02	631298.5	4175615.1	158.0	1.83	1.70	1.70	NO	
L0000504	0	0.11507E-02	631298.4	4175618.8	158.0	1.83	1.70	1.70	NO	
L0000505	0	0.11507E-02	631298.3	4175622.4	158.0	1.83	1.70	1.70	NO	
L0000506	0	0.11507E-02	631298.2	4175626.1	158.0	1.83	1.70	1.70	NO	
L0000507	0	0.11507E-02	631298.1	4175629.7	158.0	1.83	1.70	1.70	NO	
L0000508	0	0.11507E-02	631298.0	4175633.4	158.0	1.83	1.70	1.70	NO	
L0000509	0	0.11507E-02	631297.9	4175637.1	158.0	1.83	1.70	1.70	NO	
L0000510	0	0.11507E-02	631297.8	4175640.7	158.0	1.83	1.70	1.70	NO	
L0000511	0	0.11507E-02	631297.7	4175644.4	158.0	1.83	1.70	1.70	NO	
L0000512	0	0.11507E-02	631297.6	4175648.0	158.0	1.83	1.70	1.70	NO	
L0000513	0	0.11507E-02	631297.5	4175651.7	158.0	1.83	1.70	1.70	NO	
L0000514	0	0.11507E-02	631297.4	4175655.3	158.0	1.83	1.70	1.70	NO	

L0000515	0	0.11507E-02	631297.3	4175659.0	158.0	1.83	1.70	1.70	NO
L0000516	0	0.11507E-02	631297.2	4175662.6	158.0	1.83	1.70	1.70	NO
L0000517	0	0.11507E-02	631297.1	4175666.3	158.0	1.83	1.70	1.70	NO
L0000518	0	0.11507E-02	631297.0	4175670.0	158.0	1.83	1.70	1.70	NO
L0000519	0	0.11507E-02	631296.9	4175673.6	158.0	1.83	1.70	1.70	NO
L0000520	0	0.11507E-02	631296.8	4175677.3	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000521	0	0.11507E-02	631296.7	4175680.9	158.0	1.83	1.70	1.70	NO	
L0000522	0	0.11507E-02	631296.6	4175684.6	158.0	1.83	1.70	1.70	NO	
L0000523	0	0.11507E-02	631296.5	4175688.2	158.0	1.83	1.70	1.70	NO	
L0000524	0	0.11507E-02	631296.4	4175691.9	158.0	1.83	1.70	1.70	NO	
L0000525	0	0.11507E-02	631296.3	4175695.6	158.0	1.83	1.70	1.70	NO	
L0000526	0	0.11507E-02	631296.2	4175699.2	158.0	1.83	1.70	1.70	NO	
L0000527	0	0.11507E-02	631296.1	4175702.9	158.0	1.83	1.70	1.70	NO	
L0000528	0	0.11507E-02	631296.0	4175706.5	158.0	1.83	1.70	1.70	NO	
L0000529	0	0.11507E-02	631295.8	4175710.2	158.0	1.83	1.70	1.70	NO	
L0000530	0	0.11507E-02	631295.7	4175713.8	158.0	1.83	1.70	1.70	NO	
L0000531	0	0.11507E-02	631295.6	4175717.5	158.0	1.83	1.70	1.70	NO	
L0000532	0	0.11507E-02	631295.5	4175721.1	158.0	1.83	1.70	1.70	NO	
L0000533	0	0.11507E-02	631295.4	4175724.8	158.0	1.83	1.70	1.70	NO	
L0000534	0	0.11507E-02	631295.3	4175728.5	158.0	1.83	1.70	1.70	NO	
L0000535	0	0.11507E-02	631295.2	4175732.1	158.0	1.83	1.70	1.70	NO	
L0000536	0	0.11507E-02	631295.1	4175735.8	158.0	1.83	1.70	1.70	NO	
L0000537	0	0.11507E-02	631295.0	4175739.4	158.0	1.83	1.70	1.70	NO	
L0000538	0	0.11507E-02	631294.9	4175743.1	158.0	1.83	1.70	1.70	NO	
L0000539	0	0.11507E-02	631294.8	4175746.7	158.0	1.83	1.70	1.70	NO	
L0000540	0	0.11507E-02	631294.7	4175750.4	158.0	1.83	1.70	1.70	NO	
L0000541	0	0.11507E-02	631294.6	4175754.0	158.0	1.83	1.70	1.70	NO	
L0000542	0	0.11507E-02	631294.5	4175757.7	158.0	1.83	1.70	1.70	NO	
L0000543	0	0.11507E-02	631294.4	4175761.4	158.0	1.83	1.70	1.70	NO	
L0000544	0	0.11507E-02	631294.3	4175765.0	158.0	1.83	1.70	1.70	NO	
L0000545	0	0.11507E-02	631294.2	4175768.7	158.0	1.83	1.70	1.70	NO	
L0000546	0	0.11507E-02	631294.1	4175772.3	158.0	1.83	1.70	1.70	NO	
L0000547	0	0.11507E-02	631294.0	4175776.0	158.0	1.83	1.70	1.70	NO	
L0000548	0	0.11507E-02	631293.9	4175779.6	158.0	1.83	1.70	1.70	NO	
L0000549	0	0.11507E-02	631293.8	4175783.3	158.0	1.83	1.70	1.70	NO	
L0000550	0	0.11507E-02	631293.7	4175787.0	158.0	1.83	1.70	1.70	NO	
L0000551	0	0.11507E-02	631293.6	4175790.6	158.0	1.83	1.70	1.70	NO	
L0000552	0	0.11507E-02	631293.5	4175794.3	158.0	1.83	1.70	1.70	NO	
L0000553	0	0.11507E-02	631293.4	4175797.9	158.0	1.83	1.70	1.70	NO	
L0000554	0	0.11507E-02	631293.3	4175801.6	158.0	1.83	1.70	1.70	NO	
L0000555	0	0.11507E-02	631293.2	4175805.2	158.0	1.83	1.70	1.70	NO	
L0000556	0	0.11507E-02	631293.1	4175808.9	158.0	1.83	1.70	1.70	NO	

L0000557	0	0.11507E-02	631293.0	4175812.5	158.0	1.83	1.70	1.70	NO
L0000558	0	0.11507E-02	631292.9	4175816.2	158.0	1.83	1.70	1.70	NO
L0000559	0	0.11507E-02	631292.8	4175819.9	158.0	1.83	1.70	1.70	NO
L0000560	0	0.11507E-02	631292.7	4175823.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000561	0	0.11507E-02	631292.6	4175827.2	158.0	1.83	1.70	1.70	NO	
L0000562	0	0.11507E-02	631292.5	4175830.8	158.0	1.83	1.70	1.70	NO	
L0000563	0	0.11507E-02	631292.4	4175834.5	158.0	1.83	1.70	1.70	NO	
L0000564	0	0.11507E-02	631292.3	4175838.1	158.0	1.83	1.70	1.70	NO	
L0000565	0	0.11507E-02	631292.2	4175841.8	158.0	1.83	1.70	1.70	NO	
L0000566	0	0.11507E-02	631292.1	4175845.5	158.0	1.83	1.70	1.70	NO	
L0000567	0	0.11507E-02	631292.0	4175849.1	158.0	1.83	1.70	1.70	NO	
L0000568	0	0.11507E-02	631291.9	4175852.8	158.0	1.83	1.70	1.70	NO	
L0000569	0	0.11507E-02	631295.3	4175853.1	158.0	1.83	1.70	1.70	NO	
L0000570	0	0.11507E-02	631298.9	4175853.2	158.0	1.83	1.70	1.70	NO	
L0000571	0	0.11507E-02	631302.6	4175853.3	158.0	1.83	1.70	1.70	NO	
L0000572	0	0.11507E-02	631306.2	4175853.4	158.0	1.83	1.70	1.70	NO	
L0000573	0	0.11507E-02	631309.9	4175853.5	158.0	1.83	1.70	1.70	NO	
L0000574	0	0.11507E-02	631313.5	4175853.6	158.0	1.83	1.70	1.70	NO	
L0000575	0	0.11507E-02	631317.2	4175853.7	158.0	1.83	1.70	1.70	NO	
L0000576	0	0.11507E-02	631320.9	4175853.8	158.0	1.83	1.70	1.70	NO	
L0000577	0	0.11507E-02	631324.5	4175853.9	158.0	1.83	1.70	1.70	NO	
L0000578	0	0.11507E-02	631328.2	4175854.0	158.0	1.83	1.70	1.70	NO	
L0000579	0	0.11507E-02	631331.8	4175854.1	158.0	1.83	1.70	1.70	NO	
L0000580	0	0.11507E-02	631335.5	4175854.2	158.0	1.83	1.70	1.70	NO	
L0000581	0	0.11507E-02	631338.2	4175853.3	158.0	1.83	1.70	1.70	NO	
L0000582	0	0.11507E-02	631338.3	4175849.6	158.0	1.83	1.70	1.70	NO	
L0000583	0	0.11507E-02	631338.3	4175846.0	158.0	1.83	1.70	1.70	NO	
L0000584	0	0.11507E-02	631338.4	4175842.3	158.0	1.83	1.70	1.70	NO	
L0000585	0	0.11507E-02	631338.5	4175838.6	158.0	1.83	1.70	1.70	NO	
L0000586	0	0.11507E-02	631338.6	4175835.0	158.0	1.83	1.70	1.70	NO	
L0000587	0	0.11507E-02	631338.6	4175831.3	158.0	1.83	1.70	1.70	NO	
L0000588	0	0.11507E-02	631338.7	4175827.7	158.0	1.83	1.70	1.70	NO	
L0000589	0	0.11507E-02	631338.8	4175824.0	158.0	1.83	1.70	1.70	NO	
L0000590	0	0.11507E-02	631338.8	4175820.4	158.0	1.83	1.70	1.70	NO	
L0000591	0	0.11507E-02	631338.9	4175816.7	158.0	1.83	1.70	1.70	NO	
L0000592	0	0.11507E-02	631339.0	4175813.0	158.0	1.83	1.70	1.70	NO	
L0000593	0	0.11507E-02	631339.1	4175809.4	158.0	1.83	1.70	1.70	NO	
L0000594	0	0.11507E-02	631339.1	4175805.7	158.0	1.83	1.70	1.70	NO	
L0000595	0	0.11507E-02	631339.2	4175802.1	158.0	1.83	1.70	1.70	NO	
L0000596	0	0.11507E-02	631339.3	4175798.4	158.0	1.83	1.70	1.70	NO	
L0000597	0	0.11507E-02	631339.4	4175794.8	158.0	1.83	1.70	1.70	NO	
L0000598	0	0.11507E-02	631339.4	4175791.1	158.0	1.83	1.70	1.70	NO	

L0000599	0	0.11507E-02	631339.5	4175787.4	158.0	1.83	1.70	1.70	NO
L0000600	0	0.11507E-02	631339.6	4175783.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000601	0	0.11507E-02	631339.7	4175780.1	158.0	1.83	1.70	1.70	NO	
L0000602	0	0.11507E-02	631339.7	4175776.5	158.0	1.83	1.70	1.70	NO	
L0000603	0	0.11507E-02	631339.8	4175772.8	158.0	1.83	1.70	1.70	NO	
L0000604	0	0.11507E-02	631339.9	4175769.2	158.0	1.83	1.70	1.70	NO	
L0000605	0	0.11507E-02	631339.9	4175765.5	158.0	1.83	1.70	1.70	NO	
L0000606	0	0.11507E-02	631340.0	4175761.8	158.0	1.83	1.70	1.70	NO	
L0000607	0	0.11507E-02	631340.1	4175758.2	158.0	1.83	1.70	1.70	NO	
L0000608	0	0.11507E-02	631340.2	4175754.5	158.0	1.83	1.70	1.70	NO	
L0000609	0	0.11507E-02	631340.2	4175750.9	158.0	1.83	1.70	1.70	NO	
L0000610	0	0.11507E-02	631340.3	4175747.2	158.0	1.83	1.70	1.70	NO	
L0000611	0	0.11507E-02	631340.4	4175743.6	158.0	1.83	1.70	1.70	NO	
L0000612	0	0.11507E-02	631340.5	4175739.9	158.0	1.83	1.70	1.70	NO	
L0000613	0	0.11507E-02	631340.5	4175736.2	158.0	1.83	1.70	1.70	NO	
L0000614	0	0.11507E-02	631340.6	4175732.6	158.0	1.83	1.70	1.70	NO	
L0000615	0	0.11507E-02	631340.7	4175728.9	158.0	1.83	1.70	1.70	NO	
L0000616	0	0.11507E-02	631340.7	4175725.3	158.0	1.83	1.70	1.70	NO	
L0000617	0	0.11507E-02	631340.8	4175721.6	158.0	1.83	1.70	1.70	NO	
L0000618	0	0.11507E-02	631340.9	4175718.0	158.0	1.83	1.70	1.70	NO	
L0000619	0	0.11507E-02	631341.0	4175714.3	158.0	1.83	1.70	1.70	NO	
L0000620	0	0.11507E-02	631341.0	4175710.6	158.0	1.83	1.70	1.70	NO	
L0000621	0	0.11507E-02	631341.1	4175707.0	158.0	1.83	1.70	1.70	NO	
L0000622	0	0.11507E-02	631341.2	4175703.3	158.0	1.83	1.70	1.70	NO	
L0000623	0	0.11507E-02	631341.3	4175699.7	158.0	1.83	1.70	1.70	NO	
L0000624	0	0.11507E-02	631341.3	4175696.0	158.0	1.83	1.70	1.70	NO	
L0000625	0	0.11507E-02	631341.4	4175692.4	158.0	1.83	1.70	1.70	NO	
L0000626	0	0.11507E-02	631341.5	4175688.7	158.0	1.83	1.70	1.70	NO	
L0000627	0	0.11507E-02	631341.6	4175685.1	158.0	1.83	1.70	1.70	NO	
L0000628	0	0.11507E-02	631341.6	4175681.4	158.0	1.83	1.70	1.70	NO	
L0000629	0	0.11507E-02	631341.7	4175677.7	158.0	1.83	1.70	1.70	NO	
L0000630	0	0.11507E-02	631341.8	4175674.1	158.0	1.83	1.70	1.70	NO	
L0000631	0	0.11507E-02	631341.8	4175670.4	158.0	1.83	1.70	1.70	NO	
L0000632	0	0.11507E-02	631341.9	4175666.8	158.0	1.83	1.70	1.70	NO	
L0000633	0	0.11507E-02	631342.0	4175663.1	158.0	1.83	1.70	1.70	NO	
L0000634	0	0.11507E-02	631342.1	4175659.5	158.0	1.83	1.70	1.70	NO	
L0000635	0	0.11507E-02	631342.1	4175655.8	158.0	1.83	1.70	1.70	NO	
L0000636	0	0.11507E-02	631342.2	4175652.1	158.0	1.83	1.70	1.70	NO	
L0000637	0	0.11507E-02	631342.3	4175648.5	158.0	1.83	1.70	1.70	NO	
L0000638	0	0.11507E-02	631342.4	4175644.8	158.0	1.83	1.70	1.70	NO	
L0000639	0	0.11507E-02	631342.4	4175641.2	158.0	1.83	1.70	1.70	NO	
L0000640	0	0.11507E-02	631342.5	4175637.5	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000641	0	0.11507E-02	631342.6	4175633.9	158.0	1.83	1.70	1.70	NO	
L0000642	0	0.11507E-02	631342.6	4175630.2	158.0	1.83	1.70	1.70	NO	
L0000643	0	0.11507E-02	631342.7	4175626.5	158.0	1.83	1.70	1.70	NO	
L0000644	0	0.11507E-02	631342.8	4175622.9	158.0	1.83	1.70	1.70	NO	
L0000645	0	0.11507E-02	631342.9	4175619.2	158.0	1.83	1.70	1.70	NO	
L0000646	0	0.11507E-02	631342.9	4175615.6	158.0	1.83	1.70	1.70	NO	
L0000647	0	0.11507E-02	631343.0	4175611.9	158.0	1.83	1.70	1.70	NO	
L0000648	0	0.11507E-02	631343.1	4175608.3	158.0	1.83	1.70	1.70	NO	
L0000649	0	0.11507E-02	631343.2	4175604.6	158.0	1.83	1.70	1.70	NO	
L0000650	0	0.11507E-02	631343.2	4175600.9	158.0	1.83	1.70	1.70	NO	
L0000651	0	0.11507E-02	631343.3	4175597.3	158.0	1.83	1.70	1.70	NO	
L0000652	0	0.11507E-02	631343.4	4175593.6	158.0	1.83	1.70	1.70	NO	
L0000653	0	0.11507E-02	631343.5	4175590.0	158.0	1.83	1.70	1.70	NO	
L0000654	0	0.11507E-02	631343.5	4175586.3	158.0	1.83	1.70	1.70	NO	
L0000655	0	0.11507E-02	631343.6	4175582.7	158.0	1.83	1.70	1.70	NO	
L0000656	0	0.11507E-02	631343.7	4175579.0	158.0	1.83	1.70	1.70	NO	
L0000657	0	0.11507E-02	631343.7	4175575.3	158.0	1.83	1.70	1.70	NO	
L0000658	0	0.11507E-02	631343.8	4175571.7	158.0	1.83	1.70	1.70	NO	
L0000659	0	0.11507E-02	631343.9	4175568.0	158.0	1.83	1.70	1.70	NO	
L0000660	0	0.11507E-02	631344.0	4175564.4	158.0	1.83	1.70	1.70	NO	
L0000661	0	0.11507E-02	631344.0	4175560.7	158.0	1.83	1.70	1.70	NO	
L0000662	0	0.11507E-02	631344.1	4175557.1	158.0	1.83	1.70	1.70	NO	
L0000663	0	0.11507E-02	631344.2	4175553.4	158.0	1.83	1.70	1.70	NO	
L0000664	0	0.11507E-02	631344.3	4175549.7	158.0	1.83	1.70	1.70	NO	
L0000665	0	0.11507E-02	631345.7	4175546.4	158.0	1.83	1.70	1.70	NO	
L0000666	0	0.11507E-02	631347.1	4175543.0	158.0	1.83	1.70	1.70	NO	
L0000667	0	0.11507E-02	631348.6	4175539.7	158.0	1.83	1.70	1.70	NO	
L0000668	0	0.11507E-02	631350.0	4175536.3	158.0	1.83	1.70	1.70	NO	
L0000669	0	0.11507E-02	631351.5	4175533.0	158.0	1.83	1.70	1.70	NO	
L0000670	0	0.11507E-02	631352.9	4175529.6	158.0	1.83	1.70	1.70	NO	
L0000671	0	0.11507E-02	631354.4	4175526.2	158.0	1.83	1.70	1.70	NO	
L0000672	0	0.11507E-02	631355.8	4175522.9	158.0	1.83	1.70	1.70	NO	
L0000673	0	0.11507E-02	631357.3	4175519.5	158.0	1.83	1.70	1.70	NO	
L0000674	0	0.11507E-02	631358.7	4175516.2	158.0	1.83	1.70	1.70	NO	
L0000675	0	0.11507E-02	631360.2	4175512.8	158.0	1.83	1.70	1.70	NO	
L0000676	0	0.11507E-02	631361.6	4175509.5	158.0	1.83	1.70	1.70	NO	
L0000677	0	0.11507E-02	631363.1	4175506.1	158.0	1.83	1.70	1.70	NO	
L0000678	0	0.11507E-02	631364.5	4175502.7	158.0	1.83	1.70	1.70	NO	
L0000679	0	0.11507E-02	631366.0	4175499.4	158.0	1.83	1.70	1.70	NO	
L0000680	0	0.11507E-02	631367.5	4175496.0	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000681	0	0.11507E-02	631368.9	4175492.7	158.0	1.83	1.70	1.70	NO	
L0000682	0	0.11507E-02	631370.4	4175489.3	158.0	1.83	1.70	1.70	NO	
L0000683	0	0.11507E-02	631371.8	4175486.0	158.0	1.83	1.70	1.70	NO	
L0000684	0	0.11507E-02	631373.3	4175482.6	158.0	1.83	1.70	1.70	NO	
L0000685	0	0.11507E-02	631374.7	4175479.2	158.0	1.83	1.70	1.70	NO	
L0000686	0	0.11507E-02	631376.2	4175475.9	158.0	1.83	1.70	1.70	NO	
L0000687	0	0.11507E-02	631377.6	4175472.5	158.0	1.83	1.70	1.70	NO	
L0000688	0	0.11507E-02	631379.1	4175469.2	158.0	1.83	1.70	1.70	NO	
L0000689	0	0.11507E-02	631381.9	4175468.0	158.0	1.83	1.70	1.70	NO	
L0000690	0	0.11507E-02	631385.6	4175468.1	158.0	1.83	1.70	1.70	NO	
L0000691	0	0.11507E-02	631389.3	4175468.2	158.0	1.83	1.70	1.70	NO	
L0000692	0	0.11507E-02	631392.9	4175468.3	158.0	1.83	1.70	1.70	NO	
L0000693	0	0.11507E-02	631396.6	4175468.4	158.0	1.83	1.70	1.70	NO	
L0000694	0	0.11507E-02	631400.2	4175468.5	158.0	1.83	1.70	1.70	NO	
L0000695	0	0.11507E-02	631403.9	4175468.6	158.0	1.83	1.70	1.70	NO	
L0000696	0	0.11507E-02	631407.5	4175468.7	158.0	1.83	1.70	1.70	NO	
L0000697	0	0.11507E-02	631411.2	4175468.8	158.0	1.83	1.70	1.70	NO	
L0000698	0	0.11507E-02	631414.8	4175468.9	158.0	1.83	1.70	1.70	NO	
L0000699	0	0.11507E-02	631418.5	4175469.0	158.0	1.83	1.70	1.70	NO	
L0000700	0	0.11507E-02	631422.2	4175469.1	158.0	1.83	1.70	1.70	NO	
L0000701	0	0.11507E-02	631425.8	4175469.2	158.0	1.83	1.70	1.70	NO	
L0000702	0	0.11507E-02	631429.5	4175469.3	158.0	1.83	1.70	1.70	NO	
L0000703	0	0.11507E-02	631433.1	4175469.4	158.0	1.83	1.70	1.70	NO	
L0000704	0	0.11507E-02	631436.8	4175469.5	158.0	1.83	1.70	1.70	NO	
L0000705	0	0.11507E-02	631440.4	4175469.6	158.0	1.83	1.70	1.70	NO	
L0000706	0	0.11507E-02	631444.1	4175469.7	158.0	1.83	1.70	1.70	NO	
L0000707	0	0.11507E-02	631447.8	4175469.8	158.0	1.83	1.70	1.70	NO	
L0000708	0	0.11507E-02	631451.4	4175469.9	158.0	1.83	1.70	1.70	NO	
L0000709	0	0.11507E-02	631455.1	4175470.0	158.0	1.83	1.70	1.70	NO	
L0000710	0	0.11507E-02	631458.7	4175470.1	158.0	1.83	1.70	1.70	NO	
L0000711	0	0.11507E-02	631462.4	4175470.2	158.0	1.83	1.70	1.70	NO	
L0000712	0	0.11507E-02	631466.0	4175470.3	158.0	1.83	1.70	1.70	NO	
L0000713	0	0.11507E-02	631469.7	4175470.4	158.0	1.83	1.70	1.70	NO	
L0000714	0	0.11507E-02	631473.3	4175470.5	158.0	1.83	1.70	1.70	NO	
L0000715	0	0.11507E-02	631477.0	4175470.6	158.0	1.83	1.70	1.70	NO	
L0000716	0	0.11507E-02	631480.7	4175470.7	158.0	1.83	1.70	1.70	NO	
L0000717	0	0.11507E-02	631484.3	4175470.8	158.0	1.83	1.70	1.70	NO	
L0000718	0	0.11507E-02	631488.0	4175470.9	158.0	1.83	1.70	1.70	NO	
L0000719	0	0.11507E-02	631491.6	4175471.0	158.0	1.83	1.70	1.70	NO	
L0000720	0	0.11507E-02	631495.3	4175471.1	158.0	1.83	1.70	1.70	NO	

file:///C/...977GSBU)/Documents/HRA/Tracy%20Costco%20DepotV2/AERMOD/Tracy%20CostcoV2.ADO%20(AERMOD%20Output%20file).txt[6/8/2022 6:45:42 PM]

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000721	0	0.11507E-02	631498.9	4175471.2	158.0	1.83	1.70	1.70	NO	
L0000722	0	0.11507E-02	631502.6	4175471.3	158.0	1.83	1.70	1.70	NO	
L0000723	0	0.11507E-02	631506.3	4175471.4	158.0	1.83	1.70	1.70	NO	
L0000724	0	0.11507E-02	631509.9	4175471.5	158.0	1.83	1.70	1.70	NO	
L0000725	0	0.11507E-02	631513.6	4175471.6	158.0	1.83	1.70	1.70	NO	
L0000726	0	0.11507E-02	631514.8	4175474.0	158.0	1.83	1.70	1.70	NO	
L0000727	0	0.11507E-02	631514.7	4175477.7	158.0	1.83	1.70	1.70	NO	
L0000728	0	0.11507E-02	631514.6	4175481.3	158.0	1.83	1.70	1.70	NO	
L0000729	0	0.11507E-02	631514.6	4175485.0	158.0	1.83	1.70	1.70	NO	
L0000730	0	0.11507E-02	631514.5	4175488.6	158.0	1.83	1.70	1.70	NO	
L0000731	0	0.11507E-02	631514.4	4175492.3	158.0	1.83	1.70	1.70	NO	
L0000732	0	0.11507E-02	631514.3	4175495.9	158.0	1.83	1.70	1.70	NO	
L0000733	0	0.11507E-02	631514.3	4175499.6	158.0	1.83	1.70	1.70	NO	
L0000734	0	0.11507E-02	631514.2	4175503.3	158.0	1.83	1.70	1.70	NO	
L0000735	0	0.11507E-02	631514.1	4175506.9	158.0	1.83	1.70	1.70	NO	
L0000736	0	0.11507E-02	631514.0	4175510.6	158.0	1.83	1.70	1.70	NO	
L0000737	0	0.11507E-02	631513.9	4175514.2	158.0	1.83	1.70	1.70	NO	
L0000738	0	0.11507E-02	631513.9	4175517.9	158.0	1.83	1.70	1.70	NO	
L0000739	0	0.11507E-02	631513.8	4175521.5	158.0	1.83	1.70	1.70	NO	
L0000740	0	0.11507E-02	631513.7	4175525.2	158.0	1.83	1.70	1.70	NO	
L0000741	0	0.11507E-02	631513.6	4175528.8	158.0	1.83	1.70	1.70	NO	
L0000742	0	0.11507E-02	631513.6	4175532.5	158.0	1.83	1.70	1.70	NO	
L0000743	0	0.11507E-02	631513.5	4175536.2	158.0	1.83	1.70	1.70	NO	
L0000744	0	0.11507E-02	631513.4	4175539.8	158.0	1.83	1.70	1.70	NO	
L0000745	0	0.11507E-02	631513.3	4175543.5	158.0	1.83	1.70	1.70	NO	
L0000746	0	0.11507E-02	631513.2	4175547.1	158.0	1.83	1.70	1.70	NO	
L0000747	0	0.11507E-02	631513.2	4175550.8	158.0	1.83	1.70	1.70	NO	
L0000748	0	0.11507E-02	631513.1	4175554.4	158.0	1.83	1.70	1.70	NO	
L0000749	0	0.11507E-02	631513.0	4175558.1	158.0	1.83	1.70	1.70	NO	
L0000750	0	0.11507E-02	631512.9	4175561.8	158.0	1.83	1.70	1.70	NO	
L0000751	0	0.11507E-02	631512.8	4175565.4	158.0	1.83	1.70	1.70	NO	
L0000752	0	0.11507E-02	631512.8	4175569.1	158.0	1.83	1.70	1.70	NO	
L0000753	0	0.11507E-02	631512.7	4175572.7	158.0	1.83	1.70	1.70	NO	
L0000754	0	0.11507E-02	631512.6	4175576.4	158.0	1.83	1.70	1.70	NO	
L0000755	0	0.11507E-02	631512.5	4175580.0	158.0	1.83	1.70	1.70	NO	
L0000756	0	0.11507E-02	631512.5	4175583.7	158.0	1.83	1.70	1.70	NO	
L0000757	0	0.11507E-02	631512.4	4175587.4	158.0	1.83	1.70	1.70	NO	
L0000758	0	0.11507E-02	631512.3	4175591.0	158.0	1.83	1.70	1.70	NO	
L0000759	0	0.11507E-02	631512.2	4175594.7	158.0	1.83	1.70	1.70	NO	
L0000760	0	0.11507E-02	631512.1	4175598.3	158.0	1.83	1.70	1.70	NO	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000761	0	0.11507E-02	631512.1	4175602.0	158.0	1.83	1.70	1.70	NO	
L0000762	0	0.11507E-02	631512.0	4175605.6	158.0	1.83	1.70	1.70	NO	
L0000763	0	0.11507E-02	631511.9	4175609.3	158.0	1.83	1.70	1.70	NO	
L0000764	0	0.11507E-02	631511.8	4175613.0	158.0	1.83	1.70	1.70	NO	
L0000765	0	0.11507E-02	631511.7	4175616.6	158.0	1.83	1.70	1.70	NO	
L0000766	0	0.11507E-02	631511.7	4175620.3	158.0	1.83	1.70	1.70	NO	
L0000767	0	0.11507E-02	631511.6	4175623.9	158.0	1.83	1.70	1.70	NO	
L0000768	0	0.11507E-02	631511.5	4175627.6	158.0	1.83	1.70	1.70	NO	
L0000769	0	0.11507E-02	631511.4	4175631.2	158.0	1.83	1.70	1.70	NO	
L0000770	0	0.11507E-02	631511.4	4175634.9	158.0	1.83	1.70	1.70	NO	
L0000771	0	0.11507E-02	631511.3	4175638.6	158.0	1.83	1.70	1.70	NO	
L0000772	0	0.11507E-02	631511.2	4175642.2	158.0	1.83	1.70	1.70	NO	
L0000773	0	0.11507E-02	631511.1	4175645.9	158.0	1.83	1.70	1.70	NO	
L0000774	0	0.11507E-02	631511.0	4175649.5	158.0	1.83	1.70	1.70	NO	
L0000775	0	0.11507E-02	631511.0	4175653.2	158.0	1.83	1.70	1.70	NO	
L0000776	0	0.11507E-02	631510.9	4175656.8	158.0	1.83	1.70	1.70	NO	
L0000777	0	0.11507E-02	631510.8	4175660.5	158.0	1.83	1.70	1.70	NO	
L0000778	0	0.11507E-02	631510.7	4175664.1	158.0	1.83	1.70	1.70	NO	
L0000779	0	0.11507E-02	631510.7	4175667.8	158.0	1.83	1.70	1.70	NO	
L0000780	0	0.11507E-02	631510.6	4175671.5	158.0	1.83	1.70	1.70	NO	
L0000781	0	0.11507E-02	631510.5	4175675.1	158.0	1.83	1.70	1.70	NO	
L0000782	0	0.11507E-02	631510.4	4175678.8	158.0	1.83	1.70	1.70	NO	
L0000783	0	0.11507E-02	631510.3	4175682.4	158.0	1.83	1.70	1.70	NO	
L0000784	0	0.11507E-02	631510.3	4175686.1	158.0	1.83	1.70	1.70	NO	
L0000785	0	0.11507E-02	631510.2	4175689.7	158.0	1.83	1.70	1.70	NO	
L0000786	0	0.11507E-02	631510.1	4175693.4	158.0	1.83	1.70	1.70	NO	
L0000787	0	0.11507E-02	631510.0	4175697.1	158.0	1.83	1.70	1.70	NO	
L0000788	0	0.11507E-02	631509.9	4175700.7	158.0	1.83	1.70	1.70	NO	
L0000789	0	0.11507E-02	631509.9	4175704.4	158.0	1.83	1.70	1.70	NO	
L0000790	0	0.11507E-02	631509.8	4175708.0	158.0	1.83	1.70	1.70	NO	
L0000791	0	0.11507E-02	631509.7	4175711.7	158.0	1.83	1.70	1.70	NO	
L0000792	0	0.11507E-02	631509.6	4175715.3	158.0	1.83	1.70	1.70	NO	
L0000793	0	0.11507E-02	631509.6	4175719.0	158.0	1.83	1.70	1.70	NO	
L0000794	0	0.11507E-02	631509.5	4175722.7	158.0	1.83	1.70	1.70	NO	
L0000795	0	0.11507E-02	631509.4	4175726.3	158.0	1.83	1.70	1.70	NO	
L0000796	0	0.11507E-02	631509.3	4175730.0	158.0	1.83	1.70	1.70	NO	
L0000797	0	0.11507E-02	631509.2	4175733.6	158.0	1.83	1.70	1.70	NO	
L0000798	0	0.11507E-02	631509.2	4175737.3	158.0	1.83	1.70	1.70	NO	
L0000799	0	0.11507E-02	631509.1	4175740.9	158.0	1.83	1.70	1.70	NO	
L0000800	0	0.11507E-02	631509.0	4175744.6	158.0	1.83	1.70	1.70	NO	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000801	0	0.11507E-02	631508.9	4175748.3	158.0	1.83	1.70	1.70	NO	
L0000802	0	0.11507E-02	631508.9	4175751.9	158.0	1.83	1.70	1.70	NO	
L0000803	0	0.11507E-02	631508.8	4175755.6	158.0	1.83	1.70	1.70	NO	
L0000804	0	0.11507E-02	631508.7	4175759.2	158.0	1.83	1.70	1.70	NO	
L0000805	0	0.11507E-02	631508.6	4175762.9	158.0	1.83	1.70	1.70	NO	
L0000806	0	0.11507E-02	631508.5	4175766.5	158.0	1.83	1.70	1.70	NO	
L0000807	0	0.11507E-02	631508.5	4175770.2	158.0	1.83	1.70	1.70	NO	
L0000808	0	0.11507E-02	631508.4	4175773.9	158.0	1.83	1.70	1.70	NO	
L0000809	0	0.11507E-02	631508.3	4175777.5	158.0	1.83	1.70	1.70	NO	
L0000810	0	0.11507E-02	631508.2	4175781.2	158.0	1.83	1.70	1.70	NO	
L0000811	0	0.11507E-02	631508.1	4175784.8	158.0	1.83	1.70	1.70	NO	
L0000812	0	0.11507E-02	631508.1	4175788.5	158.0	1.83	1.70	1.70	NO	
L0000813	0	0.11507E-02	631508.0	4175792.1	158.0	1.83	1.70	1.70	NO	
L0000814	0	0.11507E-02	631507.9	4175795.8	158.0	1.83	1.70	1.70	NO	
L0000815	0	0.11507E-02	631507.8	4175799.4	158.0	1.83	1.70	1.70	NO	
L0000816	0	0.11507E-02	631507.8	4175803.1	158.0	1.83	1.70	1.70	NO	
L0000817	0	0.11507E-02	631507.7	4175806.8	158.0	1.83	1.70	1.70	NO	
L0000818	0	0.11507E-02	631507.6	4175810.4	158.0	1.83	1.70	1.70	NO	
L0000819	0	0.11507E-02	631507.5	4175814.1	158.0	1.83	1.70	1.70	NO	
L0000820	0	0.11507E-02	631507.4	4175817.7	158.0	1.83	1.70	1.70	NO	
L0000821	0	0.11507E-02	631507.4	4175821.4	158.0	1.83	1.70	1.70	NO	
L0000822	0	0.11507E-02	631507.3	4175825.0	158.0	1.83	1.70	1.70	NO	
L0000823	0	0.11507E-02	631507.2	4175828.7	158.0	1.83	1.70	1.70	NO	
L0000824	0	0.11507E-02	631507.1	4175832.4	158.0	1.83	1.70	1.70	NO	
L0000825	0	0.11507E-02	631507.1	4175836.0	158.0	1.83	1.70	1.70	NO	
L0000826	0	0.11507E-02	631507.0	4175839.7	158.0	1.83	1.70	1.70	NO	
L0000827	0	0.11507E-02	631506.9	4175843.3	158.0	1.83	1.70	1.70	NO	
L0000828	0	0.11507E-02	631506.8	4175847.0	158.0	1.83	1.70	1.70	NO	
L0000829	0	0.11507E-02	631506.7	4175850.6	158.0	1.83	1.70	1.70	NO	
L0000830	0	0.11507E-02	631506.7	4175854.3	158.0	1.83	1.70	1.70	NO	
L0000831	0	0.11507E-02	631506.6	4175858.0	158.0	1.83	1.70	1.70	NO	
L0000832	0	0.11507E-02	631506.5	4175861.6	158.0	1.83	1.70	1.70	NO	
L0000833	0	0.11507E-02	631506.4	4175865.3	158.0	1.83	1.70	1.70	NO	
L0000834	0	0.11507E-02	631506.3	4175868.9	158.0	1.83	1.70	1.70	NO	
L0000835	0	0.11507E-02	631505.1	4175872.3	158.0	1.83	1.70	1.70	NO	
L0000836	0	0.11507E-02	631503.3	4175875.5	158.0	1.83	1.70	1.70	NO	
L0000837	0	0.11507E-02	631501.5	4175878.6	158.0	1.83	1.70	1.70	NO	
L0000838	0	0.11507E-02	631499.7	4175881.8	158.0	1.83	1.70	1.70	NO	
L0000839	0	0.11507E-02	631497.9	4175885.0	158.0	1.83	1.70	1.70	NO	
L0000840	0	0.11507E-02	631496.1	4175888.2	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

SOURCE ID	PART. CATS.	(GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	SOURCE BY	SCALAR VARY
L0000841	0	0.11507E-02	631494.3	4175891.4	158.0	1.83	1.70	1.70	NO	
L0000842	0	0.11507E-02	631492.5	4175894.6	158.0	1.83	1.70	1.70	NO	
L0000843	0	0.11507E-02	631490.8	4175897.8	158.0	1.83	1.70	1.70	NO	
L0000844	0	0.11507E-02	631489.0	4175901.0	158.0	1.83	1.70	1.70	NO	
L0000845	0	0.11507E-02	631487.2	4175904.1	158.0	1.83	1.70	1.70	NO	
L0000846	0	0.11507E-02	631485.4	4175907.3	158.0	1.83	1.70	1.70	NO	
L0000847	0	0.11507E-02	631483.6	4175910.5	158.0	1.83	1.70	1.70	NO	
L0000848	0	0.11507E-02	631481.8	4175913.7	158.0	1.83	1.70	1.70	NO	
L0000849	0	0.11507E-02	631480.0	4175916.9	158.0	1.83	1.70	1.70	NO	
L0000850	0	0.11507E-02	631478.2	4175920.1	158.0	1.83	1.70	1.70	NO	
L0000851	0	0.11507E-02	631476.4	4175923.3	158.0	1.83	1.70	1.70	NO	
L0000852	0	0.11507E-02	631474.6	4175926.5	158.0	1.83	1.70	1.70	NO	
L0000853	0	0.11507E-02	631472.8	4175929.6	158.0	1.83	1.70	1.70	NO	
L0000854	0	0.11507E-02	631471.0	4175932.8	158.0	1.83	1.70	1.70	NO	
L0000855	0	0.11507E-02	631469.2	4175936.0	158.0	1.83	1.70	1.70	NO	
L0000856	0	0.11507E-02	631467.4	4175939.2	158.0	1.83	1.70	1.70	NO	
L0000857	0	0.11507E-02	631465.6	4175942.4	158.0	1.83	1.70	1.70	NO	
L0000858	0	0.11507E-02	631463.9	4175945.6	158.0	1.83	1.70	1.70	NO	
L0000859	0	0.11507E-02	631462.5	4175948.9	158.0	1.83	1.70	1.70	NO	
L0000860	0	0.11507E-02	631462.5	4175952.5	158.0	1.83	1.70	1.70	NO	
L0000861	0	0.11507E-02	631462.5	4175956.2	158.0	1.83	1.70	1.70	NO	
L0000862	0	0.11507E-02	631462.5	4175959.8	158.0	1.83	1.70	1.70	NO	
L0000863	0	0.11507E-02	631462.5	4175963.5	158.0	1.83	1.70	1.70	NO	
L0000864	0	0.11507E-02	631462.5	4175967.2	158.0	1.83	1.70	1.70	NO	
L0000865	0	0.11507E-02	631462.5	4175970.8	158.0	1.83	1.70	1.70	NO	
L0000866	0	0.11507E-02	631462.5	4175974.5	158.0	1.83	1.70	1.70	NO	
L0000867	0	0.11507E-02	631462.5	4175978.1	158.0	1.83	1.70	1.70	NO	
L0000868	0	0.11507E-02	631462.5	4175981.8	158.0	1.83	1.70	1.70	NO	
L0000869	0	0.11507E-02	631462.5	4175985.5	158.0	1.83	1.70	1.70	NO	
L0000870	0	0.32051E-02	631459.4	4175990.7	158.0	1.83	1.70	1.70	NO	
L0000871	0	0.32051E-02	631455.8	4175990.7	158.0	1.83	1.70	1.70	NO	
L0000872	0	0.32051E-02	631452.1	4175990.8	158.0	1.83	1.70	1.70	NO	
L0000873	0	0.32051E-02	631448.4	4175990.8	158.0	1.83	1.70	1.70	NO	
L0000874	0	0.32051E-02	631444.8	4175990.8	158.0	1.83	1.70	1.70	NO	
L0000875	0	0.32051E-02	631441.1	4175990.8	158.0	1.83	1.70	1.70	NO	
L0000876	0	0.32051E-02	631437.5	4175990.9	158.0	1.83	1.70	1.70	NO	
L0000877	0	0.32051E-02	631433.8	4175990.9	158.0	1.83	1.70	1.70	NO	
L0000878	0	0.32051E-02	631430.1	4175990.9	158.0	1.83	1.70	1.70	NO	
L0000879	0	0.32051E-02	631426.5	4175990.9	158.0	1.83	1.70	1.70	NO	
L0000880	0	0.32051E-02	631422.8	4175991.0	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	PART. CATS.	(GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	SOURCE BY	SCALAR VARY

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L0000881	0	0.32051E-02	631419.2	4175991.0	158.0	1.83	1.70	1.70	NO
L0000882	0	0.32051E-02	631415.5	4175991.0	158.0	1.83	1.70	1.70	NO
L0000883	0	0.32051E-02	631411.9	4175991.0	158.0	1.83	1.70	1.70	NO
L0000884	0	0.32051E-02	631408.2	4175991.1	158.0	1.83	1.70	1.70	NO
L0000885	0	0.32051E-02	631404.5	4175991.1	158.0	1.83	1.70	1.70	NO
L0000886	0	0.32051E-02	631400.9	4175991.1	158.0	1.83	1.70	1.70	NO
L0000887	0	0.32051E-02	631397.2	4175991.1	158.0	1.83	1.70	1.70	NO
L0000888	0	0.32051E-02	631393.6	4175991.1	158.0	1.83	1.70	1.70	NO
L0000889	0	0.32051E-02	631389.9	4175991.2	158.0	1.83	1.70	1.70	NO
L0000890	0	0.32051E-02	631386.3	4175991.2	158.0	1.83	1.70	1.70	NO
L0000891	0	0.32051E-02	631382.6	4175991.2	158.0	1.83	1.70	1.70	NO
L0000892	0	0.32051E-02	631378.9	4175991.2	158.0	1.83	1.70	1.70	NO
L0000893	0	0.32051E-02	631375.3	4175991.3	158.0	1.83	1.70	1.70	NO
L0000894	0	0.32051E-02	631371.6	4175991.3	158.0	1.83	1.70	1.70	NO
L0000895	0	0.32051E-02	631368.0	4175991.3	158.0	1.83	1.70	1.70	NO
L0000896	0	0.32051E-02	631364.3	4175991.3	158.0	1.83	1.70	1.70	NO
L0000897	0	0.32051E-02	631360.7	4175991.4	158.0	1.83	1.70	1.70	NO
L0000898	0	0.32051E-02	631357.0	4175991.4	158.0	1.83	1.70	1.70	NO
L0000899	0	0.32051E-02	631353.3	4175991.4	158.0	1.83	1.70	1.70	NO
L0000900	0	0.32051E-02	631349.7	4175991.4	158.0	1.83	1.70	1.70	NO
L0000901	0	0.32051E-02	631346.0	4175991.5	158.0	1.83	1.70	1.70	NO
L0000902	0	0.32051E-02	631342.4	4175991.5	158.0	1.83	1.70	1.70	NO
L0000903	0	0.32051E-02	631338.7	4175991.5	158.0	1.83	1.70	1.70	NO
L0000904	0	0.32051E-02	631335.1	4175991.5	158.0	1.83	1.70	1.70	NO
L0000905	0	0.32051E-02	631331.4	4175991.5	158.0	1.83	1.70	1.70	NO
L0000906	0	0.32051E-02	631327.7	4175991.6	158.0	1.83	1.70	1.70	NO
L0000907	0	0.32051E-02	631324.1	4175991.6	158.0	1.83	1.70	1.70	NO
L0000908	0	0.32051E-02	631320.4	4175991.6	158.0	1.83	1.70	1.70	NO
L0000909	0	0.32051E-02	631316.8	4175991.6	158.0	1.83	1.70	1.70	NO
L0000910	0	0.32051E-02	631313.1	4175991.7	158.0	1.83	1.70	1.70	NO
L0000911	0	0.32051E-02	631309.5	4175991.7	158.0	1.83	1.70	1.70	NO
L0000912	0	0.32051E-02	631305.8	4175991.7	158.0	1.83	1.70	1.70	NO
L0000913	0	0.32051E-02	631302.1	4175991.7	158.0	1.83	1.70	1.70	NO
L0000914	0	0.32051E-02	631298.5	4175991.8	158.0	1.83	1.70	1.70	NO
L0000915	0	0.32051E-02	631294.8	4175991.8	158.0	1.83	1.70	1.70	NO
L0000916	0	0.32051E-02	631291.2	4175991.8	158.0	1.83	1.70	1.70	NO
L0000917	0	0.32051E-02	631287.5	4175991.8	158.0	1.83	1.70	1.70	NO
L0000918	0	0.32051E-02	631283.8	4175991.8	158.0	1.83	1.70	1.70	NO
L0000919	0	0.32051E-02	631280.2	4175991.9	158.0	1.83	1.70	1.70	NO
L0000920	0	0.32051E-02	631276.5	4175991.9	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

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L0000921	0	0.32051E-02	631272.9	4175991.9	158.0	1.83	1.70	1.70	NO
L0000922	0	0.32051E-02	631269.2	4175991.9	158.0	1.83	1.70	1.70	NO
L0000923	0	0.32051E-02	631265.6	4175992.0	158.0	1.83	1.70	1.70	NO
L0000924	0	0.32051E-02	631261.9	4175992.0	158.0	1.83	1.70	1.70	NO
L0000925	0	0.32051E-02	631258.2	4175992.0	158.0	1.83	1.70	1.70	NO
L0000926	0	0.32051E-02	631254.6	4175992.0	158.0	1.83	1.70	1.70	NO
L0000927	0	0.32051E-02	631250.9	4175992.1	158.0	1.83	1.70	1.70	NO
L0000928	0	0.32051E-02	631247.3	4175992.1	158.0	1.83	1.70	1.70	NO
L0000929	0	0.32051E-02	631243.6	4175992.1	158.0	1.83	1.70	1.70	NO
L0000930	0	0.32051E-02	631240.0	4175992.1	158.0	1.83	1.70	1.70	NO
L0000931	0	0.32051E-02	631236.3	4175992.2	158.0	1.83	1.70	1.70	NO
L0000932	0	0.32051E-02	631232.6	4175992.2	158.0	1.83	1.70	1.70	NO
L0000933	0	0.32051E-02	631229.0	4175992.2	158.0	1.83	1.70	1.70	NO
L0000934	0	0.32051E-02	631225.3	4175992.2	158.0	1.83	1.70	1.70	NO
L0000935	0	0.32051E-02	631221.7	4175992.2	158.0	1.83	1.70	1.70	NO
L0000936	0	0.32051E-02	631218.0	4175992.3	158.0	1.83	1.70	1.70	NO
L0000937	0	0.32051E-02	631214.4	4175992.3	158.0	1.83	1.70	1.70	NO
L0000938	0	0.32051E-02	631210.7	4175992.3	158.0	1.83	1.70	1.70	NO
L0000939	0	0.32051E-02	631207.0	4175992.3	158.0	1.83	1.70	1.70	NO
L0000940	0	0.32051E-02	631203.4	4175992.4	158.0	1.83	1.70	1.70	NO
L0000941	0	0.32051E-02	631199.7	4175992.4	158.0	1.83	1.70	1.70	NO
L0000942	0	0.32051E-02	631196.1	4175992.4	158.0	1.83	1.70	1.70	NO
L0000943	0	0.32051E-02	631192.4	4175992.4	158.0	1.83	1.70	1.70	NO
L0000944	0	0.32051E-02	631188.8	4175992.5	158.0	1.83	1.70	1.70	NO
L0000945	0	0.32051E-02	631185.1	4175992.5	158.0	1.83	1.70	1.70	NO
L0000946	0	0.32051E-02	631181.4	4175992.5	158.0	1.83	1.70	1.70	NO
L0000947	0	0.32051E-02	631177.8	4175992.5	158.0	1.83	1.70	1.70	NO
L0000948	0	0.32051E-02	631174.1	4175992.6	158.0	1.83	1.70	1.70	NO
L0000949	0	0.32051E-02	631170.5	4175992.6	158.0	1.83	1.70	1.70	NO
L0000950	0	0.32051E-02	631166.8	4175992.6	158.0	1.83	1.70	1.70	NO
L0000951	0	0.32051E-02	631163.2	4175992.6	158.0	1.83	1.70	1.70	NO
L0000952	0	0.32051E-02	631159.5	4175992.6	158.0	1.83	1.70	1.70	NO
L0000953	0	0.32051E-02	631155.8	4175992.7	158.0	1.83	1.70	1.70	NO
L0000954	0	0.32051E-02	631152.2	4175992.7	158.0	1.83	1.70	1.70	NO
L0000955	0	0.32051E-02	631148.5	4175992.7	158.0	1.83	1.70	1.70	NO
L0000956	0	0.32051E-02	631144.9	4175992.7	158.0	1.83	1.70	1.70	NO
L0000957	0	0.32051E-02	631141.2	4175992.8	158.0	1.83	1.70	1.70	NO
L0000958	0	0.32051E-02	631137.5	4175992.8	158.0	1.83	1.70	1.70	NO
L0000959	0	0.32051E-02	631133.9	4175992.8	158.0	1.83	1.70	1.70	NO
L0000960	0	0.32051E-02	631130.2	4175992.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0000961	0	0.32051E-02	631126.6	4175992.9	158.0	1.83	1.70	1.70	NO	
L0000962	0	0.32051E-02	631122.9	4175992.9	158.0	1.83	1.70	1.70	NO	

L0000963	0	0.32051E-02	631119.3	4175992.9	158.0	1.83	1.70	1.70	NO
L0000964	0	0.32051E-02	631115.6	4175992.9	158.0	1.83	1.70	1.70	NO
L0000965	0	0.32051E-02	631111.9	4175992.9	158.0	1.83	1.70	1.70	NO
L0000966	0	0.32051E-02	631108.3	4175993.0	158.0	1.83	1.70	1.70	NO
L0000967	0	0.32051E-02	631104.6	4175993.0	158.0	1.83	1.70	1.70	NO
L0000968	0	0.32051E-02	631101.0	4175993.0	158.0	1.83	1.70	1.70	NO
L0000969	0	0.32051E-02	631097.3	4175993.0	158.0	1.83	1.70	1.70	NO
L0000970	0	0.32051E-02	631093.7	4175993.1	158.0	1.83	1.70	1.70	NO
L0000971	0	0.32051E-02	631090.0	4175993.1	158.0	1.83	1.70	1.70	NO
L0000972	0	0.32051E-02	631086.3	4175993.1	158.0	1.83	1.70	1.70	NO
L0000973	0	0.32051E-02	631082.7	4175993.1	158.0	1.83	1.70	1.70	NO
L0000974	0	0.32051E-02	631079.0	4175993.2	158.0	1.83	1.70	1.70	NO
L0000975	0	0.32051E-02	631075.4	4175993.2	158.0	1.83	1.70	1.70	NO
L0000976	0	0.32051E-02	631071.7	4175993.2	158.0	1.83	1.70	1.70	NO
L0000977	0	0.32051E-02	631068.1	4175993.2	158.0	1.83	1.70	1.70	NO
L0000978	0	0.32051E-02	631064.4	4175993.3	158.0	1.83	1.70	1.70	NO
L0000979	0	0.32051E-02	631060.7	4175993.3	158.0	1.83	1.70	1.70	NO
L0000980	0	0.32051E-02	631057.1	4175993.3	158.0	1.83	1.70	1.70	NO
L0000981	0	0.32051E-02	631053.4	4175993.3	158.0	1.83	1.70	1.70	NO
L0000982	0	0.32051E-02	631049.8	4175993.3	158.0	1.83	1.70	1.70	NO
L0000983	0	0.32051E-02	631046.1	4175993.4	158.0	1.83	1.70	1.70	NO
L0000984	0	0.32051E-02	631042.5	4175993.4	158.0	1.83	1.70	1.70	NO
L0000985	0	0.32051E-02	631038.8	4175993.4	158.0	1.83	1.70	1.70	NO
L0000986	0	0.32051E-02	631035.1	4175993.4	158.0	1.83	1.70	1.70	NO
L0000987	0	0.32051E-02	631031.5	4175993.5	158.0	1.83	1.70	1.70	NO
L0000988	0	0.32051E-02	631027.8	4175993.5	158.0	1.83	1.70	1.70	NO
L0000989	0	0.32051E-02	631024.2	4175993.5	158.0	1.83	1.70	1.70	NO
L0000990	0	0.32051E-02	631020.5	4175993.5	158.0	1.83	1.70	1.70	NO
L0000991	0	0.32051E-02	631016.8	4175993.6	158.0	1.83	1.70	1.70	NO
L0000992	0	0.32051E-02	631013.2	4175993.6	158.0	1.83	1.70	1.70	NO
L0000993	0	0.32051E-02	631009.5	4175993.6	158.0	1.83	1.70	1.70	NO
L0000994	0	0.32051E-02	631005.9	4175993.6	158.0	1.83	1.70	1.70	NO
L0000995	0	0.32051E-02	631002.2	4175993.6	158.0	1.83	1.70	1.70	NO
L0000996	0	0.32051E-02	630998.6	4175993.7	158.0	1.83	1.70	1.70	NO
L0000997	0	0.32051E-02	630994.9	4175993.7	158.0	1.83	1.70	1.70	NO
L0000998	0	0.32051E-02	630991.2	4175993.7	158.0	1.83	1.70	1.70	NO
L0000999	0	0.32051E-02	630987.6	4175993.7	158.0	1.83	1.70	1.70	NO
L0001000	0	0.32051E-02	630983.9	4175993.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001001	0	0.32051E-02	630980.3	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001002	0	0.32051E-02	630976.6	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001003	0	0.32051E-02	630973.0	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001004	0	0.32051E-02	630969.3	4175993.9	158.0	1.83	1.70	1.70	NO	

L0001005	0	0.32051E-02	630965.6	4175993.9	158.0	1.83	1.70	1.70	NO
L0001006	0	0.32051E-02	630962.0	4175993.9	158.0	1.83	1.70	1.70	NO
L0001007	0	0.32051E-02	630958.3	4175993.9	158.0	1.83	1.70	1.70	NO
L0001008	0	0.32051E-02	630954.7	4175994.0	158.0	1.83	1.70	1.70	NO
L0001009	0	0.32051E-02	630951.0	4175994.0	158.0	1.83	1.70	1.70	NO
L0001010	0	0.32051E-02	630947.4	4175994.0	158.0	1.83	1.70	1.70	NO
L0001011	0	0.32051E-02	630943.7	4175994.0	158.0	1.83	1.70	1.70	NO
L0001012	0	0.32051E-02	630940.0	4175994.0	158.0	1.83	1.70	1.70	NO
L0001013	0	0.32051E-02	630936.4	4175994.1	158.0	1.83	1.70	1.70	NO
L0001014	0	0.32051E-02	630932.7	4175994.1	158.0	1.83	1.70	1.70	NO
L0001015	0	0.32051E-02	630929.1	4175994.1	158.0	1.83	1.70	1.70	NO
L0001016	0	0.32051E-02	630925.4	4175994.1	158.0	1.83	1.70	1.70	NO
L0001017	0	0.32051E-02	630921.8	4175994.2	158.0	1.83	1.70	1.70	NO
L0001018	0	0.32051E-02	630918.1	4175994.2	158.0	1.83	1.70	1.70	NO
L0001019	0	0.32051E-02	630914.4	4175994.2	158.0	1.83	1.70	1.70	NO
L0001020	0	0.32051E-02	630910.8	4175994.2	158.0	1.83	1.70	1.70	NO
L0001021	0	0.32051E-02	630907.1	4175994.3	158.0	1.83	1.70	1.70	NO
L0001022	0	0.32051E-02	630903.5	4175994.3	158.0	1.83	1.70	1.70	NO
L0001023	0	0.32051E-02	630899.8	4175994.3	158.0	1.83	1.70	1.70	NO
L0001024	0	0.32051E-02	630896.2	4175994.3	158.0	1.83	1.70	1.70	NO
L0001025	0	0.32051E-02	630892.5	4175994.4	158.0	1.83	1.70	1.70	NO
L0001026	0	0.32051E-02	630888.8	4175994.4	158.0	1.83	1.70	1.70	NO
L0001027	0	0.32051E-02	630885.2	4175994.4	158.0	1.83	1.70	1.70	NO
L0001028	0	0.32051E-02	630881.5	4175994.4	158.0	1.83	1.70	1.70	NO
L0001029	0	0.32051E-02	630877.9	4175994.4	158.0	1.83	1.70	1.70	NO
L0001030	0	0.32051E-02	630874.2	4175994.5	158.0	1.83	1.70	1.70	NO
L0001031	0	0.32051E-02	630870.5	4175994.5	158.0	1.83	1.70	1.70	NO
L0001032	0	0.32051E-02	630866.9	4175994.5	158.0	1.83	1.70	1.70	NO
L0001033	0	0.32051E-02	630863.2	4175994.5	158.0	1.83	1.70	1.70	NO
L0001034	0	0.32051E-02	630859.6	4175994.6	158.0	1.83	1.70	1.70	NO
L0001035	0	0.32051E-02	630855.9	4175994.6	158.0	1.83	1.70	1.70	NO
L0001036	0	0.32051E-02	630852.3	4175994.6	158.0	1.83	1.70	1.70	NO
L0001037	0	0.32051E-02	630848.6	4175994.6	158.0	1.83	1.70	1.70	NO
L0001038	0	0.32051E-02	630844.9	4175994.7	158.0	1.83	1.70	1.70	NO
L0001039	0	0.32051E-02	630841.3	4175994.7	158.0	1.83	1.70	1.70	NO
L0001040	0	0.32051E-02	630837.6	4175994.7	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001041	0	0.32051E-02	630834.0	4175994.7	158.0	1.83	1.70	1.70	NO	
L0001042	0	0.32051E-02	630830.3	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001043	0	0.32051E-02	630826.7	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001044	0	0.32051E-02	630823.0	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001045	0	0.32051E-02	630819.3	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001046	0	0.32051E-02	630815.7	4175994.8	158.0	1.83	1.70	1.70	NO	

L0001047	0	0.32051E-02	630812.0	4175994.9	158.0	1.83	1.70	1.70	NO
L0001048	0	0.32051E-02	630808.4	4175994.9	158.0	1.83	1.70	1.70	NO
L0001049	0	0.32051E-02	630804.7	4175994.9	158.0	1.83	1.70	1.70	NO
L0001050	0	0.32051E-02	630801.1	4175994.9	158.0	1.83	1.70	1.70	NO
L0001051	0	0.32051E-02	630797.4	4175995.0	158.0	1.83	1.70	1.70	NO
L0001052	0	0.32051E-02	630793.7	4175995.0	158.0	1.83	1.70	1.70	NO
L0001053	0	0.32051E-02	630790.1	4175995.0	158.0	1.83	1.70	1.70	NO
L0001054	0	0.32051E-02	630786.4	4175995.0	158.0	1.83	1.70	1.70	NO
L0001055	0	0.32051E-02	630782.8	4175995.1	158.0	1.83	1.70	1.70	NO
L0001056	0	0.32051E-02	630779.1	4175995.1	158.0	1.83	1.70	1.70	NO
L0001057	0	0.32051E-02	630775.5	4175995.1	158.0	1.83	1.70	1.70	NO
L0001058	0	0.32051E-02	630771.8	4175995.1	158.0	1.83	1.70	1.70	NO
L0001059	0	0.32051E-02	630768.1	4175995.1	158.0	1.83	1.70	1.70	NO
L0001060	0	0.32051E-02	630764.5	4175995.2	158.0	1.83	1.70	1.70	NO
L0001061	0	0.32051E-02	630760.8	4175995.2	158.0	1.83	1.70	1.70	NO
L0001062	0	0.32051E-02	630757.2	4175995.2	158.0	1.83	1.70	1.70	NO
L0001063	0	0.32051E-02	630753.5	4175995.2	158.0	1.83	1.70	1.70	NO
L0001064	0	0.32051E-02	630749.9	4175995.3	158.0	1.83	1.70	1.70	NO
L0001065	0	0.32051E-02	630746.2	4175995.3	158.0	1.83	1.70	1.70	NO
L0001066	0	0.32051E-02	630742.5	4175995.3	158.0	1.83	1.70	1.70	NO
L0001067	0	0.32051E-02	630738.9	4175995.3	158.0	1.83	1.70	1.70	NO
L0001068	0	0.32051E-02	630735.2	4175995.4	158.0	1.83	1.70	1.70	NO
L0001069	0	0.32051E-02	630731.6	4175995.4	158.0	1.83	1.70	1.70	NO
L0001070	0	0.32051E-02	630727.9	4175995.4	158.0	1.83	1.70	1.70	NO
L0001071	0	0.32051E-02	630724.2	4175995.4	158.0	1.83	1.70	1.70	NO
L0001072	0	0.32051E-02	630720.6	4175995.5	158.0	1.83	1.70	1.70	NO
L0001073	0	0.32051E-02	630716.9	4175995.5	158.0	1.83	1.70	1.70	NO
L0001074	0	0.32051E-02	630713.3	4175995.5	158.0	1.83	1.70	1.70	NO
L0001075	0	0.32051E-02	630709.6	4175995.5	158.0	1.83	1.70	1.70	NO
L0001076	0	0.32051E-02	630706.0	4175995.5	158.0	1.83	1.70	1.70	NO
L0001077	0	0.32051E-02	630702.3	4175995.6	158.0	1.83	1.70	1.70	NO
L0001078	0	0.32051E-02	630698.6	4175995.6	158.0	1.83	1.70	1.70	NO
L0001079	0	0.32051E-02	630695.0	4175995.6	158.0	1.83	1.70	1.70	NO
L0001080	0	0.32051E-02	630691.3	4175995.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001081	0	0.32051E-02	630687.7	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001082	0	0.32051E-02	630684.0	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001083	0	0.32051E-02	630680.4	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001084	0	0.32051E-02	630676.7	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001085	0	0.32051E-02	630673.0	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001086	0	0.32051E-02	630669.4	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001087	0	0.32051E-02	630665.7	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001088	0	0.32051E-02	630662.1	4175995.8	158.0	1.83	1.70	1.70	NO	

L0001089	0	0.32051E-02	630658.4	4175995.8	158.0	1.83	1.70	1.70	NO
L0001090	0	0.32051E-02	630654.8	4175995.9	158.0	1.83	1.70	1.70	NO
L0001091	0	0.32051E-02	630651.1	4175995.9	158.0	1.83	1.70	1.70	NO
L0001092	0	0.32051E-02	630647.4	4175995.9	158.0	1.83	1.70	1.70	NO
L0001093	0	0.32051E-02	630643.8	4175995.9	158.0	1.83	1.70	1.70	NO
L0001094	0	0.32051E-02	630640.1	4175996.0	158.0	1.83	1.70	1.70	NO
L0001095	0	0.32051E-02	630636.5	4175996.0	158.0	1.83	1.70	1.70	NO
L0001096	0	0.32051E-02	630632.8	4175996.0	158.0	1.83	1.70	1.70	NO
L0001097	0	0.32051E-02	630629.2	4175996.0	158.0	1.83	1.70	1.70	NO
L0001098	0	0.32051E-02	630625.5	4175996.1	158.0	1.83	1.70	1.70	NO
L0001099	0	0.32051E-02	630621.8	4175996.1	158.0	1.83	1.70	1.70	NO
L0001100	0	0.32051E-02	630618.2	4175996.1	158.0	1.83	1.70	1.70	NO
L0001101	0	0.32051E-02	630614.5	4175996.1	158.0	1.83	1.70	1.70	NO
L0001102	0	0.32051E-02	630610.9	4175996.2	158.0	1.83	1.70	1.70	NO
L0001103	0	0.32051E-02	630607.2	4175996.2	158.0	1.83	1.70	1.70	NO
L0001104	0	0.32051E-02	630603.5	4175996.2	158.0	1.83	1.70	1.70	NO
L0001105	0	0.32051E-02	630599.9	4175996.2	158.0	1.83	1.70	1.70	NO
L0001106	0	0.32051E-02	630596.2	4175996.2	158.0	1.83	1.70	1.70	NO
L0001107	0	0.32051E-02	630592.6	4175996.3	158.0	1.83	1.70	1.70	NO
L0001108	0	0.32051E-02	630588.9	4175996.3	158.0	1.83	1.70	1.70	NO
L0001109	0	0.32051E-02	630585.3	4175996.3	158.0	1.83	1.70	1.70	NO
L0001110	0	0.32051E-02	630581.6	4175996.3	158.0	1.83	1.70	1.70	NO
L0001111	0	0.32051E-02	630577.9	4175996.4	158.0	1.83	1.70	1.70	NO
L0001112	0	0.32051E-02	630574.3	4175996.4	158.0	1.83	1.70	1.70	NO
L0001113	0	0.32051E-02	630570.6	4175996.4	158.0	1.83	1.70	1.70	NO
L0001114	0	0.32051E-02	630567.0	4175996.4	158.0	1.83	1.70	1.70	NO
L0001115	0	0.32051E-02	630563.3	4175996.5	158.0	1.83	1.70	1.70	NO
L0001116	0	0.32051E-02	630559.7	4175996.5	158.0	1.83	1.70	1.70	NO
L0001117	0	0.32051E-02	630556.0	4175996.5	158.0	1.83	1.70	1.70	NO
L0001118	0	0.32051E-02	630552.3	4175996.5	158.0	1.83	1.70	1.70	NO
L0001119	0	0.32051E-02	630548.7	4175996.6	158.0	1.83	1.70	1.70	NO
L0001120	0	0.32051E-02	630545.0	4175996.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001121	0	0.32051E-02	630541.4	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001122	0	0.32051E-02	630537.7	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001123	0	0.32051E-02	630534.1	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001124	0	0.32051E-02	630530.4	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001125	0	0.32051E-02	630526.7	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001126	0	0.32051E-02	630523.1	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001127	0	0.32051E-02	630519.4	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001128	0	0.32051E-02	630515.8	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001129	0	0.32051E-02	630512.1	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001130	0	0.32051E-02	630508.5	4175996.8	158.0	1.83	1.70	1.70	NO	

L0001131	0	0.32051E-02	630504.8	4175996.8	158.0	1.83	1.70	1.70	NO
L0001132	0	0.32051E-02	630501.1	4175996.9	158.0	1.83	1.70	1.70	NO
L0001133	0	0.32051E-02	630497.5	4175996.9	158.0	1.83	1.70	1.70	NO
L0001134	0	0.32051E-02	630493.8	4175996.9	158.0	1.83	1.70	1.70	NO
L0001135	0	0.32051E-02	630490.2	4175996.9	158.0	1.83	1.70	1.70	NO
L0001136	0	0.32051E-02	630486.5	4175996.9	158.0	1.83	1.70	1.70	NO
L0001137	0	0.32051E-02	630482.9	4175997.0	158.0	1.83	1.70	1.70	NO
L0001138	0	0.32051E-02	630479.2	4175997.0	158.0	1.83	1.70	1.70	NO
L0001139	0	0.32051E-02	630475.5	4175997.0	158.0	1.83	1.70	1.70	NO
L0001140	0	0.32051E-02	630471.9	4175997.0	158.0	1.83	1.70	1.70	NO
L0001141	0	0.32051E-02	630468.2	4175997.1	158.0	1.83	1.70	1.70	NO
L0001142	0	0.32051E-02	630464.6	4175997.1	158.0	1.83	1.70	1.70	NO
L0001143	0	0.32051E-02	630460.9	4175997.1	158.0	1.83	1.70	1.70	NO
L0001144	0	0.32051E-02	630457.2	4175997.1	158.0	1.83	1.70	1.70	NO
L0001145	0	0.32051E-02	630453.6	4175997.2	158.0	1.83	1.70	1.70	NO
L0001146	0	0.32051E-02	630449.9	4175997.2	158.0	1.83	1.70	1.70	NO
L0001147	0	0.32051E-02	630446.3	4175997.2	158.0	1.83	1.70	1.70	NO
L0001148	0	0.32051E-02	630442.6	4175997.2	158.0	1.83	1.70	1.70	NO
L0001149	0	0.32051E-02	630439.0	4175997.3	158.0	1.83	1.70	1.70	NO
L0001150	0	0.32051E-02	630435.3	4175997.3	158.0	1.83	1.70	1.70	NO
L0001151	0	0.32051E-02	630431.6	4175997.3	158.0	1.83	1.70	1.70	NO
L0001152	0	0.32051E-02	630428.0	4175997.3	158.0	1.83	1.70	1.70	NO
L0001153	0	0.32051E-02	630424.3	4175997.3	158.0	1.83	1.70	1.70	NO
L0001154	0	0.32051E-02	630420.7	4175997.4	158.0	1.83	1.70	1.70	NO
L0001155	0	0.32051E-02	630417.0	4175997.4	158.0	1.83	1.70	1.70	NO
L0001156	0	0.32051E-02	630413.4	4175997.4	158.0	1.83	1.70	1.70	NO
L0001157	0	0.32051E-02	630409.7	4175997.4	158.0	1.83	1.70	1.70	NO
L0001158	0	0.32051E-02	630406.0	4175997.5	158.0	1.83	1.70	1.70	NO
L0001159	0	0.32051E-02	630402.4	4175997.5	158.0	1.83	1.70	1.70	NO
L0001160	0	0.32051E-02	630398.7	4175997.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001161	0	0.32051E-02	630395.1	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001162	0	0.32051E-02	630391.4	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001163	0	0.32051E-02	630387.8	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001164	0	0.32051E-02	630384.1	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001165	0	0.32051E-02	630380.4	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001166	0	0.32051E-02	630376.8	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001167	0	0.32051E-02	630373.1	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001168	0	0.32051E-02	630369.5	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001169	0	0.32051E-02	630365.8	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001170	0	0.32051E-02	630362.2	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001171	0	0.32051E-02	630358.5	4175997.8	158.0	1.83	1.70	1.70	NO	
L0001172	0	0.32051E-02	630354.8	4175997.8	158.0	1.83	1.70	1.70	NO	

L0001173	0	0.32051E-02	630351.2	4175997.8	158.0	1.83	1.70	1.70	NO
L0001174	0	0.32051E-02	630347.5	4175997.8	158.0	1.83	1.70	1.70	NO
L0001175	0	0.32051E-02	630343.9	4175997.9	158.0	1.83	1.70	1.70	NO
L0001176	0	0.32051E-02	630340.2	4175997.9	158.0	1.83	1.70	1.70	NO
L0001177	0	0.32051E-02	630336.5	4175997.9	158.0	1.83	1.70	1.70	NO
L0001178	0	0.32051E-02	630332.9	4175997.9	158.0	1.83	1.70	1.70	NO
L0001179	0	0.32051E-02	630329.2	4175998.0	158.0	1.83	1.70	1.70	NO
L0001180	0	0.32051E-02	630325.6	4175998.0	158.0	1.83	1.70	1.70	NO
L0001181	0	0.32051E-02	630321.9	4175998.0	158.0	1.83	1.70	1.70	NO
L0001296	0	0.27027E-02	631463.6	4175994.4	158.0	1.83	1.70	1.70	NO
L0001297	0	0.27027E-02	631467.3	4175994.5	158.0	1.83	1.70	1.70	NO
L0001298	0	0.27027E-02	631471.0	4175994.5	158.0	1.83	1.70	1.70	NO
L0001299	0	0.27027E-02	631474.6	4175994.5	158.0	1.83	1.70	1.70	NO
L0001300	0	0.27027E-02	631478.3	4175994.5	158.0	1.83	1.70	1.70	NO
L0001301	0	0.27027E-02	631481.9	4175994.5	158.0	1.83	1.70	1.70	NO
L0001302	0	0.27027E-02	631485.6	4175994.5	158.0	1.83	1.70	1.70	NO
L0001303	0	0.27027E-02	631489.2	4175994.6	158.0	1.83	1.70	1.70	NO
L0001304	0	0.27027E-02	631492.9	4175994.6	158.0	1.83	1.70	1.70	NO
L0001305	0	0.27027E-02	631496.6	4175994.6	158.0	1.83	1.70	1.70	NO
L0001306	0	0.27027E-02	631500.2	4175994.6	158.0	1.83	1.70	1.70	NO
L0001307	0	0.27027E-02	631503.9	4175994.6	158.0	1.83	1.70	1.70	NO
L0001308	0	0.27027E-02	631507.5	4175994.6	158.0	1.83	1.70	1.70	NO
L0001309	0	0.27027E-02	631511.2	4175994.7	158.0	1.83	1.70	1.70	NO
L0001310	0	0.27027E-02	631514.8	4175994.7	158.0	1.83	1.70	1.70	NO
L0001311	0	0.27027E-02	631518.5	4175994.7	158.0	1.83	1.70	1.70	NO
L0001312	0	0.27027E-02	631522.2	4175994.7	158.0	1.83	1.70	1.70	NO
L0001313	0	0.27027E-02	631525.8	4175994.7	158.0	1.83	1.70	1.70	NO
L0001314	0	0.27027E-02	631529.5	4175994.7	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001315	0	0.27027E-02	631533.1	4175994.7	158.0	1.83	1.70	1.70	NO	
L0001316	0	0.27027E-02	631536.8	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001317	0	0.27027E-02	631540.5	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001318	0	0.27027E-02	631544.1	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001319	0	0.27027E-02	631547.8	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001320	0	0.27027E-02	631551.4	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001321	0	0.27027E-02	631555.1	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001322	0	0.27027E-02	631558.7	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001323	0	0.27027E-02	631562.4	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001324	0	0.27027E-02	631566.1	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001325	0	0.27027E-02	631569.7	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001326	0	0.27027E-02	631573.4	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001327	0	0.27027E-02	631577.0	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001328	0	0.27027E-02	631580.7	4175994.9	158.0	1.83	1.70	1.70	NO	

L0001329	0	0.27027E-02	631584.3	4175995.0	158.0	1.83	1.70	1.70	NO
L0001330	0	0.27027E-02	631588.0	4175995.0	158.0	1.83	1.70	1.70	NO
L0001331	0	0.27027E-02	631591.7	4175995.0	158.0	1.83	1.70	1.70	NO
L0001332	0	0.27027E-02	631595.3	4175995.0	158.0	1.83	1.70	1.70	NO
L0001333	0	0.27027E-02	631599.0	4175995.0	158.0	1.83	1.70	1.70	NO
L0001334	0	0.27027E-02	631602.6	4175995.0	158.0	1.83	1.70	1.70	NO
L0001335	0	0.27027E-02	631606.3	4175995.1	158.0	1.83	1.70	1.70	NO
L0001336	0	0.27027E-02	631609.9	4175995.1	158.0	1.83	1.70	1.70	NO
L0001337	0	0.27027E-02	631613.6	4175995.1	158.0	1.83	1.70	1.70	NO
L0001338	0	0.27027E-02	631617.3	4175995.1	158.0	1.83	1.70	1.70	NO
L0001339	0	0.27027E-02	631620.9	4175995.1	158.0	1.83	1.70	1.70	NO
L0001340	0	0.27027E-02	631624.6	4175995.1	158.0	1.83	1.70	1.70	NO
L0001341	0	0.27027E-02	631628.2	4175995.1	158.0	1.83	1.70	1.70	NO
L0001342	0	0.27027E-02	631631.9	4175995.2	158.0	1.83	1.70	1.70	NO
L0001343	0	0.27027E-02	631635.5	4175995.2	158.0	1.83	1.70	1.70	NO
L0001344	0	0.27027E-02	631639.2	4175995.2	158.0	1.83	1.70	1.70	NO
L0001345	0	0.27027E-02	631642.9	4175995.2	158.0	1.83	1.70	1.70	NO
L0001346	0	0.27027E-02	631646.5	4175995.2	158.0	1.83	1.70	1.70	NO
L0001347	0	0.27027E-02	631650.2	4175995.2	158.0	1.83	1.70	1.70	NO
L0001348	0	0.27027E-02	631653.8	4175995.3	158.0	1.83	1.70	1.70	NO
L0001349	0	0.27027E-02	631657.5	4175995.3	158.0	1.83	1.70	1.70	NO
L0001350	0	0.27027E-02	631661.1	4175995.3	158.0	1.83	1.70	1.70	NO
L0001351	0	0.27027E-02	631664.8	4175995.3	158.0	1.83	1.70	1.70	NO
L0001352	0	0.27027E-02	631668.5	4175995.3	158.0	1.83	1.70	1.70	NO
L0001353	0	0.27027E-02	631672.1	4175995.3	158.0	1.83	1.70	1.70	NO
L0001354	0	0.27027E-02	631675.8	4175995.3	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001355	0	0.27027E-02	631679.4	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001356	0	0.27027E-02	631683.1	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001357	0	0.27027E-02	631686.8	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001358	0	0.27027E-02	631690.4	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001359	0	0.27027E-02	631694.1	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001360	0	0.27027E-02	631697.7	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001361	0	0.27027E-02	631701.4	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001362	0	0.27027E-02	631705.0	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001363	0	0.27027E-02	631708.7	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001364	0	0.27027E-02	631712.4	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001365	0	0.27027E-02	631716.0	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001366	0	0.27027E-02	631719.7	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001367	0	0.27027E-02	631723.3	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001368	0	0.27027E-02	631727.0	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001369	0	0.27027E-02	631730.6	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001370	0	0.27027E-02	631734.3	4175995.6	158.0	1.83	1.70	1.70	NO	

L0001371	0	0.27027E-02	631738.0	4175995.6	158.0	1.83	1.70	1.70	NO
L0001372	0	0.27027E-02	631741.6	4175995.6	158.0	1.83	1.70	1.70	NO
L0001373	0	0.27027E-02	631745.3	4175995.6	158.0	1.83	1.70	1.70	NO
L0001374	0	0.27027E-02	631748.9	4175995.7	158.0	1.83	1.70	1.70	NO
L0001375	0	0.27027E-02	631752.6	4175995.7	158.0	1.83	1.70	1.70	NO
L0001376	0	0.27027E-02	631756.2	4175995.7	158.0	1.83	1.70	1.70	NO
L0001377	0	0.27027E-02	631759.9	4175995.7	158.0	1.83	1.70	1.70	NO
L0001378	0	0.27027E-02	631763.6	4175995.7	158.0	1.83	1.70	1.70	NO
L0001379	0	0.27027E-02	631767.2	4175995.7	158.0	1.83	1.70	1.70	NO
L0001380	0	0.27027E-02	631770.9	4175995.8	158.0	1.83	1.70	1.70	NO
L0001381	0	0.27027E-02	631774.5	4175995.8	158.0	1.83	1.70	1.70	NO
L0001382	0	0.27027E-02	631778.2	4175995.8	158.0	1.83	1.70	1.70	NO
L0001383	0	0.27027E-02	631781.8	4175995.8	158.0	1.83	1.70	1.70	NO
L0001384	0	0.27027E-02	631785.5	4175995.8	158.0	1.83	1.70	1.70	NO
L0001385	0	0.27027E-02	631789.2	4175995.8	158.0	1.83	1.70	1.70	NO
L0001386	0	0.27027E-02	631792.8	4175995.8	158.0	1.83	1.70	1.70	NO
L0001387	0	0.27027E-02	631796.5	4175995.9	158.0	1.83	1.70	1.70	NO
L0001388	0	0.27027E-02	631800.1	4175995.9	158.0	1.83	1.70	1.70	NO
L0001389	0	0.27027E-02	631803.8	4175995.9	158.0	1.83	1.70	1.70	NO
L0001390	0	0.27027E-02	631807.5	4175995.9	158.0	1.83	1.70	1.70	NO
L0001391	0	0.27027E-02	631811.1	4175995.9	158.0	1.83	1.70	1.70	NO
L0001392	0	0.27027E-02	631814.8	4175995.9	158.0	1.83	1.70	1.70	NO
L0001393	0	0.27027E-02	631818.4	4175996.0	158.0	1.83	1.70	1.70	NO
L0001394	0	0.27027E-02	631822.1	4175996.0	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001395	0	0.27027E-02	631825.7	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001396	0	0.27027E-02	631829.4	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001397	0	0.27027E-02	631833.1	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001398	0	0.27027E-02	631836.7	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001399	0	0.27027E-02	631840.4	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001400	0	0.27027E-02	631844.0	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001401	0	0.27027E-02	631847.7	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001402	0	0.27027E-02	631851.3	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001403	0	0.27027E-02	631855.0	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001404	0	0.27027E-02	631858.7	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001405	0	0.27027E-02	631862.3	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001406	0	0.27027E-02	631866.0	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001407	0	0.27027E-02	631869.6	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001408	0	0.27027E-02	631873.3	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001409	0	0.27027E-02	631876.9	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001410	0	0.27027E-02	631880.6	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001411	0	0.27027E-02	631884.3	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001412	0	0.27027E-02	631887.9	4175996.2	158.0	1.83	1.70	1.70	NO	

L0001413	0	0.27027E-02	631891.6	4175996.3	158.0	1.83	1.70	1.70	NO
L0001414	0	0.27027E-02	631895.2	4175996.3	158.0	1.83	1.70	1.70	NO
L0001415	0	0.27027E-02	631898.9	4175996.3	158.0	1.83	1.70	1.70	NO
L0001416	0	0.27027E-02	631902.5	4175996.3	158.0	1.83	1.70	1.70	NO
L0001417	0	0.27027E-02	631906.2	4175996.3	158.0	1.83	1.70	1.70	NO
L0001418	0	0.27027E-02	631909.9	4175996.3	158.0	1.83	1.70	1.70	NO
L0001419	0	0.27027E-02	631913.5	4175996.4	158.0	1.83	1.70	1.70	NO
L0001420	0	0.27027E-02	631917.2	4175996.4	158.0	1.83	1.70	1.70	NO
L0001421	0	0.27027E-02	631920.8	4175996.4	158.0	1.83	1.70	1.70	NO
L0001422	0	0.27027E-02	631924.5	4175996.4	158.0	1.83	1.70	1.70	NO
L0001423	0	0.27027E-02	631928.2	4175996.4	158.0	1.83	1.70	1.70	NO
L0001424	0	0.27027E-02	631931.8	4175996.4	158.0	1.83	1.70	1.70	NO
L0001425	0	0.27027E-02	631935.5	4175996.5	158.0	1.83	1.70	1.70	NO
L0001426	0	0.27027E-02	631939.1	4175996.5	158.0	1.83	1.70	1.70	NO
L0001427	0	0.27027E-02	631942.8	4175996.5	158.0	1.83	1.70	1.70	NO
L0001428	0	0.27027E-02	631946.4	4175996.5	158.0	1.83	1.70	1.70	NO
L0001429	0	0.27027E-02	631950.1	4175996.5	158.0	1.83	1.70	1.70	NO
L0001430	0	0.27027E-02	631953.8	4175996.5	158.0	1.83	1.70	1.70	NO
L0001431	0	0.27027E-02	631957.4	4175996.5	158.0	1.83	1.70	1.70	NO
L0001432	0	0.27027E-02	631961.1	4175996.6	158.0	1.83	1.70	1.70	NO
L0001433	0	0.27027E-02	631964.7	4175996.6	158.0	1.83	1.70	1.70	NO
L0001434	0	0.27027E-02	631968.4	4175996.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001435	0	0.27027E-02	631972.0	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001436	0	0.27027E-02	631975.7	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001437	0	0.27027E-02	631979.4	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001438	0	0.27027E-02	631983.0	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001439	0	0.27027E-02	631986.7	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001440	0	0.27027E-02	631990.3	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001441	0	0.27027E-02	631994.0	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001442	0	0.27027E-02	631997.6	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001443	0	0.27027E-02	632001.3	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001444	0	0.27027E-02	632005.0	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001445	0	0.27027E-02	632008.6	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001446	0	0.27027E-02	632012.3	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001447	0	0.27027E-02	632015.9	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001448	0	0.27027E-02	632019.6	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001449	0	0.27027E-02	632023.2	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001450	0	0.27027E-02	632026.9	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001451	0	0.27027E-02	632030.6	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001452	0	0.27027E-02	632034.2	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001453	0	0.27027E-02	632037.9	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001454	0	0.27027E-02	632041.5	4175996.9	158.0	1.83	1.70	1.70	NO	

L0001455	0	0.27027E-02	632045.2	4175996.9	158.0	1.83	1.70	1.70	NO
L0001456	0	0.27027E-02	632048.9	4175996.9	158.0	1.83	1.70	1.70	NO
L0001457	0	0.27027E-02	632052.5	4175996.9	158.0	1.83	1.70	1.70	NO
L0001458	0	0.27027E-02	632056.2	4175997.0	158.0	1.83	1.70	1.70	NO
L0001459	0	0.27027E-02	632059.8	4175997.0	158.0	1.83	1.70	1.70	NO
L0001460	0	0.27027E-02	632063.5	4175997.0	158.0	1.83	1.70	1.70	NO
L0001461	0	0.27027E-02	632067.1	4175997.0	158.0	1.83	1.70	1.70	NO
L0001462	0	0.27027E-02	632070.8	4175997.0	158.0	1.83	1.70	1.70	NO
L0001463	0	0.27027E-02	632074.5	4175997.0	158.0	1.83	1.70	1.70	NO
L0001464	0	0.27027E-02	632078.1	4175997.1	158.0	1.83	1.70	1.70	NO
L0001465	0	0.27027E-02	632081.8	4175997.1	158.0	1.83	1.70	1.70	NO
L0001466	0	0.27027E-02	632085.4	4175997.1	158.0	1.83	1.70	1.70	NO
L0001467	0	0.27027E-02	632089.1	4175997.1	158.0	1.83	1.70	1.70	NO
L0001468	0	0.27027E-02	632092.7	4175997.1	158.0	1.83	1.70	1.70	NO
L0001469	0	0.27027E-02	632096.4	4175997.1	158.0	1.83	1.70	1.70	NO
L0001470	0	0.27027E-02	632100.1	4175997.1	158.0	1.83	1.70	1.70	NO
L0001471	0	0.27027E-02	632103.7	4175997.2	158.0	1.83	1.70	1.70	NO
L0001472	0	0.27027E-02	632107.4	4175997.2	158.0	1.83	1.70	1.70	NO
L0001473	0	0.27027E-02	632111.0	4175997.2	158.0	1.83	1.70	1.70	NO
L0001474	0	0.27027E-02	632114.7	4175997.2	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001475	0	0.27027E-02	632118.3	4175997.2	158.0	1.83	1.70	1.70	NO	
L0001476	0	0.27027E-02	632122.0	4175997.2	158.0	1.83	1.70	1.70	NO	
L0001477	0	0.27027E-02	632125.7	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001478	0	0.27027E-02	632129.3	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001479	0	0.27027E-02	632133.0	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001480	0	0.27027E-02	632136.6	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001481	0	0.27027E-02	632140.3	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001482	0	0.27027E-02	632143.9	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001483	0	0.27027E-02	632147.6	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001484	0	0.27027E-02	632151.3	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001485	0	0.27027E-02	632154.9	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001486	0	0.27027E-02	632158.6	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001487	0	0.27027E-02	632162.2	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001488	0	0.27027E-02	632165.9	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001489	0	0.27027E-02	632169.6	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001490	0	0.27027E-02	632173.2	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001491	0	0.27027E-02	632176.9	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001492	0	0.27027E-02	632180.5	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001493	0	0.27027E-02	632184.2	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001494	0	0.27027E-02	632187.8	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001495	0	0.27027E-02	632191.5	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001496	0	0.27027E-02	632195.2	4175997.6	158.0	1.83	1.70	1.70	NO	

L0001497	0	0.27027E-02	632198.8	4175997.6	158.0	1.83	1.70	1.70	NO
L0001498	0	0.27027E-02	632202.5	4175997.6	158.0	1.83	1.70	1.70	NO
L0001499	0	0.27027E-02	632206.1	4175997.6	158.0	1.83	1.70	1.70	NO
L0001500	0	0.27027E-02	632209.8	4175997.6	158.0	1.83	1.70	1.70	NO
L0001501	0	0.27027E-02	632213.4	4175997.6	158.0	1.83	1.70	1.70	NO
L0001502	0	0.27027E-02	632217.1	4175997.6	158.0	1.83	1.70	1.70	NO
L0001503	0	0.27027E-02	632220.8	4175997.7	158.0	1.83	1.70	1.70	NO
L0001504	0	0.27027E-02	632224.4	4175997.7	158.0	1.83	1.70	1.70	NO
L0001505	0	0.27027E-02	632228.1	4175997.7	158.0	1.83	1.70	1.70	NO
L0001506	0	0.27027E-02	632231.7	4175997.7	158.0	1.83	1.70	1.70	NO
L0001507	0	0.27027E-02	632235.4	4175997.7	158.0	1.83	1.70	1.70	NO
L0001508	0	0.27027E-02	632239.0	4175997.7	158.0	1.83	1.70	1.70	NO
L0001509	0	0.27027E-02	632242.7	4175997.8	158.0	1.83	1.70	1.70	NO
L0001510	0	0.27027E-02	632246.4	4175997.8	158.0	1.83	1.70	1.70	NO
L0001511	0	0.27027E-02	632250.0	4175997.8	158.0	1.83	1.70	1.70	NO
L0001512	0	0.27027E-02	632253.7	4175997.8	158.0	1.83	1.70	1.70	NO
L0001513	0	0.27027E-02	632257.3	4175997.8	158.0	1.83	1.70	1.70	NO
L0001514	0	0.27027E-02	632261.0	4175997.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001515	0	0.27027E-02	632264.6	4175997.8	158.0	1.83	1.70	1.70	NO	
L0001516	0	0.27027E-02	632268.3	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001517	0	0.27027E-02	632272.0	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001518	0	0.27027E-02	632275.6	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001519	0	0.27027E-02	632279.3	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001520	0	0.27027E-02	632282.9	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001521	0	0.27027E-02	632286.6	4175997.9	158.0	1.83	1.70	1.70	NO	
L0001522	0	0.27027E-02	632290.3	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001523	0	0.27027E-02	632293.9	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001524	0	0.27027E-02	632297.6	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001525	0	0.27027E-02	632301.2	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001526	0	0.27027E-02	632304.9	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001527	0	0.27027E-02	632308.5	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001528	0	0.27027E-02	632312.2	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001529	0	0.27027E-02	632315.9	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001530	0	0.27027E-02	632319.5	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001531	0	0.27027E-02	632323.2	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001532	0	0.27027E-02	632326.8	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001533	0	0.27027E-02	632330.5	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001534	0	0.27027E-02	632334.1	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001535	0	0.27027E-02	632337.8	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001536	0	0.27027E-02	632341.5	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001537	0	0.27027E-02	632345.1	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001538	0	0.27027E-02	632348.8	4175998.2	158.0	1.83	1.70	1.70	NO	

L0001539	0	0.27027E-02	632352.4	4175998.2	158.0	1.83	1.70	1.70	NO
L0001540	0	0.27027E-02	632356.1	4175998.2	158.0	1.83	1.70	1.70	NO
L0001541	0	0.27027E-02	632359.7	4175998.3	158.0	1.83	1.70	1.70	NO
L0001542	0	0.27027E-02	632363.4	4175998.3	158.0	1.83	1.70	1.70	NO
L0001543	0	0.27027E-02	632367.1	4175998.3	158.0	1.83	1.70	1.70	NO
L0001544	0	0.27027E-02	632370.7	4175998.3	158.0	1.83	1.70	1.70	NO
L0001545	0	0.27027E-02	632374.4	4175998.3	158.0	1.83	1.70	1.70	NO
L0001546	0	0.27027E-02	632378.0	4175998.3	158.0	1.83	1.70	1.70	NO
L0001547	0	0.27027E-02	632381.7	4175998.3	158.0	1.83	1.70	1.70	NO
L0001548	0	0.27027E-02	632385.3	4175998.4	158.0	1.83	1.70	1.70	NO
L0001549	0	0.27027E-02	632389.0	4175998.4	158.0	1.83	1.70	1.70	NO
L0001550	0	0.27027E-02	632392.7	4175998.4	158.0	1.83	1.70	1.70	NO
L0001551	0	0.27027E-02	632396.3	4175998.4	158.0	1.83	1.70	1.70	NO
L0001552	0	0.27027E-02	632400.0	4175998.4	158.0	1.83	1.70	1.70	NO
L0001553	0	0.27027E-02	632403.6	4175998.4	158.0	1.83	1.70	1.70	NO
L0001554	0	0.27027E-02	632407.3	4175998.5	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001555	0	0.27027E-02	632411.0	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001556	0	0.27027E-02	632414.6	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001557	0	0.27027E-02	632418.3	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001558	0	0.27027E-02	632421.9	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001559	0	0.27027E-02	632425.6	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001560	0	0.27027E-02	632429.2	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001561	0	0.27027E-02	632432.9	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001562	0	0.27027E-02	632436.6	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001563	0	0.27027E-02	632440.2	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001564	0	0.27027E-02	632443.9	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001565	0	0.27027E-02	632447.5	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001566	0	0.27027E-02	632451.2	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001567	0	0.27027E-02	632454.8	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001568	0	0.27027E-02	632458.5	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001569	0	0.27027E-02	632462.2	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001570	0	0.27027E-02	632465.8	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001571	0	0.27027E-02	632469.5	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001572	0	0.27027E-02	632473.1	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001573	0	0.27027E-02	632476.8	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001574	0	0.27027E-02	632480.4	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001575	0	0.27027E-02	632484.1	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001576	0	0.27027E-02	632487.8	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001577	0	0.27027E-02	632491.4	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001578	0	0.27027E-02	632495.1	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001579	0	0.27027E-02	632498.7	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001580	0	0.27027E-02	632502.4	4175998.9	158.0	1.83	1.70	1.70	NO	

L0001581	0	0.27027E-02	632506.0	4175998.9	158.0	1.83	1.70	1.70	NO
L0001582	0	0.27027E-02	632509.7	4175998.9	158.0	1.83	1.70	1.70	NO
L0001583	0	0.27027E-02	632513.4	4175998.9	158.0	1.83	1.70	1.70	NO
L0001584	0	0.27027E-02	632517.0	4175998.9	158.0	1.83	1.70	1.70	NO
L0001585	0	0.27027E-02	632520.7	4175998.9	158.0	1.83	1.70	1.70	NO
L0001586	0	0.27027E-02	632524.3	4175998.9	158.0	1.83	1.70	1.70	NO
L0001587	0	0.27027E-02	632528.0	4175999.0	158.0	1.83	1.70	1.70	NO
L0001588	0	0.27027E-02	632531.7	4175999.0	158.0	1.83	1.70	1.70	NO
L0001589	0	0.27027E-02	632535.3	4175999.0	158.0	1.83	1.70	1.70	NO
L0001590	0	0.27027E-02	632539.0	4175999.0	158.0	1.83	1.70	1.70	NO
L0001591	0	0.27027E-02	632542.6	4175999.0	158.0	1.83	1.70	1.70	NO
L0001592	0	0.27027E-02	632546.3	4175999.0	158.0	1.83	1.70	1.70	NO
L0001593	0	0.27027E-02	632549.9	4175999.1	158.0	1.83	1.70	1.70	NO
L0001594	0	0.27027E-02	632553.6	4175999.1	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001595	0	0.27027E-02	632557.3	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001596	0	0.27027E-02	632560.9	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001597	0	0.27027E-02	632564.6	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001598	0	0.27027E-02	632568.2	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001599	0	0.27027E-02	632571.9	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001600	0	0.27027E-02	632575.5	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001601	0	0.27027E-02	632579.2	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001602	0	0.27027E-02	632582.9	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001603	0	0.27027E-02	632586.5	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001604	0	0.27027E-02	632590.2	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001605	0	0.27027E-02	632593.8	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001606	0	0.27027E-02	632597.5	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001607	0	0.27027E-02	632601.1	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001608	0	0.27027E-02	632604.8	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001609	0	0.27027E-02	632608.5	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001610	0	0.27027E-02	632612.1	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001611	0	0.27027E-02	632615.8	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001612	0	0.27027E-02	632619.4	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001613	0	0.27027E-02	632623.1	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001614	0	0.27027E-02	632626.7	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001615	0	0.27027E-02	632630.4	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001616	0	0.27027E-02	632634.1	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001617	0	0.27027E-02	632637.7	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001618	0	0.27027E-02	632641.4	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001619	0	0.27027E-02	632645.0	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001620	0	0.27027E-02	632648.7	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001621	0	0.27027E-02	632652.4	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001622	0	0.27027E-02	632656.0	4175999.5	158.0	1.83	1.70	1.70	NO	

L0001623	0	0.27027E-02	632659.7	4175999.5	158.0	1.83	1.70	1.70	NO
L0001624	0	0.27027E-02	632663.3	4175999.5	158.0	1.83	1.70	1.70	NO
L0001625	0	0.27027E-02	632667.0	4175999.6	158.0	1.83	1.70	1.70	NO
L0001626	0	0.27027E-02	632670.6	4175999.6	158.0	1.83	1.70	1.70	NO
L0001627	0	0.27027E-02	632674.3	4175999.6	158.0	1.83	1.70	1.70	NO
L0001628	0	0.27027E-02	632678.0	4175999.6	158.0	1.83	1.70	1.70	NO
L0001629	0	0.27027E-02	632681.6	4175999.6	158.0	1.83	1.70	1.70	NO
L0001630	0	0.27027E-02	632685.3	4175999.6	158.0	1.83	1.70	1.70	NO
L0001631	0	0.27027E-02	632688.9	4175999.6	158.0	1.83	1.70	1.70	NO
L0001632	0	0.27027E-02	632692.6	4175999.7	158.0	1.83	1.70	1.70	NO
L0001633	0	0.27027E-02	632696.2	4175999.7	158.0	1.83	1.70	1.70	NO
L0001634	0	0.27027E-02	632699.9	4175999.7	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001635	0	0.27027E-02	632703.6	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001636	0	0.27027E-02	632707.2	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001637	0	0.27027E-02	632710.9	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001638	0	0.27027E-02	632714.5	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001639	0	0.27027E-02	632718.2	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001640	0	0.27027E-02	632721.8	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001641	0	0.27027E-02	632725.5	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001642	0	0.27027E-02	632729.2	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001643	0	0.27027E-02	632732.8	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001644	0	0.27027E-02	632736.5	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001645	0	0.27027E-02	632740.1	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001646	0	0.27027E-02	632743.8	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001647	0	0.27027E-02	632747.4	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001648	0	0.27027E-02	632751.1	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001649	0	0.27027E-02	632754.8	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001650	0	0.27027E-02	632758.4	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001651	0	0.27027E-02	632762.1	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001652	0	0.27027E-02	632765.7	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001653	0	0.27027E-02	632769.4	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001654	0	0.27027E-02	632773.1	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001655	0	0.27027E-02	632776.7	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001656	0	0.27027E-02	632780.4	4176000.0	158.0	1.83	1.70	1.70	NO	
L0001657	0	0.27027E-02	632784.0	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001658	0	0.27027E-02	632787.7	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001659	0	0.27027E-02	632791.3	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001660	0	0.27027E-02	632795.0	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001661	0	0.27027E-02	632798.7	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001662	0	0.27027E-02	632802.3	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001663	0	0.27027E-02	632806.0	4176000.1	158.0	1.83	1.70	1.70	NO	
L0001664	0	0.27027E-02	632809.6	4176000.2	158.0	1.83	1.70	1.70	NO	

L0001665	0	0.27027E-02	632813.3	4176000.2	158.0	1.83	1.70	1.70	NO
L0001666	0	0.37594E-02	632813.3	4176000.2	158.0	1.83	1.70	1.70	NO
L0001667	0	0.37594E-02	632809.6	4176000.1	158.0	1.83	1.70	1.70	NO
L0001668	0	0.37594E-02	632805.9	4176000.1	158.0	1.83	1.70	1.70	NO
L0001669	0	0.37594E-02	632802.3	4176000.1	158.0	1.83	1.70	1.70	NO
L0001670	0	0.37594E-02	632798.6	4176000.1	158.0	1.83	1.70	1.70	NO
L0001671	0	0.37594E-02	632795.0	4176000.0	158.0	1.83	1.70	1.70	NO
L0001672	0	0.37594E-02	632791.3	4176000.0	158.0	1.83	1.70	1.70	NO
L0001673	0	0.37594E-02	632787.7	4176000.0	158.0	1.83	1.70	1.70	NO
L0001674	0	0.37594E-02	632784.0	4175999.9	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001675	0	0.37594E-02	632780.3	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001676	0	0.37594E-02	632776.7	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001677	0	0.37594E-02	632773.0	4175999.9	158.0	1.83	1.70	1.70	NO	
L0001678	0	0.37594E-02	632769.4	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001679	0	0.37594E-02	632765.7	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001680	0	0.37594E-02	632762.1	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001681	0	0.37594E-02	632758.4	4175999.8	158.0	1.83	1.70	1.70	NO	
L0001682	0	0.37594E-02	632754.7	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001683	0	0.37594E-02	632751.1	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001684	0	0.37594E-02	632747.4	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001685	0	0.37594E-02	632743.8	4175999.7	158.0	1.83	1.70	1.70	NO	
L0001686	0	0.37594E-02	632740.1	4175999.6	158.0	1.83	1.70	1.70	NO	
L0001687	0	0.37594E-02	632736.4	4175999.6	158.0	1.83	1.70	1.70	NO	
L0001688	0	0.37594E-02	632732.8	4175999.6	158.0	1.83	1.70	1.70	NO	
L0001689	0	0.37594E-02	632729.1	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001690	0	0.37594E-02	632725.5	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001691	0	0.37594E-02	632721.8	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001692	0	0.37594E-02	632718.2	4175999.5	158.0	1.83	1.70	1.70	NO	
L0001693	0	0.37594E-02	632714.5	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001694	0	0.37594E-02	632710.8	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001695	0	0.37594E-02	632707.2	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001696	0	0.37594E-02	632703.5	4175999.4	158.0	1.83	1.70	1.70	NO	
L0001697	0	0.37594E-02	632699.9	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001698	0	0.37594E-02	632696.2	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001699	0	0.37594E-02	632692.6	4175999.3	158.0	1.83	1.70	1.70	NO	
L0001700	0	0.37594E-02	632688.9	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001701	0	0.37594E-02	632685.2	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001702	0	0.37594E-02	632681.6	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001703	0	0.37594E-02	632677.9	4175999.2	158.0	1.83	1.70	1.70	NO	
L0001704	0	0.37594E-02	632674.3	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001705	0	0.37594E-02	632670.6	4175999.1	158.0	1.83	1.70	1.70	NO	
L0001706	0	0.37594E-02	632667.0	4175999.1	158.0	1.83	1.70	1.70	NO	

L0001707	0	0.37594E-02	632663.3	4175999.1	158.0	1.83	1.70	1.70	NO
L0001708	0	0.37594E-02	632659.6	4175999.0	158.0	1.83	1.70	1.70	NO
L0001709	0	0.37594E-02	632656.0	4175999.0	158.0	1.83	1.70	1.70	NO
L0001710	0	0.37594E-02	632652.3	4175999.0	158.0	1.83	1.70	1.70	NO
L0001711	0	0.37594E-02	632648.7	4175999.0	158.0	1.83	1.70	1.70	NO
L0001712	0	0.37594E-02	632645.0	4175998.9	158.0	1.83	1.70	1.70	NO
L0001713	0	0.37594E-02	632641.4	4175998.9	158.0	1.83	1.70	1.70	NO
L0001714	0	0.37594E-02	632637.7	4175998.9	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001715	0	0.37594E-02	632634.0	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001716	0	0.37594E-02	632630.4	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001717	0	0.37594E-02	632626.7	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001718	0	0.37594E-02	632623.1	4175998.8	158.0	1.83	1.70	1.70	NO	
L0001719	0	0.37594E-02	632619.4	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001720	0	0.37594E-02	632615.8	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001721	0	0.37594E-02	632612.1	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001722	0	0.37594E-02	632608.4	4175998.7	158.0	1.83	1.70	1.70	NO	
L0001723	0	0.37594E-02	632604.8	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001724	0	0.37594E-02	632601.1	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001725	0	0.37594E-02	632597.5	4175998.6	158.0	1.83	1.70	1.70	NO	
L0001726	0	0.37594E-02	632593.8	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001727	0	0.37594E-02	632590.1	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001728	0	0.37594E-02	632586.5	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001729	0	0.37594E-02	632582.8	4175998.5	158.0	1.83	1.70	1.70	NO	
L0001730	0	0.37594E-02	632579.2	4175998.4	158.0	1.83	1.70	1.70	NO	
L0001731	0	0.37594E-02	632575.5	4175998.4	158.0	1.83	1.70	1.70	NO	
L0001732	0	0.37594E-02	632571.9	4175998.4	158.0	1.83	1.70	1.70	NO	
L0001733	0	0.37594E-02	632568.2	4175998.4	158.0	1.83	1.70	1.70	NO	
L0001734	0	0.37594E-02	632564.5	4175998.3	158.0	1.83	1.70	1.70	NO	
L0001735	0	0.37594E-02	632560.9	4175998.3	158.0	1.83	1.70	1.70	NO	
L0001736	0	0.37594E-02	632557.2	4175998.3	158.0	1.83	1.70	1.70	NO	
L0001737	0	0.37594E-02	632553.6	4175998.3	158.0	1.83	1.70	1.70	NO	
L0001738	0	0.37594E-02	632549.9	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001739	0	0.37594E-02	632546.3	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001740	0	0.37594E-02	632542.6	4175998.2	158.0	1.83	1.70	1.70	NO	
L0001741	0	0.37594E-02	632538.9	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001742	0	0.37594E-02	632535.3	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001743	0	0.37594E-02	632531.6	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001744	0	0.37594E-02	632528.0	4175998.1	158.0	1.83	1.70	1.70	NO	
L0001745	0	0.37594E-02	632524.3	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001746	0	0.37594E-02	632520.7	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001747	0	0.37594E-02	632517.0	4175998.0	158.0	1.83	1.70	1.70	NO	
L0001748	0	0.37594E-02	632513.3	4175998.0	158.0	1.83	1.70	1.70	NO	

L0001749	0	0.37594E-02	632509.7	4175997.9	158.0	1.83	1.70	1.70	NO
L0001750	0	0.37594E-02	632506.0	4175997.9	158.0	1.83	1.70	1.70	NO
L0001751	0	0.37594E-02	632502.4	4175997.9	158.0	1.83	1.70	1.70	NO
L0001752	0	0.37594E-02	632498.7	4175997.8	158.0	1.83	1.70	1.70	NO
L0001753	0	0.37594E-02	632495.1	4175997.8	158.0	1.83	1.70	1.70	NO
L0001754	0	0.37594E-02	632491.4	4175997.8	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001755	0	0.37594E-02	632487.7	4175997.8	158.0	1.83	1.70	1.70	NO	
L0001756	0	0.37594E-02	632484.1	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001757	0	0.37594E-02	632480.4	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001758	0	0.37594E-02	632476.8	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001759	0	0.37594E-02	632473.1	4175997.7	158.0	1.83	1.70	1.70	NO	
L0001760	0	0.37594E-02	632469.5	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001761	0	0.37594E-02	632465.8	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001762	0	0.37594E-02	632462.1	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001763	0	0.37594E-02	632458.5	4175997.6	158.0	1.83	1.70	1.70	NO	
L0001764	0	0.37594E-02	632454.8	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001765	0	0.37594E-02	632451.2	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001766	0	0.37594E-02	632447.5	4175997.5	158.0	1.83	1.70	1.70	NO	
L0001767	0	0.37594E-02	632443.8	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001768	0	0.37594E-02	632440.2	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001769	0	0.37594E-02	632436.5	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001770	0	0.37594E-02	632432.9	4175997.4	158.0	1.83	1.70	1.70	NO	
L0001771	0	0.37594E-02	632429.2	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001772	0	0.37594E-02	632425.6	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001773	0	0.37594E-02	632421.9	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001774	0	0.37594E-02	632418.2	4175997.3	158.0	1.83	1.70	1.70	NO	
L0001775	0	0.37594E-02	632414.6	4175997.2	158.0	1.83	1.70	1.70	NO	
L0001776	0	0.37594E-02	632410.9	4175997.2	158.0	1.83	1.70	1.70	NO	
L0001777	0	0.37594E-02	632407.3	4175997.2	158.0	1.83	1.70	1.70	NO	
L0001778	0	0.37594E-02	632403.6	4175997.1	158.0	1.83	1.70	1.70	NO	
L0001779	0	0.37594E-02	632400.0	4175997.1	158.0	1.83	1.70	1.70	NO	
L0001780	0	0.37594E-02	632396.3	4175997.1	158.0	1.83	1.70	1.70	NO	
L0001781	0	0.37594E-02	632392.6	4175997.1	158.0	1.83	1.70	1.70	NO	
L0001782	0	0.37594E-02	632389.0	4175997.0	158.0	1.83	1.70	1.70	NO	
L0001783	0	0.37594E-02	632385.3	4175997.0	158.0	1.83	1.70	1.70	NO	
L0001784	0	0.37594E-02	632381.7	4175997.0	158.0	1.83	1.70	1.70	NO	
L0001785	0	0.37594E-02	632378.0	4175997.0	158.0	1.83	1.70	1.70	NO	
L0001786	0	0.37594E-02	632374.4	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001787	0	0.37594E-02	632370.7	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001788	0	0.37594E-02	632367.0	4175996.9	158.0	1.83	1.70	1.70	NO	
L0001789	0	0.37594E-02	632363.4	4175996.8	158.0	1.83	1.70	1.70	NO	
L0001790	0	0.37594E-02	632359.7	4175996.8	158.0	1.83	1.70	1.70	NO	

L0001791	0	0.37594E-02	632356.1	4175996.8	158.0	1.83	1.70	1.70	NO
L0001792	0	0.37594E-02	632352.4	4175996.8	158.0	1.83	1.70	1.70	NO
L0001793	0	0.37594E-02	632348.8	4175996.7	158.0	1.83	1.70	1.70	NO
L0001794	0	0.37594E-02	632345.1	4175996.7	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001795	0	0.37594E-02	632341.4	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001796	0	0.37594E-02	632337.8	4175996.7	158.0	1.83	1.70	1.70	NO	
L0001797	0	0.37594E-02	632334.1	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001798	0	0.37594E-02	632330.5	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001799	0	0.37594E-02	632326.8	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001800	0	0.37594E-02	632323.2	4175996.6	158.0	1.83	1.70	1.70	NO	
L0001801	0	0.37594E-02	632319.5	4175996.5	158.0	1.83	1.70	1.70	NO	
L0001802	0	0.37594E-02	632315.8	4175996.5	158.0	1.83	1.70	1.70	NO	
L0001803	0	0.37594E-02	632312.2	4175996.5	158.0	1.83	1.70	1.70	NO	
L0001804	0	0.37594E-02	632308.5	4175996.4	158.0	1.83	1.70	1.70	NO	
L0001805	0	0.37594E-02	632304.9	4175996.4	158.0	1.83	1.70	1.70	NO	
L0001806	0	0.37594E-02	632301.2	4175996.4	158.0	1.83	1.70	1.70	NO	
L0001807	0	0.37594E-02	632297.5	4175996.4	158.0	1.83	1.70	1.70	NO	
L0001808	0	0.37594E-02	632293.9	4175996.3	158.0	1.83	1.70	1.70	NO	
L0001809	0	0.37594E-02	632290.2	4175996.3	158.0	1.83	1.70	1.70	NO	
L0001810	0	0.37594E-02	632286.6	4175996.3	158.0	1.83	1.70	1.70	NO	
L0001811	0	0.37594E-02	632282.9	4175996.3	158.0	1.83	1.70	1.70	NO	
L0001812	0	0.37594E-02	632279.3	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001813	0	0.37594E-02	632275.6	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001814	0	0.37594E-02	632271.9	4175996.2	158.0	1.83	1.70	1.70	NO	
L0001815	0	0.37594E-02	632268.3	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001816	0	0.37594E-02	632264.6	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001817	0	0.37594E-02	632261.0	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001818	0	0.37594E-02	632257.3	4175996.1	158.0	1.83	1.70	1.70	NO	
L0001819	0	0.37594E-02	632253.7	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001820	0	0.37594E-02	632250.0	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001821	0	0.37594E-02	632246.3	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001822	0	0.37594E-02	632242.7	4175996.0	158.0	1.83	1.70	1.70	NO	
L0001823	0	0.37594E-02	632239.0	4175995.9	158.0	1.83	1.70	1.70	NO	
L0001824	0	0.37594E-02	632235.4	4175995.9	158.0	1.83	1.70	1.70	NO	
L0001825	0	0.37594E-02	632231.7	4175995.9	158.0	1.83	1.70	1.70	NO	
L0001826	0	0.37594E-02	632228.1	4175995.9	158.0	1.83	1.70	1.70	NO	
L0001827	0	0.37594E-02	632224.4	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001828	0	0.37594E-02	632220.7	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001829	0	0.37594E-02	632217.1	4175995.8	158.0	1.83	1.70	1.70	NO	
L0001830	0	0.37594E-02	632213.4	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001831	0	0.37594E-02	632209.8	4175995.7	158.0	1.83	1.70	1.70	NO	
L0001832	0	0.37594E-02	632206.1	4175995.7	158.0	1.83	1.70	1.70	NO	

L0001833	0	0.37594E-02	632202.5	4175995.7	158.0	1.83	1.70	1.70	NO
L0001834	0	0.37594E-02	632198.8	4175995.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001835	0	0.37594E-02	632195.1	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001836	0	0.37594E-02	632191.5	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001837	0	0.37594E-02	632187.8	4175995.6	158.0	1.83	1.70	1.70	NO	
L0001838	0	0.37594E-02	632184.2	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001839	0	0.37594E-02	632180.5	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001840	0	0.37594E-02	632176.9	4175995.5	158.0	1.83	1.70	1.70	NO	
L0001841	0	0.37594E-02	632173.2	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001842	0	0.37594E-02	632169.5	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001843	0	0.37594E-02	632165.9	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001844	0	0.37594E-02	632162.2	4175995.4	158.0	1.83	1.70	1.70	NO	
L0001845	0	0.37594E-02	632158.6	4175995.3	158.0	1.83	1.70	1.70	NO	
L0001846	0	0.37594E-02	632154.9	4175995.3	158.0	1.83	1.70	1.70	NO	
L0001847	0	0.37594E-02	632151.2	4175995.3	158.0	1.83	1.70	1.70	NO	
L0001848	0	0.37594E-02	632147.6	4175995.3	158.0	1.83	1.70	1.70	NO	
L0001849	0	0.37594E-02	632143.9	4175995.2	158.0	1.83	1.70	1.70	NO	
L0001850	0	0.37594E-02	632140.3	4175995.2	158.0	1.83	1.70	1.70	NO	
L0001851	0	0.37594E-02	632136.6	4175995.2	158.0	1.83	1.70	1.70	NO	
L0001852	0	0.37594E-02	632133.0	4175995.2	158.0	1.83	1.70	1.70	NO	
L0001853	0	0.37594E-02	632129.3	4175995.1	158.0	1.83	1.70	1.70	NO	
L0001854	0	0.37594E-02	632125.6	4175995.1	158.0	1.83	1.70	1.70	NO	
L0001855	0	0.37594E-02	632122.0	4175995.1	158.0	1.83	1.70	1.70	NO	
L0001856	0	0.37594E-02	632118.3	4175995.0	158.0	1.83	1.70	1.70	NO	
L0001857	0	0.37594E-02	632114.7	4175995.0	158.0	1.83	1.70	1.70	NO	
L0001858	0	0.37594E-02	632111.0	4175995.0	158.0	1.83	1.70	1.70	NO	
L0001859	0	0.37594E-02	632107.4	4175995.0	158.0	1.83	1.70	1.70	NO	
L0001860	0	0.37594E-02	632103.7	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001861	0	0.37594E-02	632100.0	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001862	0	0.37594E-02	632096.4	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001863	0	0.37594E-02	632092.7	4175994.9	158.0	1.83	1.70	1.70	NO	
L0001864	0	0.37594E-02	632089.1	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001865	0	0.37594E-02	632085.4	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001866	0	0.37594E-02	632081.8	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001867	0	0.37594E-02	632078.1	4175994.8	158.0	1.83	1.70	1.70	NO	
L0001868	0	0.37594E-02	632074.4	4175994.7	158.0	1.83	1.70	1.70	NO	
L0001869	0	0.37594E-02	632070.8	4175994.7	158.0	1.83	1.70	1.70	NO	
L0001870	0	0.37594E-02	632067.1	4175994.7	158.0	1.83	1.70	1.70	NO	
L0001871	0	0.37594E-02	632063.5	4175994.6	158.0	1.83	1.70	1.70	NO	
L0001872	0	0.37594E-02	632059.8	4175994.6	158.0	1.83	1.70	1.70	NO	
L0001873	0	0.37594E-02	632056.2	4175994.6	158.0	1.83	1.70	1.70	NO	
L0001874	0	0.37594E-02	632052.5	4175994.6	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001875	0	0.37594E-02	632048.8	4175994.5	158.0	1.83	1.70	1.70	NO	
L0001876	0	0.37594E-02	632045.2	4175994.5	158.0	1.83	1.70	1.70	NO	
L0001877	0	0.37594E-02	632041.5	4175994.5	158.0	1.83	1.70	1.70	NO	
L0001878	0	0.37594E-02	632037.9	4175994.5	158.0	1.83	1.70	1.70	NO	
L0001879	0	0.37594E-02	632034.2	4175994.4	158.0	1.83	1.70	1.70	NO	
L0001880	0	0.37594E-02	632030.6	4175994.4	158.0	1.83	1.70	1.70	NO	
L0001881	0	0.37594E-02	632026.9	4175994.4	158.0	1.83	1.70	1.70	NO	
L0001882	0	0.37594E-02	632023.2	4175994.3	158.0	1.83	1.70	1.70	NO	
L0001883	0	0.37594E-02	632019.6	4175994.3	158.0	1.83	1.70	1.70	NO	
L0001884	0	0.37594E-02	632015.9	4175994.3	158.0	1.83	1.70	1.70	NO	
L0001885	0	0.37594E-02	632012.3	4175994.3	158.0	1.83	1.70	1.70	NO	
L0001886	0	0.37594E-02	632008.6	4175994.2	158.0	1.83	1.70	1.70	NO	
L0001887	0	0.37594E-02	632004.9	4175994.2	158.0	1.83	1.70	1.70	NO	
L0001888	0	0.37594E-02	632001.3	4175994.2	158.0	1.83	1.70	1.70	NO	
L0001889	0	0.37594E-02	631997.6	4175994.2	158.0	1.83	1.70	1.70	NO	
L0001890	0	0.37594E-02	631994.0	4175994.1	158.0	1.83	1.70	1.70	NO	
L0001891	0	0.37594E-02	631990.3	4175994.1	158.0	1.83	1.70	1.70	NO	
L0001892	0	0.37594E-02	631986.7	4175994.1	158.0	1.83	1.70	1.70	NO	
L0001893	0	0.37594E-02	631983.0	4175994.0	158.0	1.83	1.70	1.70	NO	
L0001894	0	0.37594E-02	631979.3	4175994.0	158.0	1.83	1.70	1.70	NO	
L0001895	0	0.37594E-02	631975.7	4175994.0	158.0	1.83	1.70	1.70	NO	
L0001896	0	0.37594E-02	631972.0	4175994.0	158.0	1.83	1.70	1.70	NO	
L0001897	0	0.37594E-02	631968.4	4175993.9	158.0	1.83	1.70	1.70	NO	
L0001898	0	0.37594E-02	631964.7	4175993.9	158.0	1.83	1.70	1.70	NO	
L0001899	0	0.37594E-02	631961.1	4175993.9	158.0	1.83	1.70	1.70	NO	
L0001900	0	0.37594E-02	631957.4	4175993.9	158.0	1.83	1.70	1.70	NO	
L0001901	0	0.37594E-02	631953.7	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001902	0	0.37594E-02	631950.1	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001903	0	0.37594E-02	631946.4	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001904	0	0.37594E-02	631942.8	4175993.8	158.0	1.83	1.70	1.70	NO	
L0001905	0	0.37594E-02	631939.1	4175993.7	158.0	1.83	1.70	1.70	NO	
L0001906	0	0.37594E-02	631935.5	4175993.7	158.0	1.83	1.70	1.70	NO	
L0001907	0	0.37594E-02	631931.8	4175993.7	158.0	1.83	1.70	1.70	NO	
L0001908	0	0.37594E-02	631928.1	4175993.6	158.0	1.83	1.70	1.70	NO	
L0001909	0	0.37594E-02	631924.5	4175993.6	158.0	1.83	1.70	1.70	NO	
L0001910	0	0.37594E-02	631920.8	4175993.6	158.0	1.83	1.70	1.70	NO	
L0001911	0	0.37594E-02	631917.2	4175993.6	158.0	1.83	1.70	1.70	NO	
L0001912	0	0.37594E-02	631913.5	4175993.5	158.0	1.83	1.70	1.70	NO	
L0001913	0	0.37594E-02	631909.9	4175993.5	158.0	1.83	1.70	1.70	NO	
L0001914	0	0.37594E-02	631906.2	4175993.5	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001915	0	0.37594E-02	631902.5	4175993.5	158.0	1.83	1.70	1.70	NO	
L0001916	0	0.37594E-02	631898.9	4175993.4	158.0	1.83	1.70	1.70	NO	
L0001917	0	0.37594E-02	631895.2	4175993.4	158.0	1.83	1.70	1.70	NO	
L0001918	0	0.37594E-02	631891.6	4175993.4	158.0	1.83	1.70	1.70	NO	
L0001919	0	0.37594E-02	631887.9	4175993.3	158.0	1.83	1.70	1.70	NO	
L0001920	0	0.37594E-02	631884.3	4175993.3	158.0	1.83	1.70	1.70	NO	
L0001921	0	0.37594E-02	631880.6	4175993.3	158.0	1.83	1.70	1.70	NO	
L0001922	0	0.37594E-02	631876.9	4175993.3	158.0	1.83	1.70	1.70	NO	
L0001923	0	0.37594E-02	631873.3	4175993.2	158.0	1.83	1.70	1.70	NO	
L0001924	0	0.37594E-02	631869.6	4175993.2	158.0	1.83	1.70	1.70	NO	
L0001925	0	0.37594E-02	631866.0	4175993.2	158.0	1.83	1.70	1.70	NO	
L0001926	0	0.37594E-02	631862.3	4175993.2	158.0	1.83	1.70	1.70	NO	
L0001927	0	0.37594E-02	631858.6	4175993.1	158.0	1.83	1.70	1.70	NO	
L0001928	0	0.37594E-02	631855.0	4175993.1	158.0	1.83	1.70	1.70	NO	
L0001929	0	0.37594E-02	631851.3	4175993.1	158.0	1.83	1.70	1.70	NO	
L0001930	0	0.37594E-02	631847.7	4175993.1	158.0	1.83	1.70	1.70	NO	
L0001931	0	0.37594E-02	631844.0	4175993.0	158.0	1.83	1.70	1.70	NO	
L0001932	0	0.24038E-02	630319.7	4175984.4	158.0	1.83	1.70	1.70	NO	
L0001933	0	0.24038E-02	630323.3	4175984.4	158.0	1.83	1.70	1.70	NO	
L0001934	0	0.24038E-02	630327.0	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001935	0	0.24038E-02	630330.6	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001936	0	0.24038E-02	630334.3	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001937	0	0.24038E-02	630338.0	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001938	0	0.24038E-02	630341.6	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001939	0	0.24038E-02	630345.3	4175984.5	158.0	1.83	1.70	1.70	NO	
L0001940	0	0.24038E-02	630348.9	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001941	0	0.24038E-02	630352.6	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001942	0	0.24038E-02	630356.2	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001943	0	0.24038E-02	630359.9	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001944	0	0.24038E-02	630363.6	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001945	0	0.24038E-02	630367.2	4175984.6	158.0	1.83	1.70	1.70	NO	
L0001946	0	0.24038E-02	630370.9	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001947	0	0.24038E-02	630374.5	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001948	0	0.24038E-02	630378.2	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001949	0	0.24038E-02	630381.8	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001950	0	0.24038E-02	630385.5	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001951	0	0.24038E-02	630389.2	4175984.7	158.0	1.83	1.70	1.70	NO	
L0001952	0	0.24038E-02	630392.8	4175984.8	158.0	1.83	1.70	1.70	NO	
L0001953	0	0.24038E-02	630396.5	4175984.8	158.0	1.83	1.70	1.70	NO	
L0001954	0	0.24038E-02	630400.1	4175984.8	158.0	1.83	1.70	1.70	NO	

file:///C/...977GSBU)/Documents/HRA/Tracy%20Costco%20DepotV2/AERMOD/Tracy%20CostcoV2.ADO%20(AERMOD%20Output%20file).txt[6/8/2022 6:45:42 PM]

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001955	0	0.24038E-02	630403.8	4175984.8	158.0	1.83	1.70	1.70	NO	
L0001956	0	0.24038E-02	630407.4	4175984.8	158.0	1.83	1.70	1.70	NO	
L0001957	0	0.24038E-02	630411.1	4175984.8	158.0	1.83	1.70	1.70	NO	
L0001958	0	0.24038E-02	630414.8	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001959	0	0.24038E-02	630418.4	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001960	0	0.24038E-02	630422.1	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001961	0	0.24038E-02	630425.7	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001962	0	0.24038E-02	630429.4	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001963	0	0.24038E-02	630433.1	4175984.9	158.0	1.83	1.70	1.70	NO	
L0001964	0	0.24038E-02	630436.7	4175985.0	158.0	1.83	1.70	1.70	NO	
L0001965	0	0.24038E-02	630440.4	4175985.0	158.0	1.83	1.70	1.70	NO	
L0001966	0	0.24038E-02	630444.0	4175985.0	158.0	1.83	1.70	1.70	NO	
L0001967	0	0.24038E-02	630447.7	4175985.0	158.0	1.83	1.70	1.70	NO	
L0001968	0	0.24038E-02	630451.3	4175985.0	158.0	1.83	1.70	1.70	NO	
L0001969	0	0.24038E-02	630455.0	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001970	0	0.24038E-02	630458.7	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001971	0	0.24038E-02	630462.3	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001972	0	0.24038E-02	630466.0	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001973	0	0.24038E-02	630469.6	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001974	0	0.24038E-02	630473.3	4175985.1	158.0	1.83	1.70	1.70	NO	
L0001975	0	0.24038E-02	630476.9	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001976	0	0.24038E-02	630480.6	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001977	0	0.24038E-02	630484.3	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001978	0	0.24038E-02	630487.9	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001979	0	0.24038E-02	630491.6	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001980	0	0.24038E-02	630495.2	4175985.2	158.0	1.83	1.70	1.70	NO	
L0001981	0	0.24038E-02	630498.9	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001982	0	0.24038E-02	630502.5	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001983	0	0.24038E-02	630506.2	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001984	0	0.24038E-02	630509.9	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001985	0	0.24038E-02	630513.5	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001986	0	0.24038E-02	630517.2	4175985.3	158.0	1.83	1.70	1.70	NO	
L0001987	0	0.24038E-02	630520.8	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001988	0	0.24038E-02	630524.5	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001989	0	0.24038E-02	630528.1	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001990	0	0.24038E-02	630531.8	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001991	0	0.24038E-02	630535.5	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001992	0	0.24038E-02	630539.1	4175985.4	158.0	1.83	1.70	1.70	NO	
L0001993	0	0.24038E-02	630542.8	4175985.5	158.0	1.83	1.70	1.70	NO	
L0001994	0	0.24038E-02	630546.4	4175985.5	158.0	1.83	1.70	1.70	NO	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	BASE Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0001995	0	0.24038E-02	630550.1	4175985.5	158.0	1.83	1.70	1.70	NO	
L0001996	0	0.24038E-02	630553.7	4175985.5	158.0	1.83	1.70	1.70	NO	
L0001997	0	0.24038E-02	630557.4	4175985.5	158.0	1.83	1.70	1.70	NO	
L0001998	0	0.24038E-02	630561.1	4175985.6	158.0	1.83	1.70	1.70	NO	
L0001999	0	0.24038E-02	630564.7	4175985.6	158.0	1.83	1.70	1.70	NO	
L0002000	0	0.24038E-02	630568.4	4175985.6	158.0	1.83	1.70	1.70	NO	
L0002001	0	0.24038E-02	630572.0	4175985.6	158.0	1.83	1.70	1.70	NO	
L0002002	0	0.24038E-02	630575.7	4175985.6	158.0	1.83	1.70	1.70	NO	
L0002003	0	0.24038E-02	630579.4	4175985.6	158.0	1.83	1.70	1.70	NO	
L0002004	0	0.24038E-02	630583.0	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002005	0	0.24038E-02	630586.7	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002006	0	0.24038E-02	630590.3	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002007	0	0.24038E-02	630594.0	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002008	0	0.24038E-02	630597.6	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002009	0	0.24038E-02	630601.3	4175985.7	158.0	1.83	1.70	1.70	NO	
L0002010	0	0.24038E-02	630605.0	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002011	0	0.24038E-02	630608.6	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002012	0	0.24038E-02	630612.3	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002013	0	0.24038E-02	630615.9	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002014	0	0.24038E-02	630619.6	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002015	0	0.24038E-02	630623.2	4175985.8	158.0	1.83	1.70	1.70	NO	
L0002016	0	0.24038E-02	630626.9	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002017	0	0.24038E-02	630630.6	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002018	0	0.24038E-02	630634.2	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002019	0	0.24038E-02	630637.9	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002020	0	0.24038E-02	630641.5	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002021	0	0.24038E-02	630645.2	4175985.9	158.0	1.83	1.70	1.70	NO	
L0002022	0	0.24038E-02	630648.8	4175986.0	158.0	1.83	1.70	1.70	NO	
L0002023	0	0.24038E-02	630652.5	4175986.0	158.0	1.83	1.70	1.70	NO	
L0002024	0	0.24038E-02	630656.2	4175986.0	158.0	1.83	1.70	1.70	NO	
L0002025	0	0.24038E-02	630659.8	4175986.0	158.0	1.83	1.70	1.70	NO	
L0002026	0	0.24038E-02	630663.5	4175986.0	158.0	1.83	1.70	1.70	NO	
L0002027	0	0.24038E-02	630667.1	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002028	0	0.24038E-02	630670.8	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002029	0	0.24038E-02	630674.4	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002030	0	0.24038E-02	630678.1	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002031	0	0.24038E-02	630681.8	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002032	0	0.24038E-02	630685.4	4175986.1	158.0	1.83	1.70	1.70	NO	
L0002033	0	0.24038E-02	630689.1	4175986.2	158.0	1.83	1.70	1.70	NO	
L0002034	0	0.24038E-02	630692.7	4175986.2	158.0	1.83	1.70	1.70	NO	

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002035	0	0.24038E-02	630696.4	4175986.2	158.0	1.83	1.70	1.70	NO	
L0002036	0	0.24038E-02	630700.1	4175986.2	158.0	1.83	1.70	1.70	NO	
L0002037	0	0.24038E-02	630703.7	4175986.2	158.0	1.83	1.70	1.70	NO	
L0002038	0	0.24038E-02	630707.4	4175986.2	158.0	1.83	1.70	1.70	NO	
L0002039	0	0.24038E-02	630711.0	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002040	0	0.24038E-02	630714.7	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002041	0	0.24038E-02	630718.3	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002042	0	0.24038E-02	630722.0	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002043	0	0.24038E-02	630725.7	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002044	0	0.24038E-02	630729.3	4175986.3	158.0	1.83	1.70	1.70	NO	
L0002045	0	0.24038E-02	630733.0	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002046	0	0.24038E-02	630736.6	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002047	0	0.24038E-02	630740.3	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002048	0	0.24038E-02	630743.9	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002049	0	0.24038E-02	630747.6	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002050	0	0.24038E-02	630751.3	4175986.4	158.0	1.83	1.70	1.70	NO	
L0002051	0	0.24038E-02	630754.9	4175986.5	158.0	1.83	1.70	1.70	NO	
L0002052	0	0.24038E-02	630758.6	4175986.5	158.0	1.83	1.70	1.70	NO	
L0002053	0	0.24038E-02	630762.2	4175986.5	158.0	1.83	1.70	1.70	NO	
L0002054	0	0.24038E-02	630765.9	4175986.5	158.0	1.83	1.70	1.70	NO	
L0002055	0	0.24038E-02	630769.5	4175986.5	158.0	1.83	1.70	1.70	NO	
L0002056	0	0.24038E-02	630773.2	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002057	0	0.24038E-02	630776.9	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002058	0	0.24038E-02	630780.5	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002059	0	0.24038E-02	630784.2	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002060	0	0.24038E-02	630787.8	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002061	0	0.24038E-02	630791.5	4175986.6	158.0	1.83	1.70	1.70	NO	
L0002062	0	0.24038E-02	630795.1	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002063	0	0.24038E-02	630798.8	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002064	0	0.24038E-02	630802.5	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002065	0	0.24038E-02	630806.1	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002066	0	0.24038E-02	630809.8	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002067	0	0.24038E-02	630813.4	4175986.7	158.0	1.83	1.70	1.70	NO	
L0002068	0	0.24038E-02	630817.1	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002069	0	0.24038E-02	630820.8	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002070	0	0.24038E-02	630824.4	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002071	0	0.24038E-02	630828.1	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002072	0	0.24038E-02	630831.7	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002073	0	0.24038E-02	630835.4	4175986.8	158.0	1.83	1.70	1.70	NO	
L0002074	0	0.24038E-02	630839.0	4175986.9	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

SOURCE ID	PART. CATS.	(GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	SOURCE BY	SCALAR VARY
L0002075	0	0.24038E-02	630842.7	4175986.9	158.0	1.83	1.70	1.70	NO	
L0002076	0	0.24038E-02	630846.4	4175986.9	158.0	1.83	1.70	1.70	NO	
L0002077	0	0.24038E-02	630850.0	4175986.9	158.0	1.83	1.70	1.70	NO	
L0002078	0	0.24038E-02	630853.7	4175986.9	158.0	1.83	1.70	1.70	NO	
L0002079	0	0.24038E-02	630857.3	4175986.9	158.0	1.83	1.70	1.70	NO	
L0002080	0	0.24038E-02	630861.0	4175987.0	158.0	1.83	1.70	1.70	NO	
L0002081	0	0.24038E-02	630864.6	4175987.0	158.0	1.83	1.70	1.70	NO	
L0002082	0	0.24038E-02	630868.3	4175987.0	158.0	1.83	1.70	1.70	NO	
L0002083	0	0.24038E-02	630872.0	4175987.0	158.0	1.83	1.70	1.70	NO	
L0002084	0	0.24038E-02	630875.6	4175987.0	158.0	1.83	1.70	1.70	NO	
L0002085	0	0.24038E-02	630879.3	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002086	0	0.24038E-02	630882.9	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002087	0	0.24038E-02	630886.6	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002088	0	0.24038E-02	630890.2	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002089	0	0.24038E-02	630893.9	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002090	0	0.24038E-02	630897.6	4175987.1	158.0	1.83	1.70	1.70	NO	
L0002091	0	0.24038E-02	630901.2	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002092	0	0.24038E-02	630904.9	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002093	0	0.24038E-02	630908.5	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002094	0	0.24038E-02	630912.2	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002095	0	0.24038E-02	630915.8	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002096	0	0.24038E-02	630919.5	4175987.2	158.0	1.83	1.70	1.70	NO	
L0002097	0	0.24038E-02	630923.2	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002098	0	0.24038E-02	630926.8	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002099	0	0.24038E-02	630930.5	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002100	0	0.24038E-02	630934.1	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002101	0	0.24038E-02	630937.8	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002102	0	0.24038E-02	630941.5	4175987.3	158.0	1.83	1.70	1.70	NO	
L0002103	0	0.24038E-02	630945.1	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002104	0	0.24038E-02	630948.8	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002105	0	0.24038E-02	630952.4	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002106	0	0.24038E-02	630956.1	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002107	0	0.24038E-02	630959.7	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002108	0	0.24038E-02	630963.4	4175987.4	158.0	1.83	1.70	1.70	NO	
L0002109	0	0.24038E-02	630967.1	4175987.5	158.0	1.83	1.70	1.70	NO	
L0002110	0	0.24038E-02	630970.7	4175987.5	158.0	1.83	1.70	1.70	NO	
L0002111	0	0.24038E-02	630974.4	4175987.5	158.0	1.83	1.70	1.70	NO	
L0002112	0	0.24038E-02	630978.0	4175987.5	158.0	1.83	1.70	1.70	NO	
L0002113	0	0.24038E-02	630981.7	4175987.5	158.0	1.83	1.70	1.70	NO	
L0002114	0	0.24038E-02	630985.3	4175987.5	158.0	1.83	1.70	1.70	NO	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	PART. CATS.	(GRAMS/SEC)	X (METERS)	Y (METERS)	ELEV. (METERS)	HEIGHT (METERS)	SY (METERS)	SZ (METERS)	SOURCE BY	SCALAR VARY

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L0002115	0	0.24038E-02	630989.0	4175987.6	158.0	1.83	1.70	1.70	NO
L0002116	0	0.24038E-02	630992.7	4175987.6	158.0	1.83	1.70	1.70	NO
L0002117	0	0.24038E-02	630996.3	4175987.6	158.0	1.83	1.70	1.70	NO
L0002118	0	0.24038E-02	631000.0	4175987.6	158.0	1.83	1.70	1.70	NO
L0002119	0	0.24038E-02	631003.6	4175987.6	158.0	1.83	1.70	1.70	NO
L0002120	0	0.24038E-02	631007.3	4175987.7	158.0	1.83	1.70	1.70	NO
L0002121	0	0.24038E-02	631010.9	4175987.7	158.0	1.83	1.70	1.70	NO
L0002122	0	0.24038E-02	631014.6	4175987.7	158.0	1.83	1.70	1.70	NO
L0002123	0	0.24038E-02	631018.3	4175987.7	158.0	1.83	1.70	1.70	NO
L0002124	0	0.24038E-02	631021.9	4175987.7	158.0	1.83	1.70	1.70	NO
L0002125	0	0.24038E-02	631025.6	4175987.7	158.0	1.83	1.70	1.70	NO
L0002126	0	0.24038E-02	631029.2	4175987.8	158.0	1.83	1.70	1.70	NO
L0002127	0	0.24038E-02	631032.9	4175987.8	158.0	1.83	1.70	1.70	NO
L0002128	0	0.24038E-02	631036.5	4175987.8	158.0	1.83	1.70	1.70	NO
L0002129	0	0.24038E-02	631040.2	4175987.8	158.0	1.83	1.70	1.70	NO
L0002130	0	0.24038E-02	631043.9	4175987.8	158.0	1.83	1.70	1.70	NO
L0002131	0	0.24038E-02	631047.5	4175987.8	158.0	1.83	1.70	1.70	NO
L0002132	0	0.24038E-02	631051.2	4175987.9	158.0	1.83	1.70	1.70	NO
L0002133	0	0.24038E-02	631054.8	4175987.9	158.0	1.83	1.70	1.70	NO
L0002134	0	0.24038E-02	631058.5	4175987.9	158.0	1.83	1.70	1.70	NO
L0002135	0	0.24038E-02	631062.2	4175987.9	158.0	1.83	1.70	1.70	NO
L0002136	0	0.24038E-02	631065.8	4175987.9	158.0	1.83	1.70	1.70	NO
L0002137	0	0.24038E-02	631069.5	4175987.9	158.0	1.83	1.70	1.70	NO
L0002138	0	0.24038E-02	631073.1	4175988.0	158.0	1.83	1.70	1.70	NO
L0002139	0	0.24038E-02	631076.8	4175988.0	158.0	1.83	1.70	1.70	NO
L0002140	0	0.24038E-02	631080.4	4175988.0	158.0	1.83	1.70	1.70	NO
L0002141	0	0.24038E-02	631084.1	4175988.0	158.0	1.83	1.70	1.70	NO
L0002142	0	0.24038E-02	631087.8	4175988.0	158.0	1.83	1.70	1.70	NO
L0002143	0	0.24038E-02	631091.4	4175988.0	158.0	1.83	1.70	1.70	NO
L0002144	0	0.24038E-02	631095.1	4175988.1	158.0	1.83	1.70	1.70	NO
L0002145	0	0.24038E-02	631098.7	4175988.1	158.0	1.83	1.70	1.70	NO
L0002146	0	0.24038E-02	631102.4	4175988.1	158.0	1.83	1.70	1.70	NO
L0002147	0	0.24038E-02	631106.0	4175988.1	158.0	1.83	1.70	1.70	NO
L0002148	0	0.24038E-02	631109.7	4175988.1	158.0	1.83	1.70	1.70	NO
L0002149	0	0.24038E-02	631113.4	4175988.2	158.0	1.83	1.70	1.70	NO
L0002150	0	0.24038E-02	631117.0	4175988.2	158.0	1.83	1.70	1.70	NO
L0002151	0	0.24038E-02	631120.7	4175988.2	158.0	1.83	1.70	1.70	NO
L0002152	0	0.24038E-02	631124.3	4175988.2	158.0	1.83	1.70	1.70	NO
L0002153	0	0.24038E-02	631128.0	4175988.2	158.0	1.83	1.70	1.70	NO
L0002154	0	0.24038E-02	631131.6	4175988.2	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	BASE X (METERS)	Y (METERS)	RELEASE ELEV. (METERS)	INIT. HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY

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L0002155	0	0.24038E-02	631135.3	4175988.3	158.0	1.83	1.70	1.70	NO
L0002156	0	0.24038E-02	631139.0	4175988.3	158.0	1.83	1.70	1.70	NO
L0002157	0	0.24038E-02	631142.6	4175988.3	158.0	1.83	1.70	1.70	NO
L0002158	0	0.24038E-02	631146.3	4175988.3	158.0	1.83	1.70	1.70	NO
L0002159	0	0.24038E-02	631149.9	4175988.3	158.0	1.83	1.70	1.70	NO
L0002160	0	0.24038E-02	631153.6	4175988.3	158.0	1.83	1.70	1.70	NO
L0002161	0	0.24038E-02	631157.2	4175988.4	158.0	1.83	1.70	1.70	NO
L0002162	0	0.24038E-02	631160.9	4175988.4	158.0	1.83	1.70	1.70	NO
L0002163	0	0.24038E-02	631164.6	4175988.4	158.0	1.83	1.70	1.70	NO
L0002164	0	0.24038E-02	631168.2	4175988.4	158.0	1.83	1.70	1.70	NO
L0002165	0	0.24038E-02	631171.9	4175988.4	158.0	1.83	1.70	1.70	NO
L0002166	0	0.24038E-02	631175.5	4175988.4	158.0	1.83	1.70	1.70	NO
L0002167	0	0.24038E-02	631179.2	4175988.5	158.0	1.83	1.70	1.70	NO
L0002168	0	0.24038E-02	631182.9	4175988.5	158.0	1.83	1.70	1.70	NO
L0002169	0	0.24038E-02	631186.5	4175988.5	158.0	1.83	1.70	1.70	NO
L0002170	0	0.24038E-02	631190.2	4175988.5	158.0	1.83	1.70	1.70	NO
L0002171	0	0.24038E-02	631193.8	4175988.5	158.0	1.83	1.70	1.70	NO
L0002172	0	0.24038E-02	631197.5	4175988.5	158.0	1.83	1.70	1.70	NO
L0002173	0	0.24038E-02	631201.1	4175988.6	158.0	1.83	1.70	1.70	NO
L0002174	0	0.24038E-02	631204.8	4175988.6	158.0	1.83	1.70	1.70	NO
L0002175	0	0.24038E-02	631208.5	4175988.6	158.0	1.83	1.70	1.70	NO
L0002176	0	0.24038E-02	631212.1	4175988.6	158.0	1.83	1.70	1.70	NO
L0002177	0	0.24038E-02	631215.8	4175988.6	158.0	1.83	1.70	1.70	NO
L0002178	0	0.24038E-02	631219.4	4175988.7	158.0	1.83	1.70	1.70	NO
L0002179	0	0.24038E-02	631223.1	4175988.7	158.0	1.83	1.70	1.70	NO
L0002180	0	0.24038E-02	631226.7	4175988.7	158.0	1.83	1.70	1.70	NO
L0002181	0	0.24038E-02	631230.4	4175988.7	158.0	1.83	1.70	1.70	NO
L0002182	0	0.24038E-02	631234.1	4175988.7	158.0	1.83	1.70	1.70	NO
L0002183	0	0.24038E-02	631237.7	4175988.7	158.0	1.83	1.70	1.70	NO
L0002184	0	0.24038E-02	631241.4	4175988.8	158.0	1.83	1.70	1.70	NO
L0002185	0	0.24038E-02	631245.0	4175988.8	158.0	1.83	1.70	1.70	NO
L0002186	0	0.24038E-02	631248.7	4175988.8	158.0	1.83	1.70	1.70	NO
L0002187	0	0.24038E-02	631252.3	4175988.8	158.0	1.83	1.70	1.70	NO
L0002188	0	0.24038E-02	631256.0	4175988.8	158.0	1.83	1.70	1.70	NO
L0002189	0	0.24038E-02	631259.7	4175988.8	158.0	1.83	1.70	1.70	NO
L0002190	0	0.24038E-02	631263.3	4175988.9	158.0	1.83	1.70	1.70	NO
L0002191	0	0.24038E-02	631267.0	4175988.9	158.0	1.83	1.70	1.70	NO
L0002192	0	0.24038E-02	631270.6	4175988.9	158.0	1.83	1.70	1.70	NO
L0002193	0	0.24038E-02	631274.3	4175988.9	158.0	1.83	1.70	1.70	NO
L0002194	0	0.24038E-02	631277.9	4175988.9	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002195	0	0.24038E-02	631281.6	4175988.9	158.0	1.83	1.70	1.70	NO	
L0002196	0	0.24038E-02	631285.3	4175989.0	158.0	1.83	1.70	1.70	NO	

L0002197	0	0.24038E-02	631288.9	4175989.0	158.0	1.83	1.70	1.70	NO
L0002198	0	0.24038E-02	631292.6	4175989.0	158.0	1.83	1.70	1.70	NO
L0002199	0	0.24038E-02	631296.2	4175989.0	158.0	1.83	1.70	1.70	NO
L0002200	0	0.24038E-02	631299.9	4175989.0	158.0	1.83	1.70	1.70	NO
L0002201	0	0.24038E-02	631303.5	4175989.0	158.0	1.83	1.70	1.70	NO
L0002202	0	0.24038E-02	631307.2	4175989.1	158.0	1.83	1.70	1.70	NO
L0002203	0	0.24038E-02	631310.9	4175989.1	158.0	1.83	1.70	1.70	NO
L0002204	0	0.24038E-02	631314.5	4175989.1	158.0	1.83	1.70	1.70	NO
L0002205	0	0.24038E-02	631318.2	4175989.1	158.0	1.83	1.70	1.70	NO
L0002206	0	0.24038E-02	631321.8	4175989.1	158.0	1.83	1.70	1.70	NO
L0002207	0	0.24038E-02	631325.5	4175989.2	158.0	1.83	1.70	1.70	NO
L0002208	0	0.24038E-02	631329.2	4175989.2	158.0	1.83	1.70	1.70	NO
L0002209	0	0.24038E-02	631332.8	4175989.2	158.0	1.83	1.70	1.70	NO
L0002210	0	0.24038E-02	631336.5	4175989.2	158.0	1.83	1.70	1.70	NO
L0002211	0	0.24038E-02	631340.1	4175989.2	158.0	1.83	1.70	1.70	NO
L0002212	0	0.24038E-02	631343.8	4175989.2	158.0	1.83	1.70	1.70	NO
L0002213	0	0.24038E-02	631347.4	4175989.3	158.0	1.83	1.70	1.70	NO
L0002214	0	0.24038E-02	631351.1	4175989.3	158.0	1.83	1.70	1.70	NO
L0002215	0	0.24038E-02	631354.8	4175989.3	158.0	1.83	1.70	1.70	NO
L0002216	0	0.24038E-02	631358.4	4175989.3	158.0	1.83	1.70	1.70	NO
L0002217	0	0.24038E-02	631362.1	4175989.3	158.0	1.83	1.70	1.70	NO
L0002218	0	0.24038E-02	631365.7	4175989.3	158.0	1.83	1.70	1.70	NO
L0002219	0	0.24038E-02	631369.4	4175989.4	158.0	1.83	1.70	1.70	NO
L0002220	0	0.24038E-02	631373.0	4175989.4	158.0	1.83	1.70	1.70	NO
L0002221	0	0.24038E-02	631376.7	4175989.4	158.0	1.83	1.70	1.70	NO
L0002222	0	0.24038E-02	631380.4	4175989.4	158.0	1.83	1.70	1.70	NO
L0002223	0	0.24038E-02	631384.0	4175989.4	158.0	1.83	1.70	1.70	NO
L0002224	0	0.24038E-02	631387.7	4175989.4	158.0	1.83	1.70	1.70	NO
L0002225	0	0.24038E-02	631391.3	4175989.5	158.0	1.83	1.70	1.70	NO
L0002226	0	0.24038E-02	631395.0	4175989.5	158.0	1.83	1.70	1.70	NO
L0002227	0	0.24038E-02	631398.6	4175989.5	158.0	1.83	1.70	1.70	NO
L0002228	0	0.24038E-02	631402.3	4175989.5	158.0	1.83	1.70	1.70	NO
L0002229	0	0.24038E-02	631406.0	4175989.5	158.0	1.83	1.70	1.70	NO
L0002230	0	0.24038E-02	631409.6	4175989.5	158.0	1.83	1.70	1.70	NO
L0002231	0	0.24038E-02	631413.3	4175989.6	158.0	1.83	1.70	1.70	NO
L0002232	0	0.24038E-02	631416.9	4175989.6	158.0	1.83	1.70	1.70	NO
L0002233	0	0.24038E-02	631420.6	4175989.6	158.0	1.83	1.70	1.70	NO
L0002234	0	0.24038E-02	631424.2	4175989.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002235	0	0.24038E-02	631427.9	4175989.6	158.0	1.83	1.70	1.70	NO	
L0002236	0	0.24038E-02	631431.6	4175989.7	158.0	1.83	1.70	1.70	NO	
L0002237	0	0.24038E-02	631435.2	4175989.7	158.0	1.83	1.70	1.70	NO	
L0002238	0	0.24038E-02	631438.9	4175989.7	158.0	1.83	1.70	1.70	NO	

L0002239	0	0.24038E-02	631442.5	4175989.7	158.0	1.83	1.70	1.70	NO
L0002240	0	0.24038E-02	631446.2	4175989.7	158.0	1.83	1.70	1.70	NO
L0002241	0	0.24038E-02	631449.9	4175989.7	158.0	1.83	1.70	1.70	NO
L0002242	0	0.24038E-02	631453.5	4175989.8	158.0	1.83	1.70	1.70	NO
L0002243	0	0.24038E-02	631457.2	4175989.8	158.0	1.83	1.70	1.70	NO
L0002244	0	0.24038E-02	631460.8	4175989.8	158.0	1.83	1.70	1.70	NO
L0002245	0	0.24038E-02	631464.5	4175989.8	158.0	1.83	1.70	1.70	NO
L0002246	0	0.24038E-02	631468.1	4175989.8	158.0	1.83	1.70	1.70	NO
L0002247	0	0.24038E-02	631471.8	4175989.8	158.0	1.83	1.70	1.70	NO
L0002248	0	0.24038E-02	631475.5	4175989.9	158.0	1.83	1.70	1.70	NO
L0002249	0	0.24038E-02	631479.1	4175989.9	158.0	1.83	1.70	1.70	NO
L0002250	0	0.24038E-02	631482.8	4175989.9	158.0	1.83	1.70	1.70	NO
L0002251	0	0.24038E-02	631486.4	4175989.9	158.0	1.83	1.70	1.70	NO
L0002252	0	0.24038E-02	631490.1	4175989.9	158.0	1.83	1.70	1.70	NO
L0002253	0	0.24038E-02	631493.7	4175989.9	158.0	1.83	1.70	1.70	NO
L0002254	0	0.24038E-02	631497.4	4175990.0	158.0	1.83	1.70	1.70	NO
L0002255	0	0.24038E-02	631501.1	4175990.0	158.0	1.83	1.70	1.70	NO
L0002256	0	0.24038E-02	631504.7	4175990.0	158.0	1.83	1.70	1.70	NO
L0002257	0	0.24038E-02	631508.4	4175990.0	158.0	1.83	1.70	1.70	NO
L0002258	0	0.24038E-02	631512.0	4175990.0	158.0	1.83	1.70	1.70	NO
L0002259	0	0.24038E-02	631515.7	4175990.0	158.0	1.83	1.70	1.70	NO
L0002260	0	0.24038E-02	631519.3	4175990.1	158.0	1.83	1.70	1.70	NO
L0002261	0	0.24038E-02	631523.0	4175990.1	158.0	1.83	1.70	1.70	NO
L0002262	0	0.24038E-02	631526.7	4175990.1	158.0	1.83	1.70	1.70	NO
L0002263	0	0.24038E-02	631530.3	4175990.1	158.0	1.83	1.70	1.70	NO
L0002264	0	0.24038E-02	631534.0	4175990.1	158.0	1.83	1.70	1.70	NO
L0002265	0	0.24038E-02	631537.6	4175990.1	158.0	1.83	1.70	1.70	NO
L0002266	0	0.24038E-02	631541.3	4175990.2	158.0	1.83	1.70	1.70	NO
L0002267	0	0.24038E-02	631544.9	4175990.2	158.0	1.83	1.70	1.70	NO
L0002268	0	0.24038E-02	631548.6	4175990.2	158.0	1.83	1.70	1.70	NO
L0002269	0	0.24038E-02	631552.3	4175990.2	158.0	1.83	1.70	1.70	NO
L0002270	0	0.24038E-02	631555.9	4175990.2	158.0	1.83	1.70	1.70	NO
L0002271	0	0.24038E-02	631559.6	4175990.3	158.0	1.83	1.70	1.70	NO
L0002272	0	0.24038E-02	631563.2	4175990.3	158.0	1.83	1.70	1.70	NO
L0002273	0	0.24038E-02	631566.9	4175990.3	158.0	1.83	1.70	1.70	NO
L0002274	0	0.24038E-02	631570.6	4175990.3	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002275	0	0.24038E-02	631574.2	4175990.3	158.0	1.83	1.70	1.70	NO	
L0002276	0	0.24038E-02	631577.9	4175990.3	158.0	1.83	1.70	1.70	NO	
L0002277	0	0.24038E-02	631581.5	4175990.4	158.0	1.83	1.70	1.70	NO	
L0002278	0	0.24038E-02	631585.2	4175990.4	158.0	1.83	1.70	1.70	NO	
L0002279	0	0.24038E-02	631588.8	4175990.4	158.0	1.83	1.70	1.70	NO	
L0002280	0	0.24038E-02	631592.5	4175990.4	158.0	1.83	1.70	1.70	NO	

L0002281	0	0.24038E-02	631596.2	4175990.4	158.0	1.83	1.70	1.70	NO
L0002282	0	0.24038E-02	631599.8	4175990.4	158.0	1.83	1.70	1.70	NO
L0002283	0	0.24038E-02	631603.5	4175990.5	158.0	1.83	1.70	1.70	NO
L0002284	0	0.24038E-02	631607.1	4175990.5	158.0	1.83	1.70	1.70	NO
L0002285	0	0.24038E-02	631610.8	4175990.5	158.0	1.83	1.70	1.70	NO
L0002286	0	0.24038E-02	631614.4	4175990.5	158.0	1.83	1.70	1.70	NO
L0002287	0	0.24038E-02	631618.1	4175990.5	158.0	1.83	1.70	1.70	NO
L0002288	0	0.24038E-02	631621.8	4175990.5	158.0	1.83	1.70	1.70	NO
L0002289	0	0.24038E-02	631625.4	4175990.6	158.0	1.83	1.70	1.70	NO
L0002290	0	0.24038E-02	631629.1	4175990.6	158.0	1.83	1.70	1.70	NO
L0002291	0	0.24038E-02	631632.7	4175990.6	158.0	1.83	1.70	1.70	NO
L0002292	0	0.24038E-02	631636.4	4175990.6	158.0	1.83	1.70	1.70	NO
L0002293	0	0.24038E-02	631640.0	4175990.6	158.0	1.83	1.70	1.70	NO
L0002294	0	0.24038E-02	631643.7	4175990.6	158.0	1.83	1.70	1.70	NO
L0002295	0	0.24038E-02	631647.4	4175990.7	158.0	1.83	1.70	1.70	NO
L0002296	0	0.24038E-02	631651.0	4175990.7	158.0	1.83	1.70	1.70	NO
L0002297	0	0.24038E-02	631654.7	4175990.7	158.0	1.83	1.70	1.70	NO
L0002298	0	0.24038E-02	631658.3	4175990.7	158.0	1.83	1.70	1.70	NO
L0002299	0	0.24038E-02	631662.0	4175990.7	158.0	1.83	1.70	1.70	NO
L0002300	0	0.24038E-02	631665.6	4175990.8	158.0	1.83	1.70	1.70	NO
L0002301	0	0.24038E-02	631669.3	4175990.8	158.0	1.83	1.70	1.70	NO
L0002302	0	0.24038E-02	631673.0	4175990.8	158.0	1.83	1.70	1.70	NO
L0002303	0	0.24038E-02	631676.6	4175990.8	158.0	1.83	1.70	1.70	NO
L0002304	0	0.24038E-02	631680.3	4175990.8	158.0	1.83	1.70	1.70	NO
L0002305	0	0.24038E-02	631683.9	4175990.8	158.0	1.83	1.70	1.70	NO
L0002306	0	0.24038E-02	631687.6	4175990.9	158.0	1.83	1.70	1.70	NO
L0002307	0	0.24038E-02	631691.2	4175990.9	158.0	1.83	1.70	1.70	NO
L0002308	0	0.24038E-02	631694.9	4175990.9	158.0	1.83	1.70	1.70	NO
L0002309	0	0.24038E-02	631698.6	4175990.9	158.0	1.83	1.70	1.70	NO
L0002310	0	0.24038E-02	631702.2	4175990.9	158.0	1.83	1.70	1.70	NO
L0002311	0	0.24038E-02	631705.9	4175990.9	158.0	1.83	1.70	1.70	NO
L0002312	0	0.24038E-02	631709.5	4175991.0	158.0	1.83	1.70	1.70	NO
L0002313	0	0.24038E-02	631713.2	4175991.0	158.0	1.83	1.70	1.70	NO
L0002314	0	0.24038E-02	631716.9	4175991.0	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** VOLUME SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC)	X (METERS)	Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	INIT. SY (METERS)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY
L0002315	0	0.24038E-02	631720.5	4175991.0	158.0	1.83	1.70	1.70	NO	
L0002316	0	0.24038E-02	631724.2	4175991.0	158.0	1.83	1.70	1.70	NO	
L0002317	0	0.24038E-02	631727.8	4175991.0	158.0	1.83	1.70	1.70	NO	
L0002318	0	0.24038E-02	631731.5	4175991.1	158.0	1.83	1.70	1.70	NO	
L0002319	0	0.24038E-02	631735.1	4175991.1	158.0	1.83	1.70	1.70	NO	
L0002320	0	0.24038E-02	631738.8	4175991.1	158.0	1.83	1.70	1.70	NO	
L0002321	0	0.24038E-02	631742.5	4175991.1	158.0	1.83	1.70	1.70	NO	
L0002322	0	0.24038E-02	631746.1	4175991.1	158.0	1.83	1.70	1.70	NO	

L0002323	0	0.24038E-02	631749.8	4175991.1	158.0	1.83	1.70	1.70	NO
L0002324	0	0.24038E-02	631753.4	4175991.2	158.0	1.83	1.70	1.70	NO
L0002325	0	0.24038E-02	631757.1	4175991.2	158.0	1.83	1.70	1.70	NO
L0002326	0	0.24038E-02	631760.7	4175991.2	158.0	1.83	1.70	1.70	NO
L0002327	0	0.24038E-02	631764.4	4175991.2	158.0	1.83	1.70	1.70	NO
L0002328	0	0.24038E-02	631768.1	4175991.2	158.0	1.83	1.70	1.70	NO
L0002329	0	0.24038E-02	631771.7	4175991.3	158.0	1.83	1.70	1.70	NO
L0002330	0	0.24038E-02	631775.4	4175991.3	158.0	1.83	1.70	1.70	NO
L0002331	0	0.24038E-02	631779.0	4175991.3	158.0	1.83	1.70	1.70	NO
L0002332	0	0.24038E-02	631782.7	4175991.3	158.0	1.83	1.70	1.70	NO
L0002333	0	0.24038E-02	631786.3	4175991.3	158.0	1.83	1.70	1.70	NO
L0002334	0	0.24038E-02	631790.0	4175991.3	158.0	1.83	1.70	1.70	NO
L0002335	0	0.24038E-02	631793.7	4175991.4	158.0	1.83	1.70	1.70	NO
L0002336	0	0.24038E-02	631797.3	4175991.4	158.0	1.83	1.70	1.70	NO
L0002337	0	0.24038E-02	631801.0	4175991.4	158.0	1.83	1.70	1.70	NO
L0002338	0	0.24038E-02	631804.6	4175991.4	158.0	1.83	1.70	1.70	NO
L0002339	0	0.24038E-02	631808.3	4175991.4	158.0	1.83	1.70	1.70	NO
L0002340	0	0.24038E-02	631812.0	4175991.4	158.0	1.83	1.70	1.70	NO
L0002341	0	0.24038E-02	631815.6	4175991.5	158.0	1.83	1.70	1.70	NO
L0002342	0	0.24038E-02	631819.3	4175991.5	158.0	1.83	1.70	1.70	NO
L0002343	0	0.24038E-02	631822.9	4175991.5	158.0	1.83	1.70	1.70	NO
L0002344	0	0.24038E-02	631826.6	4175991.5	158.0	1.83	1.70	1.70	NO
L0002345	0	0.24038E-02	631830.2	4175991.5	158.0	1.83	1.70	1.70	NO
L0002346	0	0.24038E-02	631833.9	4175991.5	158.0	1.83	1.70	1.70	NO
L0002347	0	0.24038E-02	631837.6	4175991.6	158.0	1.83	1.70	1.70	NO

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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SLINE1 L0000001 , L0000002 , L0000003 , L0000004 , L0000005 , L0000006 , L0000007 , L0000008 ,
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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs

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*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
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*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs

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L0001690 , L0001691 , L0001692 , L0001693 , L0001694 , L0001695 , L0001696 , L0001697 ,

L0001698 , L0001699 , L0001700 , L0001701 , L0001702 , L0001703 , L0001704 , L0001705 ,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0001706 , L0001707 , L0001708 , L0001709 , L0001710 , L0001711 , L0001712 , L0001713 ,

L0001714 , L0001715 , L0001716 , L0001717 , L0001718 , L0001719 , L0001720 , L0001721 ,

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L0001738 , L0001739 , L0001740 , L0001741 , L0001742 , L0001743 , L0001744 , L0001745 ,

L0001746 , L0001747 , L0001748 , L0001749 , L0001750 , L0001751 , L0001752 , L0001753 ,

L0001754 , L0001755 , L0001756 , L0001757 , L0001758 , L0001759 , L0001760 , L0001761 ,

L0001762 , L0001763 , L0001764 , L0001765 , L0001766 , L0001767 , L0001768 , L0001769 ,

L0001770 , L0001771 , L0001772 , L0001773 , L0001774 , L0001775 , L0001776 , L0001777 ,

L0001778 , L0001779 , L0001780 , L0001781 , L0001782 , L0001783 , L0001784 , L0001785 ,

L0001786 , L0001787 , L0001788 , L0001789 , L0001790 , L0001791 , L0001792 , L0001793 ,

L0001794 , L0001795 , L0001796 , L0001797 , L0001798 , L0001799 , L0001800 , L0001801 ,

L0001802 , L0001803 , L0001804 , L0001805 , L0001806 , L0001807 , L0001808 , L0001809 ,

L0001810 , L0001811 , L0001812 , L0001813 , L0001814 , L0001815 , L0001816 , L0001817 ,

L0001818 , L0001819 , L0001820 , L0001821 , L0001822 , L0001823 , L0001824 , L0001825 ,

L0001826 , L0001827 , L0001828 , L0001829 , L0001830 , L0001831 , L0001832 , L0001833 ,

L0001834 , L0001835 , L0001836 , L0001837 , L0001838 , L0001839 , L0001840 , L0001841 ,

L0001842 , L0001843 , L0001844 , L0001845 , L0001846 , L0001847 , L0001848 , L0001849 ,

L0001850 , L0001851 , L0001852 , L0001853 , L0001854 , L0001855 , L0001856 , L0001857 ,

L0001858 , L0001859 , L0001860 , L0001861 , L0001862 , L0001863 , L0001864 , L0001865 ,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0001866 , L0001867 , L0001868 , L0001869 , L0001870 , L0001871 , L0001872 , L0001873 ,

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L0001922 , L0001923 , L0001924 , L0001925 , L0001926 , L0001927 , L0001928 , L0001929 ,

L0001930 , L0001931 ,

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L0002004 , L0002005 , L0002006 , L0002007 , L0002008 , L0002009 , L0002010 , L0002011 ,

L0002012 , L0002013 , L0002014 , L0002015 , L0002016 , L0002017 , L0002018 , L0002019 ,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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L0002020 , L0002021 , L0002022 , L0002023 , L0002024 , L0002025 , L0002026 , L0002027 ,

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L0002036 , L0002037 , L0002038 , L0002039 , L0002040 , L0002041 , L0002042 , L0002043 ,

L0002044 , L0002045 , L0002046 , L0002047 , L0002048 , L0002049 , L0002050 , L0002051 ,

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID SOURCE IDs
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L0002180 , L0002181 , L0002182 , L0002183 , L0002184 , L0002185 , L0002186 , L0002187 ,
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L0002220 , L0002221 , L0002222 , L0002223 , L0002224 , L0002225 , L0002226 , L0002227 ,
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L0002300 , L0002301 , L0002302 , L0002303 , L0002304 , L0002305 , L0002306 , L0002307 ,

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L0002316 , L0002317 , L0002318 , L0002319 , L0002320 , L0002321 , L0002322 , L0002323 ,

L0002324 , L0002325 , L0002326 , L0002327 , L0002328 , L0002329 , L0002330 , L0002331 ,

L0002332 , L0002333 , L0002334 , L0002335 , L0002336 , L0002337 , L0002338 , L0002339 ,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

L0002340 , L0002341 , L0002342 , L0002343 , L0002344 , L0002345 , L0002346 , L0002347 ,

STCK1 STCK1 ,

STCK10 STCK10 ,

STCK11 STCK11 ,

STCK12 STCK12 ,

STCK13 STCK13 ,

STCK14 STCK14 ,

STCK15 STCK15 ,

STCK16 STCK16 ,

STCK17 STCK17 ,

STCK18 STCK18 ,

STCK19 STCK19 ,

STCK2 STCK2 ,

STCK20 STCK20 ,

STCK21 STCK21 ,

STCK22 STCK22 ,

STCK23 STCK23 ,

STCK24 STCK24 ,

STCK25 STCK25 ,

STCK26 STCK26 ,

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs

STCK27 STCK27 ,

STCK28 STCK28 ,

STCK3 STCK3 ,

STCK4 STCK4 ,

STCK5 STCK5 ,

STCK6 STCK6 ,

STCK7 STCK7 ,

STCK8 STCK8 ,

STCK9 STCK9 ,

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK1

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-533.1,	81.8,	2	6.1,	428.2,	654.5,	-542.4,	44.8,
3	6.1,	512.5,	630.6,	-535.3,	6.4,	4	6.1,	581.2,	591.2,	-515.5,	-32.2,
5	6.1,	632.2,	537.5,	-483.8,	-69.8,	6	6.1,	664.1,	475.4,	-437.3,	-105.3,
7	6.1,	675.8,	400.3,	-377.5,	-137.6,	8	6.1,	666.9,	313.1,	-306.3,	-165.7,
9	6.1,	642.6,	223.5,	-228.1,	-186.4,	10	6.1,	658.5,	330.9,	-247.2,	-203.9,
11	6.1,	654.5,	428.2,	-258.9,	-215.2,	12	6.1,	630.6,	512.5,	-262.6,	-220.0,
13	6.1,	591.2,	581.2,	-258.4,	-219.9,	14	6.1,	537.5,	632.2,	-246.3,	-215.0,
15	6.1,	475.4,	664.1,	-226.7,	-199.6,	16	6.1,	400.3,	675.8,	-200.3,	-177.4,
17	6.1,	313.1,	666.9,	-167.8,	-149.7,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-125.4,	-81.8,	20	6.1,	428.2,	654.5,	-112.1,	-44.8,
21	6.1,	512.5,	630.6,	-95.3,	-6.4,	22	6.1,	581.2,	591.2,	-75.7,	32.2,
23	6.1,	632.2,	537.5,	-53.8,	69.8,	24	6.1,	664.1,	475.4,	-38.1,	105.3,
25	6.1,	675.8,	400.3,	-22.8,	137.6,	26	6.1,	666.9,	313.1,	-6.8,	165.7,
27	6.1,	642.6,	223.5,	4.6,	186.4,	28	6.1,	658.5,	330.9,	-83.6,	203.9,
29	6.1,	654.5,	428.2,	-169.3,	215.2,	30	6.1,	630.6,	512.5,	-249.9,	220.0,
31	6.1,	591.2,	581.2,	-322.8,	219.9,	32	6.1,	537.5,	632.2,	-385.9,	215.0,
33	6.1,	475.4,	664.1,	-437.3,	199.6,	34	6.1,	400.3,	675.8,	-475.5,	177.4,
35	6.1,	313.1,	666.9,	-499.1,	149.7,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK2

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-434.7,	99.2,	2	6.1,	428.2,	654.5,	-448.5,	79.0,
3	6.1,	512.5,	630.6,	-448.7,	56.4,	4	6.1,	581.2,	591.2,	-438.9,	32.1,
5	6.1,	632.2,	537.5,	-419.5,	6.8,	6	6.1,	664.1,	475.4,	-387.3,	-18.7,
7	6.1,	675.8,	400.3,	-343.3,	-43.6,	8	6.1,	666.9,	313.1,	-288.9,	-67.2,
9	6.1,	642.6,	223.5,	-228.1,	-86.4,	10	6.1,	658.5,	330.9,	-264.6,	-105.4,
11	6.1,	654.5,	428.2,	-293.1,	-121.2,	12	6.1,	630.6,	512.5,	-312.6,	-133.4,
13	6.1,	591.2,	581.2,	-322.7,	-143.3,	14	6.1,	537.5,	632.2,	-322.9,	-150.7,
15	6.1,	475.4,	664.1,	-313.3,	-149.6,	16	6.1,	400.3,	675.8,	-294.3,	-143.1,
17	6.1,	313.1,	666.9,	-266.2,	-132.4,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-223.9,	-99.2,	20	6.1,	428.2,	654.5,	-206.0,	-79.0,
21	6.1,	512.5,	630.6,	-181.9,	-56.4,	22	6.1,	581.2,	591.2,	-152.3,	-32.1,
23	6.1,	632.2,	537.5,	-118.0,	-6.8,	24	6.1,	664.1,	475.4,	-88.1,	18.7,
25	6.1,	675.8,	400.3,	-57.0,	43.6,	26	6.1,	666.9,	313.1,	-24.2,	67.2,
27	6.1,	642.6,	223.5,	4.6,	86.4,	28	6.1,	658.5,	330.9,	-66.3,	105.4,
29	6.1,	654.5,	428.2,	-135.1,	121.2,	30	6.1,	630.6,	512.5,	-199.9,	133.4,
31	6.1,	591.2,	581.2,	-258.5,	143.3,	32	6.1,	537.5,	632.2,	-309.3,	150.7,
33	6.1,	475.4,	664.1,	-350.7,	149.6,	34	6.1,	400.3,	675.8,	-381.5,	143.1,
35	6.1,	313.1,	666.9,	-400.7,	132.4,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK3

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-336.2,	116.5,	2	6.1,	428.2,	654.5,	-354.5,	113.2,
3	6.1,	512.5,	630.6,	-362.1,	106.4,	4	6.1,	581.2,	591.2,	-362.3,	96.3,
5	6.1,	632.2,	537.5,	-355.2,	83.4,	6	6.1,	664.1,	475.4,	-337.3,	67.9,
7	6.1,	675.8,	400.3,	-309.1,	50.3,	8	6.1,	666.9,	313.1,	-271.5,	31.3,
9	6.1,	642.6,	223.5,	-228.1,	13.7,	10	6.1,	658.5,	330.9,	-282.0,	-6.9,
11	6.1,	654.5,	428.2,	-327.3,	-27.2,	12	6.1,	630.6,	512.5,	-362.6,	-46.8,

13	6.1,	591.2,	581.2,	-386.9,	-66.7,	14	6.1,	537.5,	632.2,	-399.5,	-86.4,
15	6.1,	475.4,	664.1,	-399.9,	-99.6,	16	6.1,	400.3,	675.8,	-388.2,	-108.9,
17	6.1,	313.1,	666.9,	-364.7,	-115.0,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-322.4,	-116.5,	20	6.1,	428.2,	654.5,	-300.0,	-113.2,
21	6.1,	512.5,	630.6,	-268.5,	-106.4,	22	6.1,	581.2,	591.2,	-228.9,	-96.3,
23	6.1,	632.2,	537.5,	-182.3,	-83.4,	24	6.1,	664.1,	475.4,	-138.1,	-67.9,
25	6.1,	675.8,	400.3,	-91.2,	-50.3,	26	6.1,	666.9,	313.1,	-41.5,	-31.3,
27	6.1,	642.6,	223.5,	4.6,	-13.6,	28	6.1,	658.5,	330.9,	-48.9,	6.9,
29	6.1,	654.5,	428.2,	-100.9,	27.2,	30	6.1,	630.6,	512.5,	-149.9,	46.8,
31	6.1,	591.2,	581.2,	-194.2,	66.7,	32	6.1,	537.5,	632.2,	-232.7,	86.4,
33	6.1,	475.4,	664.1,	-264.1,	99.6,	34	6.1,	400.3,	675.8,	-287.5,	108.9,
35	6.1,	313.1,	666.9,	-302.2,	115.0,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK4

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-237.7,	133.9,	2	6.1,	428.2,	654.5,	-260.5,	147.4,
3	6.1,	512.5,	630.6,	-275.4,	156.4,	4	6.1,	581.2,	591.2,	-285.7,	160.6,
5	6.1,	632.2,	537.5,	-290.9,	160.0,	6	6.1,	664.1,	475.4,	-287.3,	154.5,
7	6.1,	675.8,	400.3,	-274.9,	144.3,	8	6.1,	666.9,	313.1,	-254.2,	129.8,
9	6.1,	642.6,	223.5,	-228.1,	113.6,	10	6.1,	658.5,	330.9,	-299.3,	91.6,
11	6.1,	654.5,	428.2,	-361.5,	66.7,	12	6.1,	630.6,	512.5,	-412.6,	39.8,
13	6.1,	591.2,	581.2,	-451.2,	9.9,	14	6.1,	537.5,	632.2,	-476.1,	-22.2,
15	6.1,	475.4,	664.1,	-486.6,	-49.6,	16	6.1,	400.3,	675.8,	-482.2,	-74.7,
17	6.1,	313.1,	666.9,	-463.2,	-97.6,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-420.9,	-133.9,	20	6.1,	428.2,	654.5,	-394.0,	-147.4,
21	6.1,	512.5,	630.6,	-355.1,	-156.4,	22	6.1,	581.2,	591.2,	-305.5,	-160.6,
23	6.1,	632.2,	537.5,	-246.6,	-160.0,	24	6.1,	664.1,	475.4,	-188.1,	-154.5,
25	6.1,	675.8,	400.3,	-125.4,	-144.3,	26	6.1,	666.9,	313.1,	-58.9,	-129.8,
27	6.1,	642.6,	223.5,	4.6,	-113.6,	28	6.1,	658.5,	330.9,	-31.6,	-91.6,
29	6.1,	654.5,	428.2,	-66.7,	-66.7,	30	6.1,	630.6,	512.5,	-99.8,	-39.8,
31	6.1,	591.2,	581.2,	-130.0,	-9.9,	32	6.1,	537.5,	632.2,	-156.1,	22.2,
33	6.1,	475.4,	664.1,	-177.5,	49.6,	34	6.1,	400.3,	675.8,	-193.6,	74.7,
35	6.1,	313.1,	666.9,	-203.7,	97.6,	36	0.0,	0.0,	0.0,	0.0,	0.0,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK5

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-139.2,	151.3,	2	6.1,	428.2,	654.5,	-166.6,	181.6,
3	6.1,	512.5,	630.6,	-188.9,	206.4,	4	6.1,	581.2,	591.2,	-209.1,	224.9,
5	6.1,	632.2,	537.5,	-226.7,	236.6,	6	6.1,	664.1,	475.4,	-237.3,	241.1,
7	6.1,	675.8,	400.3,	-240.7,	238.3,	8	6.1,	666.9,	313.1,	-236.8,	228.2,
9	6.1,	642.6,	223.5,	-228.1,	213.7,	10	6.1,	658.5,	330.9,	-316.7,	190.1,
11	6.1,	654.5,	428.2,	-395.7,	160.7,	12	6.1,	630.6,	512.5,	-462.6,	126.5,
13	6.1,	591.2,	581.2,	-515.5,	86.5,	14	6.1,	537.5,	632.2,	-552.7,	42.1,
15	6.1,	475.4,	664.1,	-573.1,	0.4,	16	6.1,	400.3,	675.8,	-576.2,	-40.5,
17	6.1,	313.1,	666.9,	-561.7,	-80.3,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-519.3,	-151.3,	20	6.1,	428.2,	654.5,	-487.9,	-181.6,

21	6.1,	512.5,	630.6,	-441.7,	-206.4,	22	6.1,	581.2,	591.2,	-382.1,	-224.9,
23	6.1,	632.2,	537.5,	-310.9,	-236.6,	24	6.1,	664.1,	475.4,	-238.1,	-241.1,
25	6.1,	675.8,	400.3,	-159.6,	-238.3,	26	6.1,	666.9,	313.1,	-76.3,	-228.2,
27	6.1,	642.6,	223.5,	4.6,	-213.6,	28	6.1,	658.5,	330.9,	-14.2,	-190.1,
29	6.1,	654.5,	428.2,	-32.5,	-160.7,	30	6.1,	630.6,	512.5,	-49.8,	-126.5,
31	6.1,	591.2,	581.2,	-65.7,	-86.5,	32	6.1,	537.5,	632.2,	-79.5,	-42.1,
33	6.1,	475.4,	664.1,	-90.9,	-0.4,	34	6.1,	400.3,	675.8,	-99.6,	40.5,
35	6.1,	313.1,	666.9,	-105.2,	80.3,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK6

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-493.2,	-144.7,	2	6.1,	428.2,	654.5,	-463.8,	-171.4,
3	6.1,	512.5,	630.6,	-420.3,	-192.8,	4	6.1,	581.2,	591.2,	-367.7,	-208.4,
5	6.1,	632.2,	537.5,	-307.6,	-217.7,	6	6.1,	664.1,	475.4,	-238.1,	-220.3,
7	6.1,	675.8,	400.3,	-161.4,	-216.2,	8	6.1,	666.9,	313.1,	-79.8,	-205.6,
9	6.1,	642.6,	223.5,	1.9,	-186.4,	10	6.1,	658.5,	330.9,	-20.7,	-163.9,
11	6.1,	654.5,	428.2,	-42.7,	-136.5,	12	6.1,	630.6,	512.5,	-63.4,	-105.0,
13	6.1,	591.2,	581.2,	-82.2,	-72.1,	14	6.1,	537.5,	632.2,	-98.5,	-38.8,
15	6.1,	475.4,	664.1,	-111.7,	-0.4,	16	6.1,	400.3,	675.8,	-121.6,	38.8,
17	6.1,	313.1,	666.9,	-127.8,	76.8,	18	6.1,	223.5,	642.6,	-134.9,	113.7,
19	6.1,	330.9,	658.5,	-165.4,	144.7,	20	6.1,	428.2,	654.5,	-190.7,	171.4,
21	6.1,	512.5,	630.6,	-210.3,	192.8,	22	6.1,	581.2,	591.2,	-223.5,	208.4,
23	6.1,	632.2,	537.5,	-230.0,	217.7,	24	6.1,	664.1,	475.4,	-237.3,	220.3,
25	6.1,	675.8,	400.3,	-238.9,	216.2,	26	6.1,	666.9,	313.1,	-233.3,	205.6,
27	6.1,	642.6,	223.5,	-225.4,	186.4,	28	6.1,	658.5,	330.9,	-310.2,	163.9,
29	6.1,	654.5,	428.2,	-385.4,	136.5,	30	6.1,	630.6,	512.5,	-449.0,	105.0,
31	6.1,	591.2,	581.2,	-499.0,	72.1,	32	6.1,	537.5,	632.2,	-533.8,	38.8,
33	6.1,	475.4,	664.1,	-552.3,	0.4,	34	6.1,	400.3,	675.8,	-554.1,	-38.8,
35	6.1,	313.1,	666.9,	-539.1,	-76.8,	36	6.1,	223.5,	642.6,	-507.6,	-113.7,

SOURCE ID: STCK7

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-394.7,	-127.3,	2	6.1,	428.2,	654.5,	-369.8,	-137.2,
3	6.1,	512.5,	630.6,	-333.7,	-142.8,	4	6.1,	581.2,	591.2,	-291.1,	-144.1,
5	6.1,	632.2,	537.5,	-243.3,	-141.1,	6	6.1,	664.1,	475.4,	-188.1,	-133.7,
7	6.1,	675.8,	400.3,	-127.2,	-122.3,	8	6.1,	666.9,	313.1,	-62.4,	-107.1,
9	6.1,	642.6,	223.5,	1.9,	-86.3,	10	6.1,	658.5,	330.9,	-38.1,	-65.5,
11	6.1,	654.5,	428.2,	-76.9,	-42.5,	12	6.1,	630.6,	512.5,	-113.4,	-18.4,
13	6.1,	591.2,	581.2,	-146.5,	4.5,	14	6.1,	537.5,	632.2,	-175.1,	25.5,
15	6.1,	475.4,	664.1,	-198.3,	49.6,	16	6.1,	400.3,	675.8,	-215.6,	73.0,
17	6.1,	313.1,	666.9,	-226.3,	94.1,	18	6.1,	223.5,	642.6,	-234.9,	113.7,
19	6.1,	330.9,	658.5,	-263.8,	127.3,	20	6.1,	428.2,	654.5,	-284.7,	137.2,
21	6.1,	512.5,	630.6,	-296.9,	142.8,	22	6.1,	581.2,	591.2,	-300.1,	144.1,
23	6.1,	632.2,	537.5,	-294.2,	141.1,	24	6.1,	664.1,	475.4,	-287.3,	133.7,
25	6.1,	675.8,	400.3,	-273.1,	122.3,	26	6.1,	666.9,	313.1,	-250.7,	107.1,
27	6.1,	642.6,	223.5,	-225.4,	86.3,	28	6.1,	658.5,	330.9,	-292.8,	65.5,
29	6.1,	654.5,	428.2,	-351.2,	42.5,	30	6.1,	630.6,	512.5,	-399.0,	18.4,
31	6.1,	591.2,	581.2,	-434.7,	-4.5,	32	6.1,	537.5,	632.2,	-457.2,	-25.5,
33	6.1,	475.4,	664.1,	-465.7,	-49.6,	34	6.1,	400.3,	675.8,	-460.2,	-73.0,
35	6.1,	313.1,	666.9,	-440.6,	-94.1,	36	6.1,	223.5,	642.6,	-407.6,	-113.7,

SOURCE ID: STCK8

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ

1 6.1, 330.9, 658.5, -296.2, -110.0, 2 6.1, 428.2, 654.5, -275.8, -103.0,
3 6.1, 512.5, 630.6, -247.1, -92.8, 4 6.1, 581.2, 591.2, -214.5, -79.8,
5 6.1, 632.2, 537.5, -179.0, -64.5, 6 6.1, 664.1, 475.4, -138.1, -47.1,
7 6.1, 675.8, 400.3, -93.0, -28.3, 8 6.1, 666.9, 313.1, -45.0, -8.7,
9 6.1, 642.6, 223.5, 1.9, 13.7, 10 6.1, 658.5, 330.9, -55.5, 33.0,
11 6.1, 654.5, 428.2, -111.1, 51.4, 12 6.1, 630.6, 512.5, -163.4, 68.2,
13 6.1, 591.2, 581.2, -210.8, 81.1, 14 6.1, 537.5, 632.2, -251.7, 89.8,
15 6.1, 475.4, 664.1, -284.9, 99.6, 16 6.1, 400.3, 675.8, -309.6, 107.2,
17 6.1, 313.1, 666.9, -324.8, 111.5, 18 6.1, 223.5, 642.6, -334.9, 113.6,
19 6.1, 330.9, 658.5, -362.3, 110.0, 20 6.1, 428.2, 654.5, -378.7, 103.0,
21 6.1, 512.5, 630.6, -383.5, 92.8, 22 6.1, 581.2, 591.2, -376.8, 79.8,
23 6.1, 632.2, 537.5, -358.5, 64.5, 24 6.1, 664.1, 475.4, -337.3, 47.1,
25 6.1, 675.8, 400.3, -307.3, 28.3, 26 6.1, 666.9, 313.1, -268.1, 8.7,
27 6.1, 642.6, 223.5, -225.4, -13.7, 28 6.1, 658.5, 330.9, -275.4, -33.0,
29 6.1, 654.5, 428.2, -317.0, -51.4, 30 6.1, 630.6, 512.5, -349.0, -68.2,
31 6.1, 591.2, 581.2, -370.4, -81.1, 32 6.1, 537.5, 632.2, -380.6, -89.8,
33 6.1, 475.4, 664.1, -379.1, -99.6, 34 6.1, 400.3, 675.8, -366.2, -107.2,
35 6.1, 313.1, 666.9, -342.1, -111.5, 36 6.1, 223.5, 642.6, -307.6, -113.6,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK9

IFV BH BW BL XADJ YADJ IFV BH BW BL XADJ YADJ
1 6.1, 330.9, 658.5, -197.8, -92.6, 2 6.1, 428.2, 654.5, -181.9, -68.8,
3 6.1, 512.5, 630.6, -160.5, -42.8, 4 6.1, 581.2, 591.2, -137.9, -15.6,
5 6.1, 632.2, 537.5, -114.7, 12.2, 6 6.1, 664.1, 475.4, -88.1, 39.5,
7 6.1, 675.8, 400.3, -58.8, 65.7, 8 6.1, 666.9, 313.1, -27.7, 89.8,
9 6.1, 642.6, 223.5, 1.9, 113.6, 10 6.1, 658.5, 330.9, -72.8, 131.5,
11 6.1, 654.5, 428.2, -145.3, 145.4, 12 6.1, 630.6, 512.5, -213.4, 154.8,
13 6.1, 591.2, 581.2, -275.0, 157.7, 14 6.1, 537.5, 632.2, -328.3, 154.0,
15 6.1, 475.4, 664.1, -371.6, 149.6, 16 6.1, 400.3, 675.8, -403.5, 141.4,
17 6.1, 313.1, 666.9, -423.3, 128.9, 18 6.1, 223.5, 642.6, -434.9, 113.6,
19 6.1, 330.9, 658.5, -460.8, 92.6, 20 6.1, 428.2, 654.5, -472.6, 68.8,
21 6.1, 512.5, 630.6, -470.1, 42.8, 22 6.1, 581.2, 591.2, -453.4, 15.6,
23 6.1, 632.2, 537.5, -422.8, -12.2, 24 6.1, 664.1, 475.4, -387.3, -39.5,
25 6.1, 675.8, 400.3, -341.5, -65.7, 26 6.1, 666.9, 313.1, -285.4, -89.8,
27 6.1, 642.6, 223.5, -225.4, -113.6, 28 6.1, 658.5, 330.9, -258.1, -131.5,
29 6.1, 654.5, 428.2, -282.8, -145.4, 30 6.1, 630.6, 512.5, -299.0, -154.8,
31 6.1, 591.2, 581.2, -306.2, -157.7, 32 6.1, 537.5, 632.2, -304.0, -154.0,
33 6.1, 475.4, 664.1, -292.5, -149.6, 34 6.1, 400.3, 675.8, -272.2, -141.4,
35 6.1, 313.1, 666.9, -243.6, -128.9, 36 6.1, 223.5, 642.6, -207.6, -113.6,

SOURCE ID: STCK10

IFV BH BW BL XADJ YADJ IFV BH BW BL XADJ YADJ
1 6.1, 330.9, 658.5, -99.3, -75.2, 2 6.1, 428.2, 654.5, -87.9, -34.5,
3 6.1, 512.5, 630.6, -73.8, 7.2, 4 6.1, 581.2, 591.2, -61.3, 48.7,
5 6.1, 632.2, 537.5, -50.5, 88.8, 6 6.1, 664.1, 475.4, -38.1, 126.1,
7 6.1, 675.8, 400.3, -24.6, 159.6, 8 6.1, 666.9, 313.1, -10.3, 188.3,

9	6.1,	642.6,	223.5,	1.9,	213.7,	10	6.1,	658.5,	330.9,	-90.2,	230.0,
11	6.1,	654.5,	428.2,	-179.5,	239.4,	12	6.1,	630.6,	512.5,	-263.4,	241.5,
13	6.1,	591.2,	581.2,	-339.3,	234.3,	14	6.1,	537.5,	632.2,	-404.9,	218.3,
15	6.1,	475.4,	664.1,	-458.2,	199.6,	16	6.1,	400.3,	675.8,	-497.5,	175.6,
17	6.1,	313.1,	666.9,	-521.7,	146.2,	18	6.1,	223.5,	642.6,	-534.9,	113.6,
19	6.1,	330.9,	658.5,	-559.3,	75.2,	20	6.1,	428.2,	654.5,	-566.6,	34.5,
21	6.1,	512.5,	630.6,	-556.7,	-7.2,	22	6.1,	581.2,	591.2,	-530.0,	-48.7,
23	6.1,	632.2,	537.5,	-487.1,	-88.8,	24	6.1,	664.1,	475.4,	-437.3,	-126.1,
25	6.1,	675.8,	400.3,	-375.8,	-159.6,	26	6.1,	666.9,	313.1,	-302.8,	-188.3,
27	6.1,	642.6,	223.5,	-225.4,	-213.7,	28	6.1,	658.5,	330.9,	-240.7,	-230.0,
29	6.1,	654.5,	428.2,	-248.6,	-239.4,	30	6.1,	630.6,	512.5,	-249.0,	-241.5,
31	6.1,	591.2,	581.2,	-241.9,	-234.3,	32	6.1,	537.5,	632.2,	-227.4,	-218.3,
33	6.1,	475.4,	664.1,	-205.9,	-199.6,	34	6.1,	400.3,	675.8,	-178.2,	-175.6,
35	6.1,	313.1,	666.9,	-145.2,	-146.2,	36	6.1,	223.5,	642.6,	-107.6,	-113.6,

SOURCE ID: STCK11

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-247.5,	57.0,	2	6.1,	271.5,	463.0,	-249.1,	53.7,
3	6.1,	335.8,	439.1,	-243.2,	48.8,	4	6.1,	389.9,	401.9,	-229.8,	42.4,
5	6.1,	432.1,	355.5,	-212.6,	34.7,	6	6.1,	461.2,	306.2,	-196.8,	25.9,
7	6.1,	476.3,	247.7,	-175.1,	16.4,	8	6.1,	477.0,	181.6,	-148.0,	6.4,
9	6.1,	468.3,	120.4,	-118.7,	-4.1,	10	6.1,	472.9,	199.0,	-156.5,	-11.0,
11	6.1,	463.0,	271.5,	-189.5,	-17.6,	12	6.1,	439.1,	335.8,	-216.7,	-23.6,
13	6.1,	401.9,	389.9,	-237.3,	-28.9,	14	6.1,	355.5,	432.1,	-250.8,	-34.8,
15	6.1,	306.2,	461.2,	-256.6,	-43.7,	16	6.1,	247.7,	476.3,	-254.6,	-51.2,
17	6.1,	181.6,	477.0,	-244.9,	-57.2,	18	6.1,	120.4,	468.3,	-230.0,	-58.5,
19	6.1,	199.0,	472.9,	-225.4,	-57.0,	20	6.1,	271.5,	463.0,	-214.0,	-53.7,
21	6.1,	335.8,	439.1,	-196.0,	-48.8,	22	6.1,	389.9,	401.9,	-172.1,	-42.4,
23	6.1,	432.1,	355.5,	-142.9,	-34.7,	24	6.1,	461.2,	306.2,	-109.4,	-25.9,
25	6.1,	476.3,	247.7,	-72.6,	-16.4,	26	6.1,	477.0,	181.6,	-33.6,	-6.4,
27	6.1,	468.3,	120.4,	-1.7,	4.1,	28	6.1,	472.9,	199.0,	-42.5,	11.0,
29	6.1,	463.0,	271.5,	-82.1,	17.6,	30	6.1,	439.1,	335.8,	-119.1,	23.6,
31	6.1,	401.9,	389.9,	-152.6,	28.9,	32	6.1,	355.5,	432.1,	-181.4,	34.8,
33	6.1,	306.2,	461.2,	-204.7,	43.7,	34	6.1,	247.7,	476.3,	-221.8,	51.2,
35	6.1,	181.6,	477.0,	-232.1,	57.2,	36	6.1,	120.4,	468.3,	-238.3,	58.5,

SOURCE ID: STCK12

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-149.0,	74.3,	2	6.1,	271.5,	463.0,	-155.1,	87.9,
3	6.1,	335.8,	439.1,	-156.6,	98.8,	4	6.1,	389.9,	401.9,	-153.2,	106.6,
5	6.1,	432.1,	355.5,	-148.3,	111.3,	6	6.1,	461.2,	306.2,	-146.8,	112.5,
7	6.1,	476.3,	247.7,	-140.9,	110.4,	8	6.1,	477.0,	181.6,	-130.6,	104.9,
9	6.1,	468.3,	120.4,	-118.7,	95.9,	10	6.1,	472.9,	199.0,	-173.8,	87.5,
11	6.1,	463.0,	271.5,	-223.7,	76.4,	12	6.1,	439.1,	335.8,	-266.7,	63.0,
13	6.1,	401.9,	389.9,	-301.6,	47.7,	14	6.1,	355.5,	432.1,	-327.4,	29.4,
15	6.1,	306.2,	461.2,	-343.2,	6.3,	16	6.1,	247.7,	476.3,	-348.6,	-17.0,
17	6.1,	181.6,	477.0,	-343.3,	-39.8,	18	6.1,	120.4,	468.3,	-330.0,	-58.5,
19	6.1,	199.0,	472.9,	-323.9,	-74.3,	20	6.1,	271.5,	463.0,	-307.9,	-87.9,
21	6.1,	335.8,	439.1,	-282.6,	-98.8,	22	6.1,	389.9,	401.9,	-248.7,	-106.6,
23	6.1,	432.1,	355.5,	-207.2,	-111.3,	24	6.1,	461.2,	306.2,	-159.4,	-112.5,
25	6.1,	476.3,	247.7,	-106.8,	-110.4,	26	6.1,	477.0,	181.6,	-51.0,	-104.9,
27	6.1,	468.3,	120.4,	-1.7,	-95.9,	28	6.1,	472.9,	199.0,	-25.2,	-87.5,
29	6.1,	463.0,	271.5,	-47.9,	-76.4,	30	6.1,	439.1,	335.8,	-69.1,	-63.0,
31	6.1,	401.9,	389.9,	-88.3,	-47.7,	32	6.1,	355.5,	432.1,	-104.8,	-29.4,

33 6.1, 306.2, 461.2, -118.1, -6.3, 34 6.1, 247.7, 476.3, -127.8, 17.0,
35 6.1, 181.6, 477.0, -133.6, 39.8, 36 6.1, 120.4, 468.3, -138.3, 58.5,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK13

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-226.6,	-61.2,	2	6.1,	271.5,	463.0,	-208.1,	-59.1,
3	6.1,	335.8,	439.1,	-183.2,	-55.1,	4	6.1,	389.9,	401.9,	-152.7,	-49.5,
5	6.1,	432.1,	355.5,	-120.7,	-42.4,	6	6.1,	461.2,	306.2,	-92.9,	-34.1,
7	6.1,	476.3,	247.7,	-62.3,	-24.6,	8	6.1,	477.0,	181.6,	-29.8,	-14.5,
9	6.1,	468.3,	120.4,	1.3,	-4.1,	10	6.1,	472.9,	199.0,	-38.3,	9.8,
11	6.1,	463.0,	271.5,	-76.7,	23.5,	12	6.1,	439.1,	335.8,	-112.8,	36.4,
13	6.1,	401.9,	389.9,	-145.4,	48.2,	14	6.1,	355.5,	432.1,	-173.6,	57.1,
15	6.1,	306.2,	461.2,	-196.6,	60.2,	16	6.1,	247.7,	476.3,	-213.5,	61.5,
17	6.1,	181.6,	477.0,	-224.0,	61.0,	18	6.1,	120.4,	468.3,	-230.0,	61.5,
19	6.1,	199.0,	472.9,	-246.2,	61.2,	20	6.1,	271.5,	463.0,	-255.0,	59.1,
21	6.1,	335.8,	439.1,	-256.0,	55.1,	22	6.1,	389.9,	401.9,	-249.2,	49.5,
23	6.1,	432.1,	355.5,	-234.9,	42.4,	24	6.1,	461.2,	306.2,	-213.4,	34.1,
25	6.1,	476.3,	247.7,	-185.4,	24.6,	26	6.1,	477.0,	181.6,	-151.8,	14.5,
27	6.1,	468.3,	120.4,	-121.7,	4.1,	28	6.1,	472.9,	199.0,	-160.7,	-9.8,
29	6.1,	463.0,	271.5,	-194.8,	-23.5,	30	6.1,	439.1,	335.8,	-223.1,	-36.4,
31	6.1,	401.9,	389.9,	-244.5,	-48.2,	32	6.1,	355.5,	432.1,	-258.5,	-57.1,
33	6.1,	306.2,	461.2,	-264.7,	-60.2,	34	6.1,	247.7,	476.3,	-262.8,	-61.5,
35	6.1,	181.6,	477.0,	-252.9,	-61.0,	36	6.1,	120.4,	468.3,	-238.3,	-61.5,

SOURCE ID: STCK14

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-128.1,	-43.8,	2	6.1,	271.5,	463.0,	-114.1,	-24.9,
3	6.1,	335.8,	439.1,	-96.6,	-5.1,	4	6.1,	389.9,	401.9,	-76.1,	14.7,
5	6.1,	432.1,	355.5,	-56.4,	34.1,	6	6.1,	461.2,	306.2,	-42.9,	52.5,
7	6.1,	476.3,	247.7,	-28.1,	69.3,	8	6.1,	477.0,	181.6,	-12.5,	84.0,
9	6.1,	468.3,	120.4,	1.3,	95.9,	10	6.1,	472.9,	199.0,	-55.7,	108.3,
11	6.1,	463.0,	271.5,	-110.9,	117.4,	12	6.1,	439.1,	335.8,	-162.8,	123.0,
13	6.1,	401.9,	389.9,	-209.7,	124.8,	14	6.1,	355.5,	432.1,	-250.2,	121.4,
15	6.1,	306.2,	461.2,	-283.2,	110.2,	16	6.1,	247.7,	476.3,	-307.5,	95.8,
17	6.1,	181.6,	477.0,	-322.5,	78.3,	18	6.1,	120.4,	468.3,	-330.0,	61.5,
19	6.1,	199.0,	472.9,	-344.7,	43.8,	20	6.1,	271.5,	463.0,	-349.0,	24.9,
21	6.1,	335.8,	439.1,	-342.6,	5.1,	22	6.1,	389.9,	401.9,	-325.8,	-14.7,
23	6.1,	432.1,	355.5,	-299.1,	-34.1,	24	6.1,	461.2,	306.2,	-263.4,	-52.5,
25	6.1,	476.3,	247.7,	-219.6,	-69.3,	26	6.1,	477.0,	181.6,	-169.1,	-84.0,
27	6.1,	468.3,	120.4,	-121.7,	-95.9,	28	6.1,	472.9,	199.0,	-143.3,	-108.3,
29	6.1,	463.0,	271.5,	-160.6,	-117.4,	30	6.1,	439.1,	335.8,	-173.1,	-123.0,
31	6.1,	401.9,	389.9,	-180.2,	-124.8,	32	6.1,	355.5,	432.1,	-181.9,	-121.4,
33	6.1,	306.2,	461.2,	-178.1,	-110.2,	34	6.1,	247.7,	476.3,	-168.8,	-95.7,
35	6.1,	181.6,	477.0,	-154.5,	-78.3,	36	6.1,	120.4,	468.3,	-138.3,	-61.5,

SOURCE ID: STCK15

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-533.1,	81.8,	2	6.1,	428.2,	654.5,	-542.4,	44.8,
3	6.1,	512.5,	630.6,	-535.3,	6.4,	4	6.1,	581.2,	591.2,	-515.5,	-32.2,
5	6.1,	632.2,	537.5,	-483.8,	-69.8,	6	6.1,	664.1,	475.4,	-437.3,	-105.3,
7	6.1,	675.8,	400.3,	-377.5,	-137.6,	8	6.1,	666.9,	313.1,	-306.3,	-165.7,
9	6.1,	642.6,	223.5,	-228.1,	-186.4,	10	6.1,	658.5,	330.9,	-247.2,	-203.9,
11	6.1,	654.5,	428.2,	-258.9,	-215.2,	12	6.1,	630.6,	512.5,	-262.6,	-220.0,
13	6.1,	591.2,	581.2,	-258.4,	-219.9,	14	6.1,	537.5,	632.2,	-246.3,	-215.0,
15	6.1,	475.4,	664.1,	-226.7,	-199.6,	16	6.1,	400.3,	675.8,	-200.3,	-177.4,
17	6.1,	313.1,	666.9,	-167.8,	-149.7,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-125.4,	-81.8,	20	6.1,	428.2,	654.5,	-112.1,	-44.8,
21	6.1,	512.5,	630.6,	-95.3,	-6.4,	22	6.1,	581.2,	591.2,	-75.7,	32.2,
23	6.1,	632.2,	537.5,	-53.8,	69.8,	24	6.1,	664.1,	475.4,	-38.1,	105.3,
25	6.1,	675.8,	400.3,	-22.8,	137.6,	26	6.1,	666.9,	313.1,	-6.8,	165.7,
27	6.1,	642.6,	223.5,	4.6,	186.4,	28	6.1,	658.5,	330.9,	-83.6,	203.9,
29	6.1,	654.5,	428.2,	-169.3,	215.2,	30	6.1,	630.6,	512.5,	-249.9,	220.0,
31	6.1,	591.2,	581.2,	-322.8,	219.9,	32	6.1,	537.5,	632.2,	-385.9,	215.0,
33	6.1,	475.4,	664.1,	-437.3,	199.6,	34	6.1,	400.3,	675.8,	-475.5,	177.4,
35	6.1,	313.1,	666.9,	-499.1,	149.7,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK16

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-434.7,	99.2,	2	6.1,	428.2,	654.5,	-448.5,	79.0,
3	6.1,	512.5,	630.6,	-448.7,	56.4,	4	6.1,	581.2,	591.2,	-438.9,	32.1,
5	6.1,	632.2,	537.5,	-419.5,	6.8,	6	6.1,	664.1,	475.4,	-387.3,	-18.7,
7	6.1,	675.8,	400.3,	-343.3,	-43.6,	8	6.1,	666.9,	313.1,	-288.9,	-67.2,
9	6.1,	642.6,	223.5,	-228.1,	-86.4,	10	6.1,	658.5,	330.9,	-264.6,	-105.4,
11	6.1,	654.5,	428.2,	-293.1,	-121.2,	12	6.1,	630.6,	512.5,	-312.6,	-133.4,
13	6.1,	591.2,	581.2,	-322.7,	-143.3,	14	6.1,	537.5,	632.2,	-322.9,	-150.7,
15	6.1,	475.4,	664.1,	-313.3,	-149.6,	16	6.1,	400.3,	675.8,	-294.3,	-143.1,
17	6.1,	313.1,	666.9,	-266.2,	-132.4,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-223.9,	-99.2,	20	6.1,	428.2,	654.5,	-206.0,	-79.0,
21	6.1,	512.5,	630.6,	-181.9,	-56.4,	22	6.1,	581.2,	591.2,	-152.3,	-32.1,
23	6.1,	632.2,	537.5,	-118.0,	-6.8,	24	6.1,	664.1,	475.4,	-88.1,	18.7,
25	6.1,	675.8,	400.3,	-57.0,	43.6,	26	6.1,	666.9,	313.1,	-24.2,	67.2,
27	6.1,	642.6,	223.5,	4.6,	86.4,	28	6.1,	658.5,	330.9,	-66.3,	105.4,
29	6.1,	654.5,	428.2,	-135.1,	121.2,	30	6.1,	630.6,	512.5,	-199.9,	133.4,
31	6.1,	591.2,	581.2,	-258.5,	143.3,	32	6.1,	537.5,	632.2,	-309.3,	150.7,
33	6.1,	475.4,	664.1,	-350.7,	149.6,	34	6.1,	400.3,	675.8,	-381.5,	143.1,
35	6.1,	313.1,	666.9,	-400.7,	132.4,	36	0.0,	0.0,	0.0,	0.0,	0.0,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK17

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-336.2,	116.5,	2	6.1,	428.2,	654.5,	-354.5,	113.2,
3	6.1,	512.5,	630.6,	-362.1,	106.4,	4	6.1,	581.2,	591.2,	-362.3,	96.3,

5	6.1,	632.2,	537.5,	-355.2,	83.4,	6	6.1,	664.1,	475.4,	-337.3,	67.9,
7	6.1,	675.8,	400.3,	-309.1,	50.3,	8	6.1,	666.9,	313.1,	-271.5,	31.3,
9	6.1,	642.6,	223.5,	-228.1,	13.7,	10	6.1,	658.5,	330.9,	-282.0,	-6.9,
11	6.1,	654.5,	428.2,	-327.3,	-27.2,	12	6.1,	630.6,	512.5,	-362.6,	-46.8,
13	6.1,	591.2,	581.2,	-386.9,	-66.7,	14	6.1,	537.5,	632.2,	-399.5,	-86.4,
15	6.1,	475.4,	664.1,	-399.9,	-99.6,	16	6.1,	400.3,	675.8,	-388.2,	-108.9,
17	6.1,	313.1,	666.9,	-364.7,	-115.0,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-322.4,	-116.5,	20	6.1,	428.2,	654.5,	-300.0,	-113.2,
21	6.1,	512.5,	630.6,	-268.5,	-106.4,	22	6.1,	581.2,	591.2,	-228.9,	-96.3,
23	6.1,	632.2,	537.5,	-182.3,	-83.4,	24	6.1,	664.1,	475.4,	-138.1,	-67.9,
25	6.1,	675.8,	400.3,	-91.2,	-50.3,	26	6.1,	666.9,	313.1,	-41.5,	-31.3,
27	6.1,	642.6,	223.5,	4.6,	-13.6,	28	6.1,	658.5,	330.9,	-48.9,	6.9,
29	6.1,	654.5,	428.2,	-100.9,	27.2,	30	6.1,	630.6,	512.5,	-149.9,	46.8,
31	6.1,	591.2,	581.2,	-194.2,	66.7,	32	6.1,	537.5,	632.2,	-232.7,	86.4,
33	6.1,	475.4,	664.1,	-264.1,	99.6,	34	6.1,	400.3,	675.8,	-287.5,	108.9,
35	6.1,	313.1,	666.9,	-302.2,	115.0,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK18

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-237.7,	133.9,	2	6.1,	428.2,	654.5,	-260.5,	147.4,
3	6.1,	512.5,	630.6,	-275.4,	156.4,	4	6.1,	581.2,	591.2,	-285.7,	160.6,
5	6.1,	632.2,	537.5,	-290.9,	160.0,	6	6.1,	664.1,	475.4,	-287.3,	154.5,
7	6.1,	675.8,	400.3,	-274.9,	144.3,	8	6.1,	666.9,	313.1,	-254.2,	129.8,
9	6.1,	642.6,	223.5,	-228.1,	113.6,	10	6.1,	658.5,	330.9,	-299.3,	91.6,
11	6.1,	654.5,	428.2,	-361.5,	66.7,	12	6.1,	630.6,	512.5,	-412.6,	39.8,
13	6.1,	591.2,	581.2,	-451.2,	9.9,	14	6.1,	537.5,	632.2,	-476.1,	-22.2,
15	6.1,	475.4,	664.1,	-486.6,	-49.6,	16	6.1,	400.3,	675.8,	-482.2,	-74.7,
17	6.1,	313.1,	666.9,	-463.2,	-97.6,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-420.9,	-133.9,	20	6.1,	428.2,	654.5,	-394.0,	-147.4,
21	6.1,	512.5,	630.6,	-355.1,	-156.4,	22	6.1,	581.2,	591.2,	-305.5,	-160.6,
23	6.1,	632.2,	537.5,	-246.6,	-160.0,	24	6.1,	664.1,	475.4,	-188.1,	-154.5,
25	6.1,	675.8,	400.3,	-125.4,	-144.3,	26	6.1,	666.9,	313.1,	-58.9,	-129.8,
27	6.1,	642.6,	223.5,	4.6,	-113.6,	28	6.1,	658.5,	330.9,	-31.6,	-91.6,
29	6.1,	654.5,	428.2,	-66.7,	-66.7,	30	6.1,	630.6,	512.5,	-99.8,	-39.8,
31	6.1,	591.2,	581.2,	-130.0,	-9.9,	32	6.1,	537.5,	632.2,	-156.1,	22.2,
33	6.1,	475.4,	664.1,	-177.5,	49.6,	34	6.1,	400.3,	675.8,	-193.6,	74.7,
35	6.1,	313.1,	666.9,	-203.7,	97.6,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK19

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-139.2,	151.3,	2	6.1,	428.2,	654.5,	-166.6,	181.6,
3	6.1,	512.5,	630.6,	-188.9,	206.4,	4	6.1,	581.2,	591.2,	-209.1,	224.9,
5	6.1,	632.2,	537.5,	-226.7,	236.6,	6	6.1,	664.1,	475.4,	-237.3,	241.1,
7	6.1,	675.8,	400.3,	-240.7,	238.3,	8	6.1,	666.9,	313.1,	-236.8,	228.2,
9	6.1,	642.6,	223.5,	-228.1,	213.7,	10	6.1,	658.5,	330.9,	-316.7,	190.1,
11	6.1,	654.5,	428.2,	-395.7,	160.7,	12	6.1,	630.6,	512.5,	-462.6,	126.5,
13	6.1,	591.2,	581.2,	-515.5,	86.5,	14	6.1,	537.5,	632.2,	-552.7,	42.1,
15	6.1,	475.4,	664.1,	-573.1,	0.4,	16	6.1,	400.3,	675.8,	-576.2,	-40.5,
17	6.1,	313.1,	666.9,	-561.7,	-80.3,	18	0.0,	0.0,	0.0,	0.0,	0.0,
19	6.1,	330.9,	658.5,	-519.3,	-151.3,	20	6.1,	428.2,	654.5,	-487.9,	-181.6,
21	6.1,	512.5,	630.6,	-441.7,	-206.4,	22	6.1,	581.2,	591.2,	-382.1,	-224.9,
23	6.1,	632.2,	537.5,	-310.9,	-236.6,	24	6.1,	664.1,	475.4,	-238.1,	-241.1,
25	6.1,	675.8,	400.3,	-159.6,	-238.3,	26	6.1,	666.9,	313.1,	-76.3,	-228.2,
27	6.1,	642.6,	223.5,	4.6,	-213.6,	28	6.1,	658.5,	330.9,	-14.2,	-190.1,

29	6.1,	654.5,	428.2,	-32.5,	-160.7,	30	6.1,	630.6,	512.5,	-49.8,	-126.5,
31	6.1,	591.2,	581.2,	-65.7,	-86.5,	32	6.1,	537.5,	632.2,	-79.5,	-42.1,
33	6.1,	475.4,	664.1,	-90.9,	-0.4,	34	6.1,	400.3,	675.8,	-99.6,	40.5,
35	6.1,	313.1,	666.9,	-105.2,	80.3,	36	0.0,	0.0,	0.0,	0.0,	0.0,

SOURCE ID: STCK20

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-493.2,	-144.7,	2	6.1,	428.2,	654.5,	-463.8,	-171.4,
3	6.1,	512.5,	630.6,	-420.3,	-192.8,	4	6.1,	581.2,	591.2,	-367.7,	-208.4,
5	6.1,	632.2,	537.5,	-307.6,	-217.7,	6	6.1,	664.1,	475.4,	-238.1,	-220.3,
7	6.1,	675.8,	400.3,	-161.4,	-216.2,	8	6.1,	666.9,	313.1,	-79.8,	-205.6,
9	6.1,	642.6,	223.5,	1.9,	-186.4,	10	6.1,	658.5,	330.9,	-20.7,	-163.9,
11	6.1,	654.5,	428.2,	-42.7,	-136.5,	12	6.1,	630.6,	512.5,	-63.4,	-105.0,
13	6.1,	591.2,	581.2,	-82.2,	-72.1,	14	6.1,	537.5,	632.2,	-98.5,	-38.8,
15	6.1,	475.4,	664.1,	-111.7,	-0.4,	16	6.1,	400.3,	675.8,	-121.6,	38.8,
17	6.1,	313.1,	666.9,	-127.8,	76.8,	18	6.1,	223.5,	642.6,	-134.9,	113.7,
19	6.1,	330.9,	658.5,	-165.4,	144.7,	20	6.1,	428.2,	654.5,	-190.7,	171.4,
21	6.1,	512.5,	630.6,	-210.3,	192.8,	22	6.1,	581.2,	591.2,	-223.5,	208.4,
23	6.1,	632.2,	537.5,	-230.0,	217.7,	24	6.1,	664.1,	475.4,	-237.3,	220.3,
25	6.1,	675.8,	400.3,	-238.9,	216.2,	26	6.1,	666.9,	313.1,	-233.3,	205.6,
27	6.1,	642.6,	223.5,	-225.4,	186.4,	28	6.1,	658.5,	330.9,	-310.2,	163.9,
29	6.1,	654.5,	428.2,	-385.4,	136.5,	30	6.1,	630.6,	512.5,	-449.0,	105.0,
31	6.1,	591.2,	581.2,	-499.0,	72.1,	32	6.1,	537.5,	632.2,	-533.8,	38.8,
33	6.1,	475.4,	664.1,	-552.3,	0.4,	34	6.1,	400.3,	675.8,	-554.1,	-38.8,
35	6.1,	313.1,	666.9,	-539.1,	-76.8,	36	6.1,	223.5,	642.6,	-507.6,	-113.7,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK21

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-394.7,	-127.3,	2	6.1,	428.2,	654.5,	-369.8,	-137.2,
3	6.1,	512.5,	630.6,	-333.7,	-142.8,	4	6.1,	581.2,	591.2,	-291.1,	-144.1,
5	6.1,	632.2,	537.5,	-243.3,	-141.1,	6	6.1,	664.1,	475.4,	-188.1,	-133.7,
7	6.1,	675.8,	400.3,	-127.2,	-122.3,	8	6.1,	666.9,	313.1,	-62.4,	-107.1,
9	6.1,	642.6,	223.5,	1.9,	-86.3,	10	6.1,	658.5,	330.9,	-38.1,	-65.5,
11	6.1,	654.5,	428.2,	-76.9,	-42.5,	12	6.1,	630.6,	512.5,	-113.4,	-18.4,
13	6.1,	591.2,	581.2,	-146.5,	4.5,	14	6.1,	537.5,	632.2,	-175.1,	25.5,
15	6.1,	475.4,	664.1,	-198.3,	49.6,	16	6.1,	400.3,	675.8,	-215.6,	73.0,
17	6.1,	313.1,	666.9,	-226.3,	94.1,	18	6.1,	223.5,	642.6,	-234.9,	113.7,
19	6.1,	330.9,	658.5,	-263.8,	127.3,	20	6.1,	428.2,	654.5,	-284.7,	137.2,
21	6.1,	512.5,	630.6,	-296.9,	142.8,	22	6.1,	581.2,	591.2,	-300.1,	144.1,
23	6.1,	632.2,	537.5,	-294.2,	141.1,	24	6.1,	664.1,	475.4,	-287.3,	133.7,
25	6.1,	675.8,	400.3,	-273.1,	122.3,	26	6.1,	666.9,	313.1,	-250.7,	107.1,
27	6.1,	642.6,	223.5,	-225.4,	86.3,	28	6.1,	658.5,	330.9,	-292.8,	65.5,
29	6.1,	654.5,	428.2,	-351.2,	42.5,	30	6.1,	630.6,	512.5,	-399.0,	18.4,
31	6.1,	591.2,	581.2,	-434.7,	-4.5,	32	6.1,	537.5,	632.2,	-457.2,	-25.5,
33	6.1,	475.4,	664.1,	-465.7,	-49.6,	34	6.1,	400.3,	675.8,	-460.2,	-73.0,
35	6.1,	313.1,	666.9,	-440.6,	-94.1,	36	6.1,	223.5,	642.6,	-407.6,	-113.7,

SOURCE ID: STCK22

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-296.2,	-110.0,	2	6.1,	428.2,	654.5,	-275.8,	-103.0,
3	6.1,	512.5,	630.6,	-247.1,	-92.8,	4	6.1,	581.2,	591.2,	-214.5,	-79.8,
5	6.1,	632.2,	537.5,	-179.0,	-64.5,	6	6.1,	664.1,	475.4,	-138.1,	-47.1,
7	6.1,	675.8,	400.3,	-93.0,	-28.3,	8	6.1,	666.9,	313.1,	-45.0,	-8.7,
9	6.1,	642.6,	223.5,	1.9,	13.7,	10	6.1,	658.5,	330.9,	-55.5,	33.0,
11	6.1,	654.5,	428.2,	-111.1,	51.4,	12	6.1,	630.6,	512.5,	-163.4,	68.2,
13	6.1,	591.2,	581.2,	-210.8,	81.1,	14	6.1,	537.5,	632.2,	-251.7,	89.8,
15	6.1,	475.4,	664.1,	-284.9,	99.6,	16	6.1,	400.3,	675.8,	-309.6,	107.2,
17	6.1,	313.1,	666.9,	-324.8,	111.5,	18	6.1,	223.5,	642.6,	-334.9,	113.6,
19	6.1,	330.9,	658.5,	-362.3,	110.0,	20	6.1,	428.2,	654.5,	-378.7,	103.0,
21	6.1,	512.5,	630.6,	-383.5,	92.8,	22	6.1,	581.2,	591.2,	-376.8,	79.8,
23	6.1,	632.2,	537.5,	-358.5,	64.5,	24	6.1,	664.1,	475.4,	-337.3,	47.1,
25	6.1,	675.8,	400.3,	-307.3,	28.3,	26	6.1,	666.9,	313.1,	-268.1,	8.7,
27	6.1,	642.6,	223.5,	-225.4,	-13.7,	28	6.1,	658.5,	330.9,	-275.4,	-33.0,
29	6.1,	654.5,	428.2,	-317.0,	-51.4,	30	6.1,	630.6,	512.5,	-349.0,	-68.2,
31	6.1,	591.2,	581.2,	-370.4,	-81.1,	32	6.1,	537.5,	632.2,	-380.6,	-89.8,
33	6.1,	475.4,	664.1,	-379.1,	-99.6,	34	6.1,	400.3,	675.8,	-366.2,	-107.2,
35	6.1,	313.1,	666.9,	-342.1,	-111.5,	36	6.1,	223.5,	642.6,	-307.6,	-113.6,

SOURCE ID: STCK23

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-197.8,	-92.6,	2	6.1,	428.2,	654.5,	-181.9,	-68.8,
3	6.1,	512.5,	630.6,	-160.5,	-42.8,	4	6.1,	581.2,	591.2,	-137.9,	-15.6,
5	6.1,	632.2,	537.5,	-114.7,	12.2,	6	6.1,	664.1,	475.4,	-88.1,	39.5,
7	6.1,	675.8,	400.3,	-58.8,	65.7,	8	6.1,	666.9,	313.1,	-27.7,	89.8,
9	6.1,	642.6,	223.5,	1.9,	113.6,	10	6.1,	658.5,	330.9,	-72.8,	131.5,
11	6.1,	654.5,	428.2,	-145.3,	145.4,	12	6.1,	630.6,	512.5,	-213.4,	154.8,
13	6.1,	591.2,	581.2,	-275.0,	157.7,	14	6.1,	537.5,	632.2,	-328.3,	154.0,
15	6.1,	475.4,	664.1,	-371.6,	149.6,	16	6.1,	400.3,	675.8,	-403.5,	141.4,
17	6.1,	313.1,	666.9,	-423.3,	128.9,	18	6.1,	223.5,	642.6,	-434.9,	113.6,
19	6.1,	330.9,	658.5,	-460.8,	92.6,	20	6.1,	428.2,	654.5,	-472.6,	68.8,
21	6.1,	512.5,	630.6,	-470.1,	42.8,	22	6.1,	581.2,	591.2,	-453.4,	15.6,
23	6.1,	632.2,	537.5,	-422.8,	-12.2,	24	6.1,	664.1,	475.4,	-387.3,	-39.5,
25	6.1,	675.8,	400.3,	-341.5,	-65.7,	26	6.1,	666.9,	313.1,	-285.4,	-89.8,
27	6.1,	642.6,	223.5,	-225.4,	-113.6,	28	6.1,	658.5,	330.9,	-258.1,	-131.5,
29	6.1,	654.5,	428.2,	-282.8,	-145.4,	30	6.1,	630.6,	512.5,	-299.0,	-154.8,
31	6.1,	591.2,	581.2,	-306.2,	-157.7,	32	6.1,	537.5,	632.2,	-304.0,	-154.0,
33	6.1,	475.4,	664.1,	-292.5,	-149.6,	34	6.1,	400.3,	675.8,	-272.2,	-141.4,
35	6.1,	313.1,	666.9,	-243.6,	-128.9,	36	6.1,	223.5,	642.6,	-207.6,	-113.6,

SOURCE ID: STCK24

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	330.9,	658.5,	-99.3,	-75.2,	2	6.1,	428.2,	654.5,	-87.9,	-34.5,
3	6.1,	512.5,	630.6,	-73.8,	7.2,	4	6.1,	581.2,	591.2,	-61.3,	48.7,
5	6.1,	632.2,	537.5,	-50.5,	88.8,	6	6.1,	664.1,	475.4,	-38.1,	126.1,
7	6.1,	675.8,	400.3,	-24.6,	159.6,	8	6.1,	666.9,	313.1,	-10.3,	188.3,
9	6.1,	642.6,	223.5,	1.9,	213.7,	10	6.1,	658.5,	330.9,	-90.2,	230.0,
11	6.1,	654.5,	428.2,	-179.5,	239.4,	12	6.1,	630.6,	512.5,	-263.4,	241.5,
13	6.1,	591.2,	581.2,	-339.3,	234.3,	14	6.1,	537.5,	632.2,	-404.9,	218.3,
15	6.1,	475.4,	664.1,	-458.2,	199.6,	16	6.1,	400.3,	675.8,	-497.5,	175.6,

17	6.1,	313.1,	666.9,	-521.7,	146.2,	18	6.1,	223.5,	642.6,	-534.9,	113.6,
19	6.1,	330.9,	658.5,	-559.3,	75.2,	20	6.1,	428.2,	654.5,	-566.6,	34.5,
21	6.1,	512.5,	630.6,	-556.7,	-7.2,	22	6.1,	581.2,	591.2,	-530.0,	-48.7,
23	6.1,	632.2,	537.5,	-487.1,	-88.8,	24	6.1,	664.1,	475.4,	-437.3,	-126.1,
25	6.1,	675.8,	400.3,	-375.8,	-159.6,	26	6.1,	666.9,	313.1,	-302.8,	-188.3,
27	6.1,	642.6,	223.5,	-225.4,	-213.7,	28	6.1,	658.5,	330.9,	-240.7,	-230.0,
29	6.1,	654.5,	428.2,	-248.6,	-239.4,	30	6.1,	630.6,	512.5,	-249.0,	-241.5,
31	6.1,	591.2,	581.2,	-241.9,	-234.3,	32	6.1,	537.5,	632.2,	-227.4,	-218.3,
33	6.1,	475.4,	664.1,	-205.9,	-199.6,	34	6.1,	400.3,	675.8,	-178.2,	-175.6,
35	6.1,	313.1,	666.9,	-145.2,	-146.2,	36	6.1,	223.5,	642.6,	-107.6,	-113.6,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DIRECTION SPECIFIC BUILDING DIMENSIONS ***

SOURCE ID: STCK25

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-247.5,	57.0,	2	6.1,	271.5,	463.0,	-249.1,	53.7,
3	6.1,	335.8,	439.1,	-243.2,	48.8,	4	6.1,	389.9,	401.9,	-229.8,	42.4,
5	6.1,	432.1,	355.5,	-212.6,	34.7,	6	6.1,	461.2,	306.2,	-196.8,	25.9,
7	6.1,	476.3,	247.7,	-175.1,	16.4,	8	6.1,	477.0,	181.6,	-148.0,	6.4,
9	6.1,	468.3,	120.4,	-118.7,	-4.1,	10	6.1,	472.9,	199.0,	-156.5,	-11.0,
11	6.1,	463.0,	271.5,	-189.5,	-17.6,	12	6.1,	439.1,	335.8,	-216.7,	-23.6,
13	6.1,	401.9,	389.9,	-237.3,	-28.9,	14	6.1,	355.5,	432.1,	-250.8,	-34.8,
15	6.1,	306.2,	461.2,	-256.6,	-43.7,	16	6.1,	247.7,	476.3,	-254.6,	-51.2,
17	6.1,	181.6,	477.0,	-244.9,	-57.2,	18	6.1,	120.4,	468.3,	-230.0,	-58.5,
19	6.1,	199.0,	472.9,	-225.4,	-57.0,	20	6.1,	271.5,	463.0,	-214.0,	-53.7,
21	6.1,	335.8,	439.1,	-196.0,	-48.8,	22	6.1,	389.9,	401.9,	-172.1,	-42.4,
23	6.1,	432.1,	355.5,	-142.9,	-34.7,	24	6.1,	461.2,	306.2,	-109.4,	-25.9,
25	6.1,	476.3,	247.7,	-72.6,	-16.4,	26	6.1,	477.0,	181.6,	-33.6,	-6.4,
27	6.1,	468.3,	120.4,	-1.7,	4.1,	28	6.1,	472.9,	199.0,	-42.5,	11.0,
29	6.1,	463.0,	271.5,	-82.1,	17.6,	30	6.1,	439.1,	335.8,	-119.1,	23.6,
31	6.1,	401.9,	389.9,	-152.6,	28.9,	32	6.1,	355.5,	432.1,	-181.4,	34.8,
33	6.1,	306.2,	461.2,	-204.7,	43.7,	34	6.1,	247.7,	476.3,	-221.8,	51.2,
35	6.1,	181.6,	477.0,	-232.1,	57.2,	36	6.1,	120.4,	468.3,	-238.3,	58.5,

SOURCE ID: STCK26

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-149.0,	74.3,	2	6.1,	271.5,	463.0,	-155.1,	87.9,
3	6.1,	335.8,	439.1,	-156.6,	98.8,	4	6.1,	389.9,	401.9,	-153.2,	106.6,
5	6.1,	432.1,	355.5,	-148.3,	111.3,	6	6.1,	461.2,	306.2,	-146.8,	112.5,
7	6.1,	476.3,	247.7,	-140.9,	110.4,	8	6.1,	477.0,	181.6,	-130.6,	104.9,
9	6.1,	468.3,	120.4,	-118.7,	95.9,	10	6.1,	472.9,	199.0,	-173.8,	87.5,
11	6.1,	463.0,	271.5,	-223.7,	76.4,	12	6.1,	439.1,	335.8,	-266.7,	63.0,
13	6.1,	401.9,	389.9,	-301.6,	47.7,	14	6.1,	355.5,	432.1,	-327.4,	29.4,
15	6.1,	306.2,	461.2,	-343.2,	6.3,	16	6.1,	247.7,	476.3,	-348.6,	-17.0,
17	6.1,	181.6,	477.0,	-343.3,	-39.8,	18	6.1,	120.4,	468.3,	-330.0,	-58.5,
19	6.1,	199.0,	472.9,	-323.9,	-74.3,	20	6.1,	271.5,	463.0,	-307.9,	-87.9,
21	6.1,	335.8,	439.1,	-282.6,	-98.8,	22	6.1,	389.9,	401.9,	-248.7,	-106.6,
23	6.1,	432.1,	355.5,	-207.2,	-111.3,	24	6.1,	461.2,	306.2,	-159.4,	-112.5,

25 6.1, 476.3, 247.7, -106.8, -110.4, 26 6.1, 477.0, 181.6, -51.0, -104.9,
27 6.1, 468.3, 120.4, -1.7, -95.9, 28 6.1, 472.9, 199.0, -25.2, -87.5,
29 6.1, 463.0, 271.5, -47.9, -76.4, 30 6.1, 439.1, 335.8, -69.1, -63.0,
31 6.1, 401.9, 389.9, -88.3, -47.7, 32 6.1, 355.5, 432.1, -104.8, -29.4,
33 6.1, 306.2, 461.2, -118.1, -6.3, 34 6.1, 247.7, 476.3, -127.8, 17.0,
35 6.1, 181.6, 477.0, -133.6, 39.8, 36 6.1, 120.4, 468.3, -138.3, 58.5,

SOURCE ID: STCK27

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-226.6,	-61.2,	2	6.1,	271.5,	463.0,	-208.1,	-59.1,
3	6.1,	335.8,	439.1,	-183.2,	-55.1,	4	6.1,	389.9,	401.9,	-152.7,	-49.5,
5	6.1,	432.1,	355.5,	-120.7,	-42.4,	6	6.1,	461.2,	306.2,	-92.9,	-34.1,
7	6.1,	476.3,	247.7,	-62.3,	-24.6,	8	6.1,	477.0,	181.6,	-29.8,	-14.5,
9	6.1,	468.3,	120.4,	1.3,	-4.1,	10	6.1,	472.9,	199.0,	-38.3,	9.8,
11	6.1,	463.0,	271.5,	-76.7,	23.5,	12	6.1,	439.1,	335.8,	-112.8,	36.4,
13	6.1,	401.9,	389.9,	-145.4,	48.2,	14	6.1,	355.5,	432.1,	-173.6,	57.1,
15	6.1,	306.2,	461.2,	-196.6,	60.2,	16	6.1,	247.7,	476.3,	-213.5,	61.5,
17	6.1,	181.6,	477.0,	-224.0,	61.0,	18	6.1,	120.4,	468.3,	-230.0,	61.5,
19	6.1,	199.0,	472.9,	-246.2,	61.2,	20	6.1,	271.5,	463.0,	-255.0,	59.1,
21	6.1,	335.8,	439.1,	-256.0,	55.1,	22	6.1,	389.9,	401.9,	-249.2,	49.5,
23	6.1,	432.1,	355.5,	-234.9,	42.4,	24	6.1,	461.2,	306.2,	-213.4,	34.1,
25	6.1,	476.3,	247.7,	-185.4,	24.6,	26	6.1,	477.0,	181.6,	-151.8,	14.5,
27	6.1,	468.3,	120.4,	-121.7,	4.1,	28	6.1,	472.9,	199.0,	-160.7,	-9.8,
29	6.1,	463.0,	271.5,	-194.8,	-23.5,	30	6.1,	439.1,	335.8,	-223.1,	-36.4,
31	6.1,	401.9,	389.9,	-244.5,	-48.2,	32	6.1,	355.5,	432.1,	-258.5,	-57.1,
33	6.1,	306.2,	461.2,	-264.7,	-60.2,	34	6.1,	247.7,	476.3,	-262.8,	-61.5,
35	6.1,	181.6,	477.0,	-252.9,	-61.0,	36	6.1,	120.4,	468.3,	-238.3,	-61.5,

SOURCE ID: STCK28

IFV	BH	BW	BL	XADJ	YADJ	IFV	BH	BW	BL	XADJ	YADJ
1	6.1,	199.0,	472.9,	-128.1,	-43.8,	2	6.1,	271.5,	463.0,	-114.1,	-24.9,
3	6.1,	335.8,	439.1,	-96.6,	-5.1,	4	6.1,	389.9,	401.9,	-76.1,	14.7,
5	6.1,	432.1,	355.5,	-56.4,	34.1,	6	6.1,	461.2,	306.2,	-42.9,	52.5,
7	6.1,	476.3,	247.7,	-28.1,	69.3,	8	6.1,	477.0,	181.6,	-12.5,	84.0,
9	6.1,	468.3,	120.4,	1.3,	95.9,	10	6.1,	472.9,	199.0,	-55.7,	108.3,
11	6.1,	463.0,	271.5,	-110.9,	117.4,	12	6.1,	439.1,	335.8,	-162.8,	123.0,
13	6.1,	401.9,	389.9,	-209.7,	124.8,	14	6.1,	355.5,	432.1,	-250.2,	121.4,
15	6.1,	306.2,	461.2,	-283.2,	110.2,	16	6.1,	247.7,	476.3,	-307.5,	95.8,
17	6.1,	181.6,	477.0,	-322.5,	78.3,	18	6.1,	120.4,	468.3,	-330.0,	61.5,
19	6.1,	199.0,	472.9,	-344.7,	43.8,	20	6.1,	271.5,	463.0,	-349.0,	24.9,
21	6.1,	335.8,	439.1,	-342.6,	5.1,	22	6.1,	389.9,	401.9,	-325.8,	-14.7,
23	6.1,	432.1,	355.5,	-299.1,	-34.1,	24	6.1,	461.2,	306.2,	-263.4,	-52.5,
25	6.1,	476.3,	247.7,	-219.6,	-69.3,	26	6.1,	477.0,	181.6,	-169.1,	-84.0,
27	6.1,	468.3,	120.4,	-121.7,	-95.9,	28	6.1,	472.9,	199.0,	-143.3,	-108.3,
29	6.1,	463.0,	271.5,	-160.6,	-117.4,	30	6.1,	439.1,	335.8,	-173.1,	-123.0,
31	6.1,	401.9,	389.9,	-180.2,	-124.8,	32	6.1,	355.5,	432.1,	-181.9,	-121.4,
33	6.1,	306.2,	461.2,	-178.1,	-110.2,	34	6.1,	247.7,	476.3,	-168.8,	-95.7,
35	6.1,	181.6,	477.0,	-154.5,	-78.3,	36	6.1,	120.4,	468.3,	-138.3,	-61.5,

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	632121.2,	4174952.4,	158.0,	158.0,	0.0);	(632304.4,	4174354.5,	158.0,	158.0,	0.0);
(	632192.2,	4174956.3,	158.0,	158.0,	0.0);	(632420.6,	4175510.1,	158.0,	158.0,	0.0);
(	632419.0,	4175552.9,	158.0,	158.0,	0.0);	(631187.0,	4175727.0,	158.0,	158.0,	0.0);
(	631166.0,	4175729.0,	158.0,	158.0,	0.0);	(631121.0,	4175719.0,	158.0,	158.0,	0.0);
(	631035.0,	4174830.0,	158.0,	158.0,	0.0);	(631106.0,	4174825.0,	158.0,	158.0,	0.0);
(	631937.0,	4174528.0,	158.0,	158.0,	0.0);	(631322.0,	4174522.0,	158.0,	158.0,	0.0);
(	629800.6,	4173850.4,	158.0,	158.0,	0.0);	(630150.6,	4173850.4,	158.0,	158.0,	0.0);
(	630500.6,	4173850.4,	158.0,	158.0,	0.0);	(630850.6,	4173850.4,	158.0,	158.0,	0.0);
(	631200.6,	4173850.4,	158.0,	158.0,	0.0);	(631550.6,	4173850.4,	158.0,	158.0,	0.0);
(	631900.6,	4173850.4,	158.0,	158.0,	0.0);	(632250.6,	4173850.4,	158.0,	158.0,	0.0);
(	632600.6,	4173850.4,	158.0,	158.0,	0.0);	(632950.6,	4173850.4,	158.0,	158.0,	0.0);
(	633300.6,	4173850.4,	158.0,	158.0,	0.0);	(629800.6,	4174200.4,	158.0,	158.0,	0.0);
(	630150.6,	4174200.4,	158.0,	158.0,	0.0);	(630500.6,	4174200.4,	158.0,	158.0,	0.0);
(	630850.6,	4174200.4,	158.0,	158.0,	0.0);	(631200.6,	4174200.4,	158.0,	158.0,	0.0);
(	631550.6,	4174200.4,	158.0,	158.0,	0.0);	(631900.6,	4174200.4,	158.0,	158.0,	0.0);
(	632250.6,	4174200.4,	158.0,	158.0,	0.0);	(632600.6,	4174200.4,	158.0,	158.0,	0.0);
(	632950.6,	4174200.4,	158.0,	158.0,	0.0);	(633300.6,	4174200.4,	158.0,	158.0,	0.0);
(	629800.6,	4174550.4,	158.0,	158.0,	0.0);	(630150.6,	4174550.4,	158.0,	158.0,	0.0);
(	630500.6,	4174550.4,	158.0,	158.0,	0.0);	(630850.6,	4174550.4,	158.0,	158.0,	0.0);
(	631200.6,	4174550.4,	158.0,	158.0,	0.0);	(631550.6,	4174550.4,	158.0,	158.0,	0.0);
(	631900.6,	4174550.4,	158.0,	158.0,	0.0);	(632250.6,	4174550.4,	158.0,	158.0,	0.0);
(	632600.6,	4174550.4,	158.0,	158.0,	0.0);	(632950.6,	4174550.4,	158.0,	158.0,	0.0);
(	633300.6,	4174550.4,	158.0,	158.0,	0.0);	(629800.6,	4174900.4,	158.0,	158.0,	0.0);
(	630150.6,	4174900.4,	158.0,	158.0,	0.0);	(630500.6,	4174900.4,	158.0,	158.0,	0.0);
(	630850.6,	4174900.4,	158.0,	158.0,	0.0);	(631200.6,	4174900.4,	158.0,	158.0,	0.0);
(	631550.6,	4174900.4,	158.0,	158.0,	0.0);	(631900.6,	4174900.4,	158.0,	158.0,	0.0);
(	632250.6,	4174900.4,	158.0,	158.0,	0.0);	(632600.6,	4174900.4,	158.0,	158.0,	0.0);
(	632950.6,	4174900.4,	158.0,	158.0,	0.0);	(633300.6,	4174900.4,	158.0,	158.0,	0.0);
(	629800.6,	4175250.4,	158.0,	158.0,	0.0);	(630150.6,	4175250.4,	158.0,	158.0,	0.0);
(	630500.6,	4175250.4,	158.0,	158.0,	0.0);	(630850.6,	4175250.4,	158.0,	158.0,	0.0);
(	631200.6,	4175250.4,	158.0,	158.0,	0.0);	(631550.6,	4175250.4,	158.0,	158.0,	0.0);
(	631900.6,	4175250.4,	158.0,	158.0,	0.0);	(632250.6,	4175250.4,	158.0,	158.0,	0.0);
(	632600.6,	4175250.4,	158.0,	158.0,	0.0);	(632950.6,	4175250.4,	158.0,	158.0,	0.0);
(	633300.6,	4175250.4,	158.0,	158.0,	0.0);	(629800.6,	4175600.4,	158.0,	158.0,	0.0);
(	630150.6,	4175600.4,	158.0,	158.0,	0.0);	(630500.6,	4175600.4,	158.0,	158.0,	0.0);
(	630850.6,	4175600.4,	158.0,	158.0,	0.0);	(631200.6,	4175600.4,	158.0,	158.0,	0.0);
(	631550.6,	4175600.4,	158.0,	158.0,	0.0);	(631900.6,	4175600.4,	158.0,	158.0,	0.0);
(	632250.6,	4175600.4,	158.0,	158.0,	0.0);	(632600.6,	4175600.4,	158.0,	158.0,	0.0);
(	632950.6,	4175600.4,	158.0,	158.0,	0.0);	(633300.6,	4175600.4,	158.0,	158.0,	0.0);
(	629800.6,	4175950.4,	158.0,	158.0,	0.0);	(630150.6,	4175950.4,	158.0,	158.0,	0.0);
(	630500.6,	4175950.4,	158.0,	158.0,	0.0);	(630850.6,	4175950.4,	158.0,	158.0,	0.0);
(	631200.6,	4175950.4,	158.0,	158.0,	0.0);	(631550.6,	4175950.4,	158.0,	158.0,	0.0);
(	631900.6,	4175950.4,	158.0,	158.0,	0.0);	(632250.6,	4175950.4,	158.0,	158.0,	0.0);
(	632600.6,	4175950.4,	158.0,	158.0,	0.0);	(632950.6,	4175950.4,	158.0,	158.0,	0.0);
(	633300.6,	4175950.4,	158.0,	158.0,	0.0);	(629800.6,	4176300.4,	158.0,	158.0,	0.0);

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(	630150.6,	4176300.4,	158.0,	158.0,	0.0);	(	630500.6,	4176300.4,	158.0,	158.0,	0.0);
(	630850.6,	4176300.4,	158.0,	158.0,	0.0);	(	631200.6,	4176300.4,	158.0,	158.0,	0.0);
(	631550.6,	4176300.4,	158.0,	158.0,	0.0);	(	631900.6,	4176300.4,	158.0,	158.0,	0.0);
(	632250.6,	4176300.4,	158.0,	158.0,	0.0);	(	632600.6,	4176300.4,	158.0,	158.0,	0.0);
(	632950.6,	4176300.4,	158.0,	158.0,	0.0);	(	633300.6,	4176300.4,	158.0,	158.0,	0.0);
(	629800.6,	4176650.4,	158.0,	158.0,	0.0);	(	630150.6,	4176650.4,	158.0,	158.0,	0.0);
(	630500.6,	4176650.4,	158.0,	158.0,	0.0);	(	630850.6,	4176650.4,	158.0,	158.0,	0.0);
(	631200.6,	4176650.4,	158.0,	158.0,	0.0);	(	631550.6,	4176650.4,	158.0,	158.0,	0.0);
(	631900.6,	4176650.4,	158.0,	158.0,	0.0);	(	632250.6,	4176650.4,	158.0,	158.0,	0.0);
(	632600.6,	4176650.4,	158.0,	158.0,	0.0);	(	632950.6,	4176650.4,	158.0,	158.0,	0.0);
(	633300.6,	4176650.4,	158.0,	158.0,	0.0);	(	629800.6,	4177000.4,	158.0,	158.0,	0.0);
(	630150.6,	4177000.4,	158.0,	158.0,	0.0);	(	630500.6,	4177000.4,	158.0,	158.0,	0.0);
(	630850.6,	4177000.4,	158.0,	158.0,	0.0);	(	631200.6,	4177000.4,	158.0,	158.0,	0.0);
(	631550.6,	4177000.4,	158.0,	158.0,	0.0);	(	631900.6,	4177000.4,	158.0,	158.0,	0.0);
(	632250.6,	4177000.4,	158.0,	158.0,	0.0);	(	632600.6,	4177000.4,	158.0,	158.0,	0.0);
(	632950.6,	4177000.4,	158.0,	158.0,	0.0);	(	633300.6,	4177000.4,	158.0,	158.0,	0.0);
(	629800.6,	4177350.4,	158.0,	158.0,	0.0);	(	630150.6,	4177350.4,	158.0,	158.0,	0.0);
(	630500.6,	4177350.4,	158.0,	158.0,	0.0);	(	630850.6,	4177350.4,	158.0,	158.0,	0.0);
(	631200.6,	4177350.4,	158.0,	158.0,	0.0);	(	631550.6,	4177350.4,	158.0,	158.0,	0.0);
(	631900.6,	4177350.4,	158.0,	158.0,	0.0);	(	632250.6,	4177350.4,	158.0,	158.0,	0.0);
(	632600.6,	4177350.4,	158.0,	158.0,	0.0);	(	632950.6,	4177350.4,	158.0,	158.0,	0.0);
(	633300.6,	4177350.4,	158.0,	158.0,	0.0);	(	631670.7,	4175493.6,	158.0,	158.0,	0.0);
(	631669.8,	4175641.4,	158.0,	158.0,	0.0);	(	631665.3,	4175796.4,	158.0,	158.0,	0.0);
(	631417.2,	4175826.8,	158.0,	158.0,	0.0);	(	631417.2,	4175673.7,	158.0,	158.0,	0.0);
(	631422.6,	4175484.6,	158.0,	158.0,	0.0);	(	631268.4,	4175983.7,	158.0,	158.0,	0.0);
(	631275.7,	4175524.0,	158.0,	158.0,	0.0);	(	631345.7,	4175419.5,	158.0,	158.0,	0.0);
(	631384.7,	4175441.3,	158.0,	158.0,	0.0);	(	631491.9,	4175442.2,	158.0,	158.0,	0.0);
(	631491.9,	4175414.9,	158.0,	158.0,	0.0);	(	631385.6,	4175413.1,	158.0,	158.0,	0.0);
(	631358.4,	4175395.9,	158.0,	158.0,	0.0);	(	631409.2,	4175336.8,	158.0,	158.0,	0.0);
(	631567.4,	4175236.0,	158.0,	158.0,	0.0);	(	631756.3,	4175028.8,	158.0,	158.0,	0.0);
(	631807.2,	4175003.4,	158.0,	158.0,	0.0);	(	631867.2,	4174987.9,	158.0,	158.0,	0.0);
(	631849.9,	4175988.3,	158.0,	158.0,	0.0);	(	631268.7,	4175963.8,	158.0,	158.0,	0.0);
(	631269.1,	4175943.8,	158.0,	158.0,	0.0);	(	631269.4,	4175923.8,	158.0,	158.0,	0.0);
(	631269.7,	4175903.8,	158.0,	158.0,	0.0);	(	631270.0,	4175883.8,	158.0,	158.0,	0.0);
(	631270.3,	4175863.8,	158.0,	158.0,	0.0);	(	631270.6,	4175843.8,	158.0,	158.0,	0.0);
(	631271.0,	4175823.8,	158.0,	158.0,	0.0);	(	631271.3,	4175803.8,	158.0,	158.0,	0.0);
(	631271.6,	4175783.8,	158.0,	158.0,	0.0);	(	631271.9,	4175763.9,	158.0,	158.0,	0.0);
(	631272.2,	4175743.9,	158.0,	158.0,	0.0);	(	631272.5,	4175723.9,	158.0,	158.0,	0.0);
(	631272.9,	4175703.9,	158.0,	158.0,	0.0);	(	631273.2,	4175683.9,	158.0,	158.0,	0.0);
(	631273.5,	4175663.9,	158.0,	158.0,	0.0);	(	631273.8,	4175643.9,	158.0,	158.0,	0.0);
(	631274.1,	4175623.9,	158.0,	158.0,	0.0);	(	631274.4,	4175603.9,	158.0,	158.0,	0.0);
(	631274.7,	4175584.0,	158.0,	158.0,	0.0);	(	631275.1,	4175564.0,	158.0,	158.0,	0.0);
(	631275.4,	4175544.0,	158.0,	158.0,	0.0);	(	631285.7,	4175509.1,	158.0,	158.0,	0.0);
(	631295.7,	4175494.1,	158.0,	158.0,	0.0);	(	631305.7,	4175479.2,	158.0,	158.0,	0.0);
(	631315.7,	4175464.3,	158.0,	158.0,	0.0);	(	631325.7,	4175449.3,	158.0,	158.0,	0.0);

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***

(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(631335.7, 4175434.4,	158.0,	158.0,	0.0);	(631358.7, 4175426.8,	158.0,	158.0,	0.0);
(631371.7, 4175434.0,	158.0,	158.0,	0.0);	(631402.6, 4175441.4,	158.0,	158.0,	0.0);
(631420.5, 4175441.6,	158.0,	158.0,	0.0);	(631438.3, 4175441.8,	158.0,	158.0,	0.0);
(631456.2, 4175441.9,	158.0,	158.0,	0.0);	(631474.1, 4175442.1,	158.0,	158.0,	0.0);
(631491.9, 4175428.6,	158.0,	158.0,	0.0);	(631474.2, 4175414.6,	158.0,	158.0,	0.0);
(631456.5, 4175414.3,	158.0,	158.0,	0.0);	(631438.8, 4175414.0,	158.0,	158.0,	0.0);
(631421.1, 4175413.7,	158.0,	158.0,	0.0);	(631403.4, 4175413.4,	158.0,	158.0,	0.0);
(631372.0, 4175404.5,	158.0,	158.0,	0.0);	(631371.1, 4175381.1,	158.0,	158.0,	0.0);
(631383.8, 4175366.3,	158.0,	158.0,	0.0);	(631396.5, 4175351.6,	158.0,	158.0,	0.0);
(631425.1, 4175326.7,	158.0,	158.0,	0.0);	(631440.9, 4175316.6,	158.0,	158.0,	0.0);
(631456.7, 4175306.6,	158.0,	158.0,	0.0);	(631472.5, 4175296.5,	158.0,	158.0,	0.0);
(631488.3, 4175286.4,	158.0,	158.0,	0.0);	(631504.1, 4175276.3,	158.0,	158.0,	0.0);
(631519.9, 4175266.2,	158.0,	158.0,	0.0);	(631535.7, 4175256.1,	158.0,	158.0,	0.0);
(631551.5, 4175246.0,	158.0,	158.0,	0.0);	(631580.0, 4175222.1,	158.0,	158.0,	0.0);
(631592.6, 4175208.3,	158.0,	158.0,	0.0);	(631605.2, 4175194.5,	158.0,	158.0,	0.0);
(631617.7, 4175180.7,	158.0,	158.0,	0.0);	(631630.3, 4175166.9,	158.0,	158.0,	0.0);
(631642.9, 4175153.1,	158.0,	158.0,	0.0);	(631655.5, 4175139.3,	158.0,	158.0,	0.0);
(631668.1, 4175125.5,	158.0,	158.0,	0.0);	(631680.7, 4175111.7,	158.0,	158.0,	0.0);
(631693.3, 4175097.8,	158.0,	158.0,	0.0);	(631705.9, 4175084.0,	158.0,	158.0,	0.0);
(631718.5, 4175070.2,	158.0,	158.0,	0.0);	(631731.1, 4175056.4,	158.0,	158.0,	0.0);
(631743.7, 4175042.6,	158.0,	158.0,	0.0);	(631773.3, 4175020.3,	158.0,	158.0,	0.0);
(631790.3, 4175011.8,	158.0,	158.0,	0.0);	(631822.2, 4174999.5,	158.0,	158.0,	0.0);
(631837.2, 4174995.6,	158.0,	158.0,	0.0);	(631852.2, 4174991.8,	158.0,	158.0,	0.0);
(631866.8, 4175007.5,	158.0,	158.0,	0.0);	(631866.5, 4175027.1,	158.0,	158.0,	0.0);
(631866.2, 4175046.8,	158.0,	158.0,	0.0);	(631865.8, 4175066.4,	158.0,	158.0,	0.0);
(631865.5, 4175086.0,	158.0,	158.0,	0.0);	(631865.2, 4175105.6,	158.0,	158.0,	0.0);
(631864.8, 4175125.2,	158.0,	158.0,	0.0);	(631864.5, 4175144.8,	158.0,	158.0,	0.0);
(631864.1, 4175164.4,	158.0,	158.0,	0.0);	(631863.8, 4175184.1,	158.0,	158.0,	0.0);
(631863.5, 4175203.7,	158.0,	158.0,	0.0);	(631863.1, 4175223.3,	158.0,	158.0,	0.0);
(631862.8, 4175242.9,	158.0,	158.0,	0.0);	(631862.4, 4175262.5,	158.0,	158.0,	0.0);
(631862.1, 4175282.1,	158.0,	158.0,	0.0);	(631861.8, 4175301.8,	158.0,	158.0,	0.0);
(631861.4, 4175321.4,	158.0,	158.0,	0.0);	(631861.1, 4175341.0,	158.0,	158.0,	0.0);
(631860.8, 4175360.6,	158.0,	158.0,	0.0);	(631860.4, 4175380.2,	158.0,	158.0,	0.0);
(631860.1, 4175399.8,	158.0,	158.0,	0.0);	(631859.7, 4175419.4,	158.0,	158.0,	0.0);
(631859.4, 4175439.1,	158.0,	158.0,	0.0);	(631859.1, 4175458.7,	158.0,	158.0,	0.0);
(631858.7, 4175478.3,	158.0,	158.0,	0.0);	(631858.4, 4175497.9,	158.0,	158.0,	0.0);
(631858.0, 4175517.5,	158.0,	158.0,	0.0);	(631857.7, 4175537.1,	158.0,	158.0,	0.0);
(631857.4, 4175556.8,	158.0,	158.0,	0.0);	(631857.0, 4175576.4,	158.0,	158.0,	0.0);
(631856.7, 4175596.0,	158.0,	158.0,	0.0);	(631856.4, 4175615.6,	158.0,	158.0,	0.0);
(631856.0, 4175635.2,	158.0,	158.0,	0.0);	(631855.7, 4175654.8,	158.0,	158.0,	0.0);
(631855.3, 4175674.4,	158.0,	158.0,	0.0);	(631855.0, 4175694.0,	158.0,	158.0,	0.0);
(631854.7, 4175713.7,	158.0,	158.0,	0.0);	(631854.3, 4175733.3,	158.0,	158.0,	0.0);
(631854.0, 4175752.9,	158.0,	158.0,	0.0);	(631853.6, 4175772.5,	158.0,	158.0,	0.0);
(631853.3, 4175792.1,	158.0,	158.0,	0.0);	(631853.0, 4175811.7,	158.0,	158.0,	0.0);
(631852.6, 4175831.4,	158.0,	158.0,	0.0);	(631852.3, 4175851.0,	158.0,	158.0,	0.0);

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)

(METERS)

(631852.0, 4175870.6, 158.0, 158.0, 0.0); (631851.6, 4175890.2, 158.0, 158.0, 0.0);
(631851.3, 4175909.8, 158.0, 158.0, 0.0); (631850.9, 4175929.4, 158.0, 158.0, 0.0);
(631850.6, 4175949.0, 158.0, 158.0, 0.0); (631850.3, 4175968.7, 158.0, 158.0, 0.0);
(631830.5, 4175988.1, 158.0, 158.0, 0.0); (631811.2, 4175988.0, 158.0, 158.0, 0.0);
(631791.8, 4175987.8, 158.0, 158.0, 0.0); (631772.4, 4175987.7, 158.0, 158.0, 0.0);
(631753.0, 4175987.5, 158.0, 158.0, 0.0); (631733.6, 4175987.4, 158.0, 158.0, 0.0);
(631714.2, 4175987.2, 158.0, 158.0, 0.0); (631694.9, 4175987.1, 158.0, 158.0, 0.0);
(631675.5, 4175986.9, 158.0, 158.0, 0.0); (631656.1, 4175986.8, 158.0, 158.0, 0.0);
(631636.7, 4175986.6, 158.0, 158.0, 0.0); (631617.3, 4175986.5, 158.0, 158.0, 0.0);
(631597.9, 4175986.3, 158.0, 158.0, 0.0); (631578.6, 4175986.2, 158.0, 158.0, 0.0);
(631559.2, 4175986.0, 158.0, 158.0, 0.0); (631539.8, 4175985.9, 158.0, 158.0, 0.0);
(631520.4, 4175985.7, 158.0, 158.0, 0.0); (631501.0, 4175985.6, 158.0, 158.0, 0.0);
(631481.6, 4175985.4, 158.0, 158.0, 0.0); (631462.2, 4175985.2, 158.0, 158.0, 0.0);
(631442.9, 4175985.1, 158.0, 158.0, 0.0); (631423.5, 4175984.9, 158.0, 158.0, 0.0);
(631404.1, 4175984.8, 158.0, 158.0, 0.0); (631384.7, 4175984.6, 158.0, 158.0, 0.0);
(631365.3, 4175984.5, 158.0, 158.0, 0.0); (631346.0, 4175984.3, 158.0, 158.0, 0.0);
(631326.6, 4175984.2, 158.0, 158.0, 0.0); (631307.2, 4175984.0, 158.0, 158.0, 0.0);
(631287.8, 4175983.9, 158.0, 158.0, 0.0);

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

* SOURCE-RECEPTOR COMBINATIONS FOR WHICH CALCULATIONS MAY NOT BE PERFORMED *

LESS THAN 1.0 METER; WITHIN OPENPIT; OR BEYOND 80KM FOR FASTAREA/FASTALL

SOURCE ID	- - RECEPTOR LOCATION - - XR (METERS)	YR (METERS)	DISTANCE (METERS)
L0000868	631462.2	4175985.2	-0.19
L0000869	631462.2	4175985.2	-3.37
L0002239	631442.9	4175985.1	0.96
L0002250	631481.6	4175985.4	0.98
L0002255	631501.0	4175985.6	0.76
L0002260	631520.4	4175985.7	0.82
L0002266	631539.8	4175985.9	0.91
L0002271	631559.2	4175986.0	0.61
L0002276	631578.6	4175986.2	0.58
L0002281	631597.9	4175986.3	0.83
L0002282	631597.9	4175986.3	0.88
L0002287	631617.3	4175986.5	0.49
L0002292	631636.7	4175986.6	0.35
L0002297	631656.1	4175986.8	0.52
L0002298	631656.1	4175986.8	0.89
L0002302	631675.5	4175986.9	0.95
L0002303	631675.5	4175986.9	0.40
L0002308	631694.9	4175987.1	0.17
L0002313	631714.2	4175987.2	0.24
L0002314	631714.2	4175987.2	0.94
L0002318	631733.6	4175987.4	0.61

L0002319	631733.6	4175987.4	0.35
L0002324	631753.0	4175987.5	0.02
L0002329	631772.4	4175987.7	-0.01
L0002334	631791.8	4175987.8	0.27
L0002335	631791.8	4175987.8	0.35
L0002339	631811.2	4175988.0	0.82
L0002340	631811.2	4175988.0	-0.10
L0002345	631830.5	4175988.1	-0.24
STCK8	631550.6	4175600.4	0.00
STCK22	631550.6	4175600.4	0.00

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

1 1 1

```
 04 01 01   1 01  -30.2  0.306 -9.000 -9.000 -999.  406.   102.9  0.09   0.77   1.00   4.10  151.   14.0  282.0    2.0
 04 01 01   1 02  -35.7  0.362 -9.000 -9.000 -999.  523.   144.2  0.11   0.77   1.00   4.60  148.   14.0  282.0    2.0
 04 01 01   1 03  -44.6  0.453 -9.000 -9.000 -999.  731.   225.4  0.11   0.77   1.00   5.70  144.   14.0  281.8    2.0
 04 01 01   1 04  -48.8  0.494 -9.000 -9.000 -999.  833.   268.6  0.11   0.77   1.00   6.20  143.   14.0  281.6    2.0
 04 01 01   1 05  -52.8  0.536 -9.000 -9.000 -999.  940.   315.8  0.11   0.77   1.00   6.70  143.   14.0  281.5    2.0
 04 01 01   1 06  -57.0  0.578 -9.000 -9.000 -999. 1052.   367.0  0.11   0.77   1.00   7.20  142.   14.0  281.4    2.0
 04 01 01   1 07  -61.2  0.619 -9.000 -9.000 -999. 1168.   422.1  0.11   0.77   1.00   7.70  135.   14.0  281.2    2.0
 04 01 01   1 08  -64.0  0.658 -9.000 -9.000 -999. 1279.   476.0  0.11   0.77   0.73   8.20  143.   14.0  281.2    2.0
 04 01 01   1 09   7.0  0.717  0.238  0.005   68. 1454.  -4692.4  0.11   0.77   0.39   8.70  137.   14.0  281.5    2.0
 04 01 01   1 10  43.3  0.655  0.675  0.005  251. 1280.   -574.5  0.09   0.77   0.27   8.20  151.   14.0  282.1    2.0
 04 01 01   1 11  70.4  0.549  0.930  0.005  405.  989.   -207.5  0.09   0.77   0.23   6.70  164.   14.0  283.1    2.0
 04 01 01   1 12  90.7  0.480  1.217  0.005  703.  804.   -107.8  0.09   0.77   0.21   5.70  166.   14.0  284.1    2.0
 04 01 01   1 13  92.9  0.395  1.327  0.005  891.  602.    -58.8  0.08   0.77   0.21   4.60  183.   14.0  284.9    2.0
 04 01 01   1 14  81.1  0.321  1.332  0.005 1031.  440.    -36.0  0.08   0.77   0.22   3.60  189.   14.0  285.2    2.0
 04 01 01   1 15  47.5  0.160  1.139  0.005 1104.  174.     -7.6  0.08   0.77   0.26   1.50  192.   14.0  284.5    2.0
 04 01 01   1 16  19.1  0.076  0.847  0.005 1130.   56.     -2.0  0.12   0.77   0.34   0.50   54.   14.0  283.5    2.0
 04 01 01   1 17  -5.0  0.110 -9.000 -9.000 -999.   88.     23.5  0.10   0.77   0.59   1.50  341.   14.0  283.1    2.0
 04 01 01   1 18  -5.6  0.111 -9.000 -9.000 -999.   89.     21.5  0.11   0.77   1.00   1.50  307.   14.0  282.2    2.0
 04 01 01   1 19 -17.3  0.197 -9.000 -9.000 -999.  209.     42.5  0.10   0.77   1.00   2.60  284.   14.0  281.2    2.0
 04 01 01   1 20 -27.2  0.273 -9.000 -9.000 -999.  342.     81.8  0.10   0.77   1.00   3.60  267.   14.0  280.4    2.0
 04 01 01   1 21 -31.2  0.312 -9.000 -9.000 -999.  419.    107.3  0.10   0.77   1.00   4.10  260.   14.0  279.8    2.0
 04 01 01   1 22 -35.2  0.352 -9.000 -9.000 -999.  501.    136.4  0.10   0.77   1.00   4.60  262.   14.0  279.4    2.0
 04 01 01   1 23 -35.3  0.352 -9.000 -9.000 -999.  501.    136.4  0.10   0.77   1.00   4.60  250.   14.0  279.2    2.0
 04 01 01   1 24 -31.3  0.312 -9.000 -9.000 -999.  420.    107.3  0.10   0.77   1.00   4.10  240.   14.0  279.0    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 04 01 01 01   14.0 1  151.    4.10   282.1   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
   *** AERMOD - VERSION  19191 ***   *** C:\Users\Smith\Dropbox\My PC (DESKTOP-
977GSBU)\Documents\HRA\Tracy C ***       06/06/22
 *** AERMET - VERSION  18081 ***   ***                                                    ***       12:14:02
                                                                      PAGE  89
 *** MODELOPTs:    NonDFAULT  CONC  FLAT  RURAL  ADJ_U*

                    *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION   VALUES FOR SOURCE GROUP:
SLINE1   ***
                       INCLUDING SOURCE(S):    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    , . . .     ,

                              *** DISCRETE CARTESIAN RECEPTOR POINTS ***

                            ** CONC OF OTHER    IN MICROGRAMS/M**3                  **

     X-COORD (M)   Y-COORD (M)       CONC                X-COORD (M)   Y-COORD (M)       CONC
 ------------------------------------------------------------------------------------------
       632121.21   4174952.36       1.39325              632304.44   4174354.52       0.31539
       632192.15   4174956.32       1.28526              632420.62   4175510.15       2.05800
       632418.97   4175552.92       2.03605              631187.00   4175727.00       3.94159
       631166.00   4175729.00       3.28035              631121.00   4175719.00       2.33954
       631035.00   4174830.00       0.33145              631106.00   4174825.00       0.35837
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631937.00	4174528.00	0.39586	631322.00	4174522.00	0.26116
629800.63	4173850.44	0.06001	630150.63	4173850.44	0.07088
630500.63	4173850.44	0.08452	630850.63	4173850.44	0.09986
631200.63	4173850.44	0.11125	631550.63	4173850.44	0.12195
631900.63	4173850.44	0.13666	632250.63	4173850.44	0.15108
632600.63	4173850.44	0.15974	632950.63	4173850.44	0.15632
633300.63	4173850.44	0.13844	629800.63	4174200.44	0.07081
630150.63	4174200.44	0.08625	630500.63	4174200.44	0.10702
630850.63	4174200.44	0.13416	631200.63	4174200.44	0.15921
631550.63	4174200.44	0.18525	631900.63	4174200.44	0.21323
632250.63	4174200.44	0.24229	632600.63	4174200.44	0.24429
632950.63	4174200.44	0.21185	633300.63	4174200.44	0.18230
629800.63	4174550.44	0.08493	630150.63	4174550.44	0.10698
630500.63	4174550.44	0.14000	630850.63	4174550.44	0.18986
631200.63	4174550.44	0.25150	631550.63	4174550.44	0.32721
631900.63	4174550.44	0.40649	632250.63	4174550.44	0.45515
632600.63	4174550.44	0.38134	632950.63	4174550.44	0.31464
633300.63	4174550.44	0.27182	629800.63	4174900.44	0.10007
630150.63	4174900.44	0.13293	630500.63	4174900.44	0.18751
630850.63	4174900.44	0.28682	631200.63	4174900.44	0.46418
631550.63	4174900.44	0.77520	631900.63	4174900.44	1.24668
632250.63	4174900.44	1.00637	632600.63	4174900.44	0.72454
632950.63	4174900.44	0.55692	633300.63	4174900.44	0.44635
629800.63	4175250.44	0.11219	630150.63	4175250.44	0.15806
630500.63	4175250.44	0.24526	630850.63	4175250.44	0.44989
631200.63	4175250.44	1.11767	631550.63	4175250.44	4.77480
631900.63	4175250.44	16.74990	632250.63	4175250.44	2.73274
632600.63	4175250.44	1.40036	632950.63	4175250.44	0.90664
633300.63	4175250.44	0.65133	629800.63	4175600.44	0.11790
630150.63	4175600.44	0.17175	630500.63	4175600.44	0.28657
630850.63	4175600.44	0.63330	631200.63	4175600.44	3.95819
631550.63	4175600.44	19.35078	631900.63	4175600.44	13.25862
632250.63	4175600.44	2.78264	632600.63	4175600.44	1.49916
632950.63	4175600.44	0.97212	633300.63	4175600.44	0.69100
629800.63	4175950.44	0.12085	630150.63	4175950.44	0.18105

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.31403	630850.63	4175950.44	0.71868
631200.63	4175950.44	2.84676	631550.63	4175950.44	7.60561

631900.63	4175950.44	8.86710	632250.63	4175950.44	1.76984
632600.63	4175950.44	1.03501	632950.63	4175950.44	0.71473
633300.63	4175950.44	0.53627	629800.63	4176300.44	0.12801
630150.63	4176300.44	0.19147	630500.63	4176300.44	0.32337
630850.63	4176300.44	0.59754	631200.63	4176300.44	1.00294
631550.63	4176300.44	1.17251	631900.63	4176300.44	1.02399
632250.63	4176300.44	0.73811	632600.63	4176300.44	0.55291
632950.63	4176300.44	0.43153	633300.63	4176300.44	0.35001
629800.63	4176650.44	0.13115	630150.63	4176650.44	0.19230
630500.63	4176650.44	0.29075	630850.63	4176650.44	0.41608
631200.63	4176650.44	0.53237	631550.63	4176650.44	0.57152
631900.63	4176650.44	0.51937	632250.63	4176650.44	0.43423
632600.63	4176650.44	0.35525	632950.63	4176650.44	0.28883
633300.63	4176650.44	0.24184	629800.63	4177000.44	0.13052
630150.63	4177000.44	0.17871	630500.63	4177000.44	0.23530
630850.63	4177000.44	0.29181	631200.63	4177000.44	0.33661
631550.63	4177000.44	0.35080	631900.63	4177000.44	0.32308
632250.63	4177000.44	0.29250	632600.63	4177000.44	0.25340
632950.63	4177000.44	0.21865	633300.63	4177000.44	0.18441
629800.63	4177350.44	0.12363	630150.63	4177350.44	0.15434
630500.63	4177350.44	0.18618	630850.63	4177350.44	0.21535
631200.63	4177350.44	0.23449	631550.63	4177350.44	0.24055
631900.63	4177350.44	0.22821	632250.63	4177350.44	0.20889
632600.63	4177350.44	0.18942	632950.63	4177350.44	0.17102
633300.63	4177350.44	0.15075	631670.70	4175493.59	9.76986
631669.80	4175641.41	7.95975	631665.32	4175796.39	6.86901
631417.17	4175826.85	12.16802	631417.17	4175673.66	14.78691
631422.55	4175484.63	38.54342	631268.42	4175983.74	3.10484
631275.69	4175523.99	8.95085	631345.65	4175419.50	7.87470
631384.72	4175441.30	29.84381	631491.93	4175442.21	42.95218
631491.93	4175414.95	23.77737	631385.63	4175413.14	10.76123
631358.37	4175395.87	6.12233	631409.25	4175336.81	4.53576
631567.35	4175235.96	4.36769	631756.33	4175028.80	2.10626
631807.22	4175003.36	1.98285	631867.18	4174987.91	1.98978
631849.92	4175988.28	15.01803	631268.74	4175963.75	3.52742
631269.05	4175943.76	4.10519	631269.37	4175923.77	4.93307
631269.68	4175903.78	6.17785	631270.00	4175883.79	8.11950
631270.32	4175863.81	10.84393	631270.63	4175843.82	13.09443

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC

- - - -

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	44.22139	631861.77	4175301.75	44.60841
631861.43	4175321.37	44.35599	631861.09	4175340.98	43.08757
631860.75	4175360.60	41.48004	631860.41	4175380.21	40.30381
631860.07	4175399.83	39.58140	631859.73	4175419.44	39.13682
631859.40	4175439.06	38.83872	631859.06	4175458.67	38.64849
631858.72	4175478.29	38.51472	631858.38	4175497.90	38.40851
631858.04	4175517.52	38.32128	631857.70	4175537.13	38.24027
631857.37	4175556.75	38.15127	631857.03	4175576.36	38.08150
631856.69	4175595.98	38.01628	631856.35	4175615.59	37.95343
631856.01	4175635.21	37.89253	631855.67	4175654.82	37.83227
631855.33	4175674.44	37.77165	631855.00	4175694.05	37.69307
631854.66	4175713.67	37.62636	631854.32	4175733.28	37.55526
631853.98	4175752.90	37.47605	631853.64	4175772.51	37.38799
631853.30	4175792.13	37.28702	631852.97	4175811.74	37.15567
631852.63	4175831.36	37.01947	631852.29	4175850.97	36.86069
631851.95	4175870.59	36.66379	631851.61	4175890.20	36.41868
631851.27	4175909.82	36.08346	631850.94	4175929.43	35.85652
631850.60	4175949.05	35.52261	631850.26	4175968.66	33.68365
631830.54	4175988.13	11.41800	631811.15	4175987.98	6.68010
631791.77	4175987.83	5.09040	631772.39	4175987.67	4.35755
631753.00	4175987.52	3.96681	631733.62	4175987.37	3.75135
631714.24	4175987.22	3.64222	631694.85	4175987.07	3.60744
631675.47	4175986.92	3.63159	631656.09	4175986.77	3.70832
631636.70	4175986.62	3.83774	631617.32	4175986.46	4.02586
631597.94	4175986.31	4.28533	631578.55	4175986.16	4.64098
631559.17	4175986.01	5.13859	631539.79	4175985.86	5.86815
631520.40	4175985.71	7.02632	631501.02	4175985.56	9.15849
631481.64	4175985.40	14.37607	631462.25	4175985.25	14.11987
631442.87	4175985.10	9.76873	631423.49	4175984.95	6.15618
631404.10	4175984.80	4.83171	631384.72	4175984.65	4.20379
631365.34	4175984.50	3.85955	631345.95	4175984.35	3.64801
631326.57	4175984.19	3.49965	631307.19	4175984.04	3.37498
631287.80	4175983.89	3.24678			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC

632121.21	4174952.36	0.30375	632304.44	4174354.52	0.15398
632192.15	4174956.32	0.29569	632420.62	4175510.15	0.61362
632418.97	4175552.92	0.66085	631187.00	4175727.00	3.09226
631166.00	4175729.00	3.11958	631121.00	4175719.00	2.93623
631035.00	4174830.00	0.24935	631106.00	4174825.00	0.25405
631937.00	4174528.00	0.19257	631322.00	4174522.00	0.17684
629800.63	4173850.44	0.06457	630150.63	4173850.44	0.07103
630500.63	4173850.44	0.07596	630850.63	4173850.44	0.08152
631200.63	4173850.44	0.08769	631550.63	4173850.44	0.09445
631900.63	4173850.44	0.09947	632250.63	4173850.44	0.10165
632600.63	4173850.44	0.09995	632950.63	4173850.44	0.09364
633300.63	4173850.44	0.08497	629800.63	4174200.44	0.07960
630150.63	4174200.44	0.09067	630500.63	4174200.44	0.09981
630850.63	4174200.44	0.10979	631200.63	4174200.44	0.11941
631550.63	4174200.44	0.13023	631900.63	4174200.44	0.13683
632250.63	4174200.44	0.13580	632600.63	4174200.44	0.12740
632950.63	4174200.44	0.11459	633300.63	4174200.44	0.10285
629800.63	4174550.44	0.10067	630150.63	4174550.44	0.12090
630500.63	4174550.44	0.13892	630850.63	4174550.44	0.15877
631200.63	4174550.44	0.17680	631550.63	4174550.44	0.19459
631900.63	4174550.44	0.19805	632250.63	4174550.44	0.18656
632600.63	4174550.44	0.16607	632950.63	4174550.44	0.14631
633300.63	4174550.44	0.13334	629800.63	4174900.44	0.13206
630150.63	4174900.44	0.17103	630500.63	4174900.44	0.21123
630850.63	4174900.44	0.25724	631200.63	4174900.44	0.29786
631550.63	4174900.44	0.31940	631900.63	4174900.44	0.30579
632250.63	4174900.44	0.26934	632600.63	4174900.44	0.23040
632950.63	4174900.44	0.20537	633300.63	4174900.44	0.18747
629800.63	4175250.44	0.18177	630150.63	4175250.44	0.26567
630500.63	4175250.44	0.37422	630850.63	4175250.44	0.51241
631200.63	4175250.44	0.60216	631550.63	4175250.44	0.60490
631900.63	4175250.44	0.53113	632250.63	4175250.44	0.42996
632600.63	4175250.44	0.36581	632950.63	4175250.44	0.31854
633300.63	4175250.44	0.27842	629800.63	4175600.44	0.26006
630150.63	4175600.44	0.48226	630500.63	4175600.44	0.95342
630850.63	4175600.44	1.50801	631200.63	4175600.44	1.72729
631550.63	4175600.44	1.58365	631900.63	4175600.44	1.11626
632250.63	4175600.44	0.81837	632600.63	4175600.44	0.62203
632950.63	4175600.44	0.48515	633300.63	4175600.44	0.38878
629800.63	4175950.44	0.33425	630150.63	4175950.44	1.06188

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	18.44207	630850.63	4175950.44	23.31345
631200.63	4175950.44	25.13663	631550.63	4175950.44	9.90597
631900.63	4175950.44	2.45981	632250.63	4175950.44	1.29827
632600.63	4175950.44	0.84026	632950.63	4175950.44	0.60129
633300.63	4175950.44	0.45741	629800.63	4176300.44	0.36308
630150.63	4176300.44	1.03402	630500.63	4176300.44	2.35953
630850.63	4176300.44	3.03043	631200.63	4176300.44	2.99670
631550.63	4176300.44	1.98254	631900.63	4176300.44	1.22947
632250.63	4176300.44	0.85831	632600.63	4176300.44	0.63400
632950.63	4176300.44	0.48812	633300.63	4176300.44	0.38831
629800.63	4176650.44	0.36169	630150.63	4176650.44	0.63934
630500.63	4176650.44	0.94265	630850.63	4176650.44	1.09549
631200.63	4176650.44	1.03070	631550.63	4176650.44	0.81045
631900.63	4176650.44	0.60924	632250.63	4176650.44	0.46699
632600.63	4176650.44	0.37986	632950.63	4176650.44	0.31798
633300.63	4176650.44	0.27097	629800.63	4177000.44	0.30294
630150.63	4177000.44	0.42731	630500.63	4177000.44	0.53216
630850.63	4177000.44	0.57097	631200.63	4177000.44	0.54555
631550.63	4177000.44	0.46989	631900.63	4177000.44	0.38589
632250.63	4177000.44	0.31241	632600.63	4177000.44	0.25822
632950.63	4177000.44	0.22041	633300.63	4177000.44	0.19324
629800.63	4177350.44	0.24182	630150.63	4177350.44	0.30138
630500.63	4177350.44	0.34324	630850.63	4177350.44	0.35786
631200.63	4177350.44	0.34202	631550.63	4177350.44	0.31086
631900.63	4177350.44	0.27040	632250.63	4177350.44	0.23423
632600.63	4177350.44	0.19645	632950.63	4177350.44	0.16832
633300.63	4177350.44	0.14730	631670.70	4175493.59	1.04837
631669.80	4175641.41	1.63186	631665.32	4175796.39	2.86354
631417.17	4175826.85	5.34058	631417.17	4175673.66	2.27531
631422.55	4175484.63	1.12947	631268.42	4175983.74	93.28892
631275.69	4175523.99	1.30460	631345.65	4175419.50	0.93836
631384.72	4175441.30	0.99641	631491.93	4175442.21	0.98239
631491.93	4175414.95	0.91070	631385.63	4175413.14	0.91926
631358.37	4175395.87	0.87782	631409.25	4175336.81	0.75015
631567.35	4175235.96	0.58483	631756.33	4175028.80	0.38357
631807.22	4175003.36	0.36394	631867.18	4174987.91	0.34978
631849.92	4175988.28	2.81532	631268.74	4175963.75	36.11576
631269.05	4175943.76	21.89892	631269.37	4175923.77	15.52520
631269.68	4175903.78	11.86881	631270.00	4175883.79	9.48942
631270.32	4175863.81	7.81935	631270.63	4175843.82	6.58476

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	5.63811	631271.26	4175803.84	4.89138
631271.58	4175783.85	4.28905	631271.90	4175763.86	3.79444
631272.21	4175743.87	3.38229	631272.53	4175723.88	3.03465
631272.85	4175703.89	2.73839	631273.16	4175683.90	2.48371
631273.48	4175663.91	2.26310	631273.79	4175643.92	2.07072
631274.11	4175623.94	1.90205	631274.43	4175603.95	1.75321
631274.74	4175583.96	1.62130	631275.06	4175563.97	1.50386
631275.37	4175543.98	1.39886	631285.68	4175509.06	1.24002
631295.68	4175494.14	1.18020	631305.67	4175479.21	1.12463
631315.67	4175464.28	1.07299	631325.66	4175449.35	1.02493
631335.66	4175434.43	0.98017	631358.67	4175426.77	0.95737
631371.70	4175434.03	0.97670	631402.59	4175441.45	0.99495
631420.46	4175441.60	0.99319	631438.33	4175441.76	0.99112
631456.19	4175441.91	0.98864	631474.06	4175442.06	0.98575
631491.93	4175428.58	0.94551	631474.21	4175414.65	0.91302
631456.50	4175414.35	0.91493	631438.78	4175414.05	0.91647
631421.06	4175413.74	0.91767	631403.35	4175413.44	0.91860
631372.00	4175404.51	0.89831	631371.09	4175381.11	0.84288
631383.81	4175366.34	0.81005	631396.53	4175351.58	0.77921
631425.06	4175326.73	0.73098	631440.87	4175316.64	0.71249
631456.68	4175306.56	0.69466	631472.49	4175296.47	0.67742
631488.30	4175286.39	0.66077	631504.11	4175276.30	0.64463
631519.92	4175266.22	0.62900	631535.73	4175256.13	0.61383
631551.54	4175246.05	0.59912	631579.95	4175222.15	0.56690
631592.55	4175208.34	0.54978	631605.15	4175194.53	0.53342
631617.74	4175180.72	0.51778	631630.34	4175166.91	0.50283
631642.94	4175153.10	0.48851	631655.54	4175139.29	0.47481
631668.14	4175125.47	0.46167	631680.74	4175111.66	0.44909
631693.34	4175097.85	0.43703	631705.94	4175084.04	0.42545
631718.53	4175070.23	0.41434	631731.13	4175056.42	0.40368
631743.73	4175042.61	0.39343	631773.29	4175020.32	0.37689
631790.26	4175011.84	0.37035	631822.21	4174999.50	0.36038
631837.20	4174995.64	0.35684	631852.19	4174991.77	0.35330
631866.84	4175007.53	0.36027	631866.50	4175027.14	0.37125
631866.16	4175046.76	0.38275	631865.83	4175066.37	0.39480
631865.49	4175085.99	0.40743	631865.15	4175105.60	0.42068
631864.81	4175125.22	0.43460	631864.47	4175144.83	0.44922
631864.13	4175164.45	0.46459	631863.80	4175184.06	0.48075
631863.46	4175203.68	0.49778	631863.12	4175223.29	0.51571
631862.78	4175242.91	0.53461	631862.44	4175262.52	0.55455

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 ,

L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 ,
L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	0.57560	631861.77	4175301.75	0.59783
631861.43	4175321.37	0.62135	631861.09	4175340.98	0.64622
631860.75	4175360.60	0.67256	631860.41	4175380.21	0.70047
631860.07	4175399.83	0.73007	631859.73	4175419.44	0.76148
631859.40	4175439.06	0.79485	631859.06	4175458.67	0.83031
631858.72	4175478.29	0.86808	631858.38	4175497.90	0.90830
631858.04	4175517.52	0.95122	631857.70	4175537.13	0.99706
631857.37	4175556.75	1.04611	631857.03	4175576.36	1.09866
631856.69	4175595.98	1.15510	631856.35	4175615.59	1.21572
631856.01	4175635.21	1.28097	631855.67	4175654.82	1.35118
631855.33	4175674.44	1.42677	631855.00	4175694.05	1.50795
631854.66	4175713.67	1.59508	631854.32	4175733.28	1.68813
631853.98	4175752.90	1.78708	631853.64	4175772.51	1.89145
631853.30	4175792.13	2.00059	631852.97	4175811.74	2.11316
631852.63	4175831.36	2.22762	631852.29	4175850.97	2.34150
631851.95	4175870.59	2.45202	631851.61	4175890.20	2.55555
631851.27	4175909.82	2.64806	631850.94	4175929.43	2.72471
631850.60	4175949.05	2.78086	631850.26	4175968.66	2.81205
631830.54	4175988.13	2.96757	631811.15	4175987.98	3.13579
631791.77	4175987.83	3.32244	631772.39	4175987.67	3.53088
631753.00	4175987.52	3.76531	631733.62	4175987.37	4.03073
631714.24	4175987.22	4.33400	631694.85	4175987.07	4.68422
631675.47	4175986.92	5.09301	631656.09	4175986.77	5.57711
631636.70	4175986.62	6.16042	631617.32	4175986.46	6.87718
631597.94	4175986.31	7.78126	631578.55	4175986.16	8.96067
631559.17	4175986.01	10.56711	631539.79	4175985.86	12.89589
631520.40	4175985.71	16.59654	631501.02	4175985.56	23.39279
631481.64	4175985.40	39.50085	631462.25	4175985.25	87.24243
631442.87	4175985.10	106.37902	631423.49	4175984.95	107.65204
631404.10	4175984.80	106.54758	631384.72	4175984.65	104.83644
631365.34	4175984.50	102.93031	631345.95	4175984.35	100.96499
631326.57	4175984.19	98.92712	631307.19	4175984.04	97.00289
631287.80	4175983.89	95.12138			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***
INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 ,
L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 ,
L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 ,
L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.28293	632304.44	4174354.52	0.13500
632192.15	4174956.32	0.29496	632420.62	4175510.15	1.15590
632418.97	4175552.92	1.33466	631187.00	4175727.00	0.43006
631166.00	4175729.00	0.41102	631121.00	4175719.00	0.36736
631035.00	4174830.00	0.12507	631106.00	4174825.00	0.13090
631937.00	4174528.00	0.14601	631322.00	4174522.00	0.11325
629800.63	4173850.44	0.04070	630150.63	4173850.44	0.04621
630500.63	4173850.44	0.05272	630850.63	4173850.44	0.06024
631200.63	4173850.44	0.06715	631550.63	4173850.44	0.07269
631900.63	4173850.44	0.07856	632250.63	4173850.44	0.08431
632600.63	4173850.44	0.09009	632950.63	4173850.44	0.09637
633300.63	4173850.44	0.10018	629800.63	4174200.44	0.04621
630150.63	4174200.44	0.05328	630500.63	4174200.44	0.06211
630850.63	4174200.44	0.07294	631200.63	4174200.44	0.08432
631550.63	4174200.44	0.09390	631900.63	4174200.44	0.10432
632250.63	4174200.44	0.11403	632600.63	4174200.44	0.12339
632950.63	4174200.44	0.13273	633300.63	4174200.44	0.13534
629800.63	4174550.44	0.05303	630150.63	4174550.44	0.06227
630500.63	4174550.44	0.07451	630850.63	4174550.44	0.09045
631200.63	4174550.44	0.10967	631550.63	4174550.44	0.12768
631900.63	4174550.44	0.14761	632250.63	4174550.44	0.16666
632600.63	4174550.44	0.18343	632950.63	4174550.44	0.19446
633300.63	4174550.44	0.19055	629800.63	4174900.44	0.06183
630150.63	4174900.44	0.07394	630500.63	4174900.44	0.09106
630850.63	4174900.44	0.11587	631200.63	4174900.44	0.15005
631550.63	4174900.44	0.18714	631900.63	4174900.44	0.23114
632250.63	4174900.44	0.27520	632600.63	4174900.44	0.30325
632950.63	4174900.44	0.30785	633300.63	4174900.44	0.28803
629800.63	4175250.44	0.07063	630150.63	4175250.44	0.08837
630500.63	4175250.44	0.11407	630850.63	4175250.44	0.15412
631200.63	4175250.44	0.22097	631550.63	4175250.44	0.31287
631900.63	4175250.44	0.43588	632250.63	4175250.44	0.54778
632600.63	4175250.44	0.58412	632950.63	4175250.44	0.56525
633300.63	4175250.44	0.48877	629800.63	4175600.44	0.07518
630150.63	4175600.44	0.09818	630500.63	4175600.44	0.13696
630850.63	4175600.44	0.20787	631200.63	4175600.44	0.36201
631550.63	4175600.44	0.70687	631900.63	4175600.44	1.22863
632250.63	4175600.44	1.52180	632600.63	4175600.44	1.59558
632950.63	4175600.44	1.38779	633300.63	4175600.44	0.97996
629800.63	4175950.44	0.07913	630150.63	4175950.44	0.10525

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 ,

L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.15146	630850.63	4175950.44	0.25180
631200.63	4175950.44	0.60980	631550.63	4175950.44	13.06496
631900.63	4175950.44	18.78698	632250.63	4175950.44	19.23241
632600.63	4175950.44	18.71289	632950.63	4175950.44	6.10572
633300.63	4175950.44	1.97979	629800.63	4176300.44	0.07910
630150.63	4176300.44	0.10581	630500.63	4176300.44	0.15439
630850.63	4176300.44	0.26775	631200.63	4176300.44	0.66247
631550.63	4176300.44	1.76198	631900.63	4176300.44	2.54606
632250.63	4176300.44	2.87584	632600.63	4176300.44	2.68913
632950.63	4176300.44	1.71594	633300.63	4176300.44	1.09180
629800.63	4176650.44	0.08068	630150.63	4176650.44	0.11078
630500.63	4176650.44	0.16530	630850.63	4176650.44	0.27787
631200.63	4176650.44	0.49444	631550.63	4176650.44	0.77629
631900.63	4176650.44	0.98598	632250.63	4176650.44	1.05490
632600.63	4176650.44	0.94496	632950.63	4176650.44	0.73375
633300.63	4176650.44	0.55512	629800.63	4177000.44	0.08539
630150.63	4177000.44	0.11573	630500.63	4177000.44	0.16725
630850.63	4177000.44	0.24918	631200.63	4177000.44	0.35802
631550.63	4177000.44	0.47078	631900.63	4177000.44	0.54393
632250.63	4177000.44	0.55891	632600.63	4177000.44	0.51449
632950.63	4177000.44	0.43525	633300.63	4177000.44	0.35760
629800.63	4177350.44	0.08662	630150.63	4177350.44	0.11536
630500.63	4177350.44	0.15659	630850.63	4177350.44	0.20907
631200.63	4177350.44	0.26806	631550.63	4177350.44	0.31830
631900.63	4177350.44	0.34872	632250.63	4177350.44	0.34957
632600.63	4177350.44	0.32987	632950.63	4177350.44	0.29462
633300.63	4177350.44	0.25489	631670.70	4175493.59	0.62406
631669.80	4175641.41	1.04357	631665.32	4175796.39	2.42746
631417.17	4175826.85	1.18534	631417.17	4175673.66	0.67149
631422.55	4175484.63	0.42430	631268.42	4175983.74	0.84520
631275.69	4175523.99	0.36427	631345.65	4175419.50	0.33697
631384.72	4175441.30	0.36926	631491.93	4175442.21	0.42565
631491.93	4175414.95	0.40173	631385.63	4175413.14	0.35081
631358.37	4175395.87	0.32871	631409.25	4175336.81	0.31506
631567.35	4175235.96	0.30992	631756.33	4175028.80	0.25672
631807.22	4175003.36	0.25546	631867.18	4174987.91	0.25925
631849.92	4175988.28	80.45729	631268.74	4175963.75	0.83087
631269.05	4175943.76	0.81201	631269.37	4175923.77	0.78963
631269.68	4175903.78	0.76430	631270.00	4175883.79	0.73683
631270.32	4175863.81	0.70826	631270.63	4175843.82	0.67953

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 , L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	0.65140	631271.26	4175803.84	0.62423
631271.58	4175783.85	0.59828	631271.90	4175763.86	0.57362
631272.21	4175743.87	0.55024	631272.53	4175723.88	0.52816
631272.85	4175703.89	0.50730	631273.16	4175683.90	0.48761
631273.48	4175663.91	0.46903	631273.79	4175643.92	0.45147
631274.11	4175623.94	0.43490	631274.43	4175603.95	0.41923
631274.74	4175583.96	0.40438	631275.06	4175563.97	0.39031
631275.37	4175543.98	0.37695	631285.68	4175509.06	0.36086
631295.68	4175494.14	0.35728	631305.67	4175479.21	0.35351
631315.67	4175464.28	0.34958	631325.66	4175449.35	0.34549
631335.66	4175434.43	0.34129	631358.67	4175426.77	0.34726
631371.70	4175434.03	0.35801	631402.59	4175441.45	0.37824
631420.46	4175441.60	0.38735	631438.33	4175441.76	0.39662
631456.19	4175441.91	0.40606	631474.06	4175442.06	0.41572
631491.93	4175428.58	0.41339	631474.21	4175414.65	0.39277
631456.50	4175414.35	0.38405	631438.78	4175414.05	0.37552
631421.06	4175413.74	0.36715	631403.35	4175413.44	0.35892
631372.00	4175404.51	0.33949	631371.09	4175381.11	0.32547
631383.81	4175366.34	0.32209	631396.53	4175351.58	0.31862
631425.06	4175326.73	0.31500	631440.87	4175316.64	0.31478
631456.68	4175306.56	0.31445	631472.49	4175296.47	0.31402
631488.30	4175286.39	0.31349	631504.11	4175276.30	0.31289
631519.92	4175266.22	0.31223	631535.73	4175256.13	0.31151
631551.54	4175246.05	0.31074	631579.95	4175222.15	0.30613
631592.55	4175208.34	0.30237	631605.15	4175194.53	0.29865
631617.74	4175180.72	0.29497	631630.34	4175166.91	0.29132
631642.94	4175153.10	0.28770	631655.54	4175139.29	0.28413
631668.14	4175125.47	0.28058	631680.74	4175111.66	0.27707
631693.34	4175097.85	0.27359	631705.94	4175084.04	0.27015
631718.53	4175070.23	0.26674	631731.13	4175056.42	0.26337
631743.73	4175042.61	0.26003	631773.29	4175020.32	0.25635
631790.26	4175011.84	0.25593	631822.21	4174999.50	0.25646
631837.20	4174995.64	0.25742	631852.19	4174991.77	0.25835
631866.84	4175007.53	0.26753	631866.50	4175027.14	0.27626
631866.16	4175046.76	0.28547	631865.83	4175066.37	0.29519
631865.49	4175085.99	0.30548	631865.15	4175105.60	0.31637
631864.81	4175125.22	0.32792	631864.47	4175144.83	0.34018
631864.13	4175164.45	0.35323	631863.80	4175184.06	0.36712
631863.46	4175203.68	0.38194	631863.12	4175223.29	0.39777
631862.78	4175242.91	0.41472	631862.44	4175262.52	0.43289

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 , L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	0.45241	631861.77	4175301.75	0.47342
631861.43	4175321.37	0.49608	631861.09	4175340.98	0.52055
631860.75	4175360.60	0.54705	631860.41	4175380.21	0.57580
631860.07	4175399.83	0.60708	631859.73	4175419.44	0.64115
631859.40	4175439.06	0.67841	631859.06	4175458.67	0.71917
631858.72	4175478.29	0.76396	631858.38	4175497.90	0.81322
631858.04	4175517.52	0.86763	631857.70	4175537.13	0.92782
631857.37	4175556.75	0.99470	631857.03	4175576.36	1.06918
631856.69	4175595.98	1.15253	631856.35	4175615.59	1.24613
631856.01	4175635.21	1.35186	631855.67	4175654.82	1.47189
631855.33	4175674.44	1.60921	631855.00	4175694.05	1.76740
631854.66	4175713.67	1.95142	631854.32	4175733.28	2.16746
631853.98	4175752.90	2.42429	631853.64	4175772.51	2.73322
631853.30	4175792.13	3.11061	631852.97	4175811.74	3.57875
631852.63	4175831.36	4.17098	631852.29	4175850.97	4.93621
631851.95	4175870.59	5.95323	631851.61	4175890.20	7.35150
631851.27	4175909.82	9.37105	631850.94	4175929.43	12.50736
631850.60	4175949.05	18.02528	631850.26	4175968.66	30.41819
631830.54	4175988.13	79.90610	631811.15	4175987.98	79.34489
631791.77	4175987.83	78.77247	631772.39	4175987.67	78.12619
631753.00	4175987.52	77.51980	631733.62	4175987.37	76.88980
631714.24	4175987.22	76.23165	631694.85	4175987.07	75.53735
631675.47	4175986.92	74.79579	631656.09	4175986.77	73.99535
631636.70	4175986.62	73.11262	631617.32	4175986.46	72.06440
631597.94	4175986.31	70.91509	631578.55	4175986.16	69.53629
631559.17	4175986.01	67.79995	631539.79	4175985.86	65.46043
631520.40	4175985.71	61.98510	631501.02	4175985.56	56.02827
631481.64	4175985.40	43.41850	631462.25	4175985.25	18.48120
631442.87	4175985.10	6.94594	631423.49	4175984.95	3.94787
631404.10	4175984.80	2.72766	631384.72	4175984.65	2.07742
631365.34	4175984.50	1.67537	631345.95	4175984.35	1.40247
631326.57	4175984.19	1.20534	631307.19	4175984.04	1.05618
631287.80	4175983.89	0.93926			

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 ,

L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 ,
L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 ,
L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.25389	632304.44	4174354.52	0.12743
632192.15	4174956.32	0.26647	632420.62	4175510.15	1.21484
632418.97	4175552.92	1.41780	631187.00	4175727.00	0.25335
631166.00	4175729.00	0.24532	631121.00	4175719.00	0.22777
631035.00	4174830.00	0.10682	631106.00	4174825.00	0.11179
631937.00	4174528.00	0.13576	631322.00	4174522.00	0.10295
629800.63	4173850.44	0.03780	630150.63	4173850.44	0.04279
630500.63	4173850.44	0.04876	630850.63	4173850.44	0.05579
631200.63	4173850.44	0.06372	631550.63	4173850.44	0.07083
631900.63	4173850.44	0.07545	632250.63	4173850.44	0.08017
632600.63	4173850.44	0.08691	632950.63	4173850.44	0.09403
633300.63	4173850.44	0.09896	629800.63	4174200.44	0.04270
630150.63	4174200.44	0.04868	630500.63	4174200.44	0.05651
630850.63	4174200.44	0.06620	631200.63	4174200.44	0.07804
631550.63	4174200.44	0.09004	631900.63	4174200.44	0.09897
632250.63	4174200.44	0.10787	632600.63	4174200.44	0.11814
632950.63	4174200.44	0.12948	633300.63	4174200.44	0.13674
629800.63	4174550.44	0.04850	630150.63	4174550.44	0.05631
630500.63	4174550.44	0.06638	630850.63	4174550.44	0.07998
631200.63	4174550.44	0.09783	631550.63	4174550.44	0.11919
631900.63	4174550.44	0.13718	632250.63	4174550.44	0.15580
632600.63	4174550.44	0.17434	632950.63	4174550.44	0.19414
633300.63	4174550.44	0.20041	629800.63	4174900.44	0.05589
630150.63	4174900.44	0.06574	630500.63	4174900.44	0.07938
630850.63	4174900.44	0.09873	631200.63	4174900.44	0.12680
631550.63	4174900.44	0.16610	631900.63	4174900.44	0.20673
632250.63	4174900.44	0.25137	632600.63	4174900.44	0.29396
632950.63	4174900.44	0.32401	633300.63	4174900.44	0.31149
629800.63	4175250.44	0.06190	630150.63	4175250.44	0.07667
630500.63	4175250.44	0.09634	630850.63	4175250.44	0.12502
631200.63	4175250.44	0.17101	631550.63	4175250.44	0.24963
631900.63	4175250.44	0.35800	632250.63	4175250.44	0.49660
632600.63	4175250.44	0.60906	632950.63	4175250.44	0.62054
633300.63	4175250.44	0.53656	629800.63	4175600.44	0.06490
630150.63	4175600.44	0.08162	630500.63	4175600.44	0.10793
630850.63	4175600.44	0.15306	631200.63	4175600.44	0.23653
631550.63	4175600.44	0.41910	631900.63	4175600.44	0.84185
632250.63	4175600.44	1.51240	632600.63	4175600.44	1.79706
632950.63	4175600.44	1.61442	633300.63	4175600.44	1.12171
629800.63	4175950.44	0.06754	630150.63	4175950.44	0.08630

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.11625	630850.63	4175950.44	0.16997
631200.63	4175950.44	0.28782	631550.63	4175950.44	0.69734
631900.63	4175950.44	15.73965	632250.63	4175950.44	25.91760
632600.63	4175950.44	25.61356	632950.63	4175950.44	8.01996
633300.63	4175950.44	2.43164	629800.63	4176300.44	0.06733
630150.63	4176300.44	0.08639	630500.63	4176300.44	0.11702
630850.63	4176300.44	0.17350	631200.63	4176300.44	0.30684
631550.63	4176300.44	0.77137	631900.63	4176300.44	2.20201
632250.63	4176300.44	3.25016	632600.63	4176300.44	3.24827
632950.63	4176300.44	2.04343	633300.63	4176300.44	1.26534
629800.63	4176650.44	0.06772	630150.63	4176650.44	0.08830
630500.63	4176650.44	0.12331	630850.63	4176650.44	0.18740
631200.63	4176650.44	0.32095	631550.63	4176650.44	0.58575
631900.63	4176650.44	0.93113	632250.63	4176650.44	1.13330
632600.63	4176650.44	1.07698	632950.63	4176650.44	0.83516
633300.63	4176650.44	0.62018	629800.63	4177000.44	0.07157
630150.63	4177000.44	0.09401	630500.63	4177000.44	0.12874
630850.63	4177000.44	0.18851	631200.63	4177000.44	0.28561
631550.63	4177000.44	0.41278	631900.63	4177000.44	0.53158
632250.63	4177000.44	0.58533	632600.63	4177000.44	0.55907
632950.63	4177000.44	0.48119	633300.63	4177000.44	0.39658
629800.63	4177350.44	0.07387	630150.63	4177350.44	0.09473
630500.63	4177350.44	0.12754	630850.63	4177350.44	0.17552
631200.63	4177350.44	0.23531	631550.63	4177350.44	0.29661
631900.63	4177350.44	0.34370	632250.63	4177350.44	0.36433
632600.63	4177350.44	0.34672	632950.63	4177350.44	0.31654
633300.63	4177350.44	0.27548	631670.70	4175493.59	0.42989
631669.80	4175641.41	0.58049	631665.32	4175796.39	0.82475
631417.17	4175826.85	0.42428	631417.17	4175673.66	0.36085
631422.55	4175484.63	0.28692	631268.42	4175983.74	0.33041
631275.69	4175523.99	0.24444	631345.65	4175419.50	0.23904
631384.72	4175441.30	0.25801	631491.93	4175442.21	0.29971
631491.93	4175414.95	0.28871	631385.63	4175413.14	0.24978
631358.37	4175395.87	0.23646	631409.25	4175336.81	0.23510
631567.35	4175235.96	0.24962	631756.33	4175028.80	0.22446
631807.22	4175003.36	0.22453	631867.18	4174987.91	0.22843
631849.92	4175988.28	68.33518	631268.74	4175963.75	0.32938
631269.05	4175943.76	0.32783	631269.37	4175923.77	0.32576
631269.68	4175903.78	0.32319	631270.00	4175883.79	0.32025
631270.32	4175863.81	0.31705	631270.63	4175843.82	0.31371

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	0.31031	631271.26	4175803.84	0.30684
631271.58	4175783.85	0.30328	631271.90	4175763.86	0.29958
631272.21	4175743.87	0.29568	631272.53	4175723.88	0.29159
631272.85	4175703.89	0.28731	631273.16	4175683.90	0.28286
631273.48	4175663.91	0.27828	631273.79	4175643.92	0.27359
631274.11	4175623.94	0.26883	631274.43	4175603.95	0.26400
631274.74	4175583.96	0.25913	631275.06	4175563.97	0.25424
631275.37	4175543.98	0.24934	631285.68	4175509.06	0.24396
631295.68	4175494.14	0.24336	631305.67	4175479.21	0.24265
631315.67	4175464.28	0.24185	631325.66	4175449.35	0.24097
631335.66	4175434.43	0.24004	631358.67	4175426.77	0.24510
631371.70	4175434.03	0.25141	631402.59	4175441.45	0.26434
631420.46	4175441.60	0.27091	631438.33	4175441.76	0.27772
631456.19	4175441.91	0.28479	631474.06	4175442.06	0.29212
631491.93	4175428.58	0.29414	631474.21	4175414.65	0.28164
631456.50	4175414.35	0.27482	631438.78	4175414.05	0.26823
631421.06	4175413.74	0.26186	631403.35	4175413.44	0.25572
631372.00	4175404.51	0.24297	631371.09	4175381.11	0.23621
631383.81	4175366.34	0.23590	631396.53	4175351.58	0.23554
631425.06	4175326.73	0.23679	631440.87	4175316.64	0.23843
631456.68	4175306.56	0.24003	631472.49	4175296.47	0.24158
631488.30	4175286.39	0.24308	631504.11	4175276.30	0.24452
631519.92	4175266.22	0.24590	631535.73	4175256.13	0.24722
631551.54	4175246.05	0.24846	631579.95	4175222.15	0.24855
631592.55	4175208.34	0.24740	631605.15	4175194.53	0.24614
631617.74	4175180.72	0.24478	631630.34	4175166.91	0.24333
631642.94	4175153.10	0.24178	631655.54	4175139.29	0.24013
631668.14	4175125.47	0.23840	631680.74	4175111.66	0.23659
631693.34	4175097.85	0.23471	631705.94	4175084.04	0.23277
631718.53	4175070.23	0.23076	631731.13	4175056.42	0.22870
631743.73	4175042.61	0.22660	631773.29	4175020.32	0.22456
631790.26	4175011.84	0.22459	631822.21	4174999.50	0.22555
631837.20	4174995.64	0.22654	631852.19	4174991.77	0.22749
631866.84	4175007.53	0.23480	631866.50	4175027.14	0.24147
631866.16	4175046.76	0.24844	631865.83	4175066.37	0.25574
631865.49	4175085.99	0.26340	631865.15	4175105.60	0.27143
631864.81	4175125.22	0.27986	631864.47	4175144.83	0.28873
631864.13	4175164.45	0.29806	631863.80	4175184.06	0.30788
631863.46	4175203.68	0.31825	631863.12	4175223.29	0.32918
631862.78	4175242.91	0.34075	631862.44	4175262.52	0.35299

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	0.36597	631861.77	4175301.75	0.37975
631861.43	4175321.37	0.39439	631861.09	4175340.98	0.40998
631860.75	4175360.60	0.42661	631860.41	4175380.21	0.44436
631860.07	4175399.83	0.46337	631859.73	4175419.44	0.48374
631859.40	4175439.06	0.50564	631859.06	4175458.67	0.52921
631858.72	4175478.29	0.55466	631858.38	4175497.90	0.58219
631858.04	4175517.52	0.61210	631857.70	4175537.13	0.64464
631857.37	4175556.75	0.68023	631857.03	4175576.36	0.71922
631856.69	4175595.98	0.76218	631856.35	4175615.59	0.80965
631856.01	4175635.21	0.86242	631855.67	4175654.82	0.92131
631855.33	4175674.44	0.98751	631855.00	4175694.05	1.06238
631854.66	4175713.67	1.14776	631854.32	4175733.28	1.24596
631853.98	4175752.90	1.36027	631853.64	4175772.51	1.49493
631853.30	4175792.13	1.65617	631852.97	4175811.74	1.85272
631852.63	4175831.36	2.09781	631852.29	4175850.97	2.41184
631851.95	4175870.59	2.82915	631851.61	4175890.20	3.40944
631851.27	4175909.82	4.26993	631850.94	4175929.43	5.66821
631850.60	4175949.05	8.31317	631850.26	4175968.66	15.28804
631830.54	4175988.13	14.51995	631811.15	4175987.98	6.71086
631791.77	4175987.83	4.28692	631772.39	4175987.67	3.12834
631753.00	4175987.52	2.45309	631733.62	4175987.37	2.01231
631714.24	4175987.22	1.70214	631694.85	4175987.07	1.47200
631675.47	4175986.92	1.29463	631656.09	4175986.77	1.15370
631636.70	4175986.62	1.03897	631617.32	4175986.46	0.94388
631597.94	4175986.31	0.86375	631578.55	4175986.16	0.79530
631559.17	4175986.01	0.73621	631539.79	4175985.86	0.68467
631520.40	4175985.71	0.63932	631501.02	4175985.56	0.59915
631481.64	4175985.40	0.56332	631462.25	4175985.25	0.53115
631442.87	4175985.10	0.50214	631423.49	4175984.95	0.47585
631404.10	4175984.80	0.45191	631384.72	4175984.65	0.43004
631365.34	4175984.50	0.40998	631345.95	4175984.35	0.39150
631326.57	4175984.19	0.37446	631307.19	4175984.04	0.35869
631287.80	4175983.89	0.34404			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.32006	632304.44	4174354.52	0.15499
632192.15	4174956.32	0.31665	632420.62	4175510.15	0.72216
632418.97	4175552.92	0.78848	631187.00	4175727.00	2.62319
631166.00	4175729.00	2.63512	631121.00	4175719.00	2.46801
631035.00	4174830.00	0.23294	631106.00	4174825.00	0.23853
631937.00	4174528.00	0.18894	631322.00	4174522.00	0.16922
629800.63	4173850.44	0.06077	630150.63	4173850.44	0.06737
630500.63	4173850.44	0.07310	630850.63	4173850.44	0.07953
631200.63	4173850.44	0.08529	631550.63	4173850.44	0.09080
631900.63	4173850.44	0.09687	632250.63	4173850.44	0.10055
632600.63	4173850.44	0.09999	632950.63	4173850.44	0.09621
633300.63	4173850.44	0.08990	629800.63	4174200.44	0.07394
630150.63	4174200.44	0.08481	630500.63	4174200.44	0.09463
630850.63	4174200.44	0.10567	631200.63	4174200.44	0.11555
631550.63	4174200.44	0.12463	631900.63	4174200.44	0.13312
632250.63	4174200.44	0.13509	632600.63	4174200.44	0.13042
632950.63	4174200.44	0.12179	633300.63	4174200.44	0.11059
629800.63	4174550.44	0.09231	630150.63	4174550.44	0.11095
630500.63	4174550.44	0.12916	630850.63	4174550.44	0.14982
631200.63	4174550.44	0.16931	631550.63	4174550.44	0.18509
631900.63	4174550.44	0.19364	632250.63	4174550.44	0.18979
632600.63	4174550.44	0.17735	632950.63	4174550.44	0.15952
633300.63	4174550.44	0.14218	629800.63	4174900.44	0.11932
630150.63	4174900.44	0.15363	630500.63	4174900.44	0.19099
630850.63	4174900.44	0.23604	631200.63	4174900.44	0.27953
631550.63	4174900.44	0.30307	631900.63	4174900.44	0.30556
632250.63	4174900.44	0.28856	632600.63	4174900.44	0.25669
632950.63	4174900.44	0.22244	633300.63	4174900.44	0.19914
629800.63	4175250.44	0.16126	630150.63	4175250.44	0.23233
630500.63	4175250.44	0.32681	630850.63	4175250.44	0.45099
631200.63	4175250.44	0.54794	631550.63	4175250.44	0.58017
631900.63	4175250.44	0.56424	632250.63	4175250.44	0.49807
632600.63	4175250.44	0.40903	632950.63	4175250.44	0.34839
633300.63	4175250.44	0.30300	629800.63	4175600.44	0.22324
630150.63	4175600.44	0.40679	630500.63	4175600.44	0.80157
630850.63	4175600.44	1.26243	631200.63	4175600.44	1.50439
631550.63	4175600.44	1.57870	631900.63	4175600.44	1.41694
632250.63	4175600.44	1.01738	632600.63	4175600.44	0.74830
632950.63	4175600.44	0.57240	633300.63	4175600.44	0.44950
629800.63	4175950.44	0.28001	630150.63	4175950.44	0.86067

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	19.27688	630850.63	4175950.44	21.31820
631200.63	4175950.44	21.15457	631550.63	4175950.44	20.44571
631900.63	4175950.44	9.54749	632250.63	4175950.44	2.16490
632600.63	4175950.44	1.15458	632950.63	4175950.44	0.75768
633300.63	4175950.44	0.54864	629800.63	4176300.44	0.30188
630150.63	4176300.44	0.80607	630500.63	4176300.44	1.76388
630850.63	4176300.44	2.32857	631200.63	4176300.44	2.58848
631550.63	4176300.44	2.50946	631900.63	4176300.44	1.73012
632250.63	4176300.44	1.09073	632600.63	4176300.44	0.77095
632950.63	4176300.44	0.57582	633300.63	4176300.44	0.44765
629800.63	4176650.44	0.29965	630150.63	4176650.44	0.51648
630500.63	4176650.44	0.76358	630850.63	4176650.44	0.93590
631200.63	4176650.44	0.99573	631550.63	4176650.44	0.91195
631900.63	4176650.44	0.72748	632250.63	4176650.44	0.55527
632600.63	4176650.44	0.43073	632950.63	4176650.44	0.35284
633300.63	4176650.44	0.29731	629800.63	4177000.44	0.25649
630150.63	4177000.44	0.36067	630500.63	4177000.44	0.46133
630850.63	4177000.44	0.52436	631200.63	4177000.44	0.53989
631550.63	4177000.44	0.50228	631900.63	4177000.44	0.42903
632250.63	4177000.44	0.35358	632600.63	4177000.44	0.29093
632950.63	4177000.44	0.24264	633300.63	4177000.44	0.20780
629800.63	4177350.44	0.21032	630150.63	4177350.44	0.26654
630500.63	4177350.44	0.31298	630850.63	4177350.44	0.33961
631200.63	4177350.44	0.34177	631550.63	4177350.44	0.32399
631900.63	4177350.44	0.29087	632250.63	4177350.44	0.25177
632600.63	4177350.44	0.21749	632950.63	4177350.44	0.18458
633300.63	4177350.44	0.15998	631670.70	4175493.59	1.08451
631669.80	4175641.41	1.81655	631665.32	4175796.39	3.88177
631417.17	4175826.85	4.91755	631417.17	4175673.66	2.12041
631422.55	4175484.63	1.06040	631268.42	4175983.74	91.40807
631275.69	4175523.99	1.17106	631345.65	4175419.50	0.86607
631384.72	4175441.30	0.92730	631491.93	4175442.21	0.93948
631491.93	4175414.95	0.86989	631385.63	4175413.14	0.85654
631358.37	4175395.87	0.81355	631409.25	4175336.81	0.70357
631567.35	4175235.96	0.56210	631756.33	4175028.80	0.37648
631807.22	4175003.36	0.36028	631867.18	4174987.91	0.35034
631849.92	4175988.28	46.80487	631268.74	4175963.75	30.79546
631269.05	4175943.76	18.16554	631269.37	4175923.77	12.81660

631269.68	4175903.78	9.81878	631270.00	4175883.79	7.88737
631270.32	4175863.81	6.53604	631270.63	4175843.82	5.53664

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	4.76850	631271.26	4175803.84	4.16040
631271.58	4175783.85	3.66783	631271.90	4175763.86	3.26151
631272.21	4175743.87	2.92135	631272.53	4175723.88	2.63309
631272.85	4175703.89	2.38632	631273.16	4175683.90	2.17322
631273.48	4175663.91	1.98782	631273.79	4175643.92	1.82546
631274.11	4175623.94	1.68253	631274.43	4175603.95	1.55591
631274.74	4175583.96	1.44327	631275.06	4175563.97	1.34264
631275.37	4175543.98	1.25236	631285.68	4175509.06	1.11814
631295.68	4175494.14	1.06887	631305.67	4175479.21	1.02284
631315.67	4175464.28	0.97980	631325.66	4175449.35	0.93947
631335.66	4175434.43	0.90165	631358.67	4175426.77	0.88596
631371.70	4175434.03	0.90635	631402.59	4175441.45	0.93001
631420.46	4175441.60	0.93245	631438.33	4175441.76	0.93465
631456.19	4175441.91	0.93654	631474.06	4175442.06	0.93815
631491.93	4175428.58	0.90366	631474.21	4175414.65	0.86828
631456.50	4175414.35	0.86642	631438.78	4175414.05	0.86432
631421.06	4175413.74	0.86195	631403.35	4175413.44	0.85936
631372.00	4175404.51	0.83472	631371.09	4175381.11	0.78378
631383.81	4175366.34	0.75559	631396.53	4175351.58	0.72890
631425.06	4175326.73	0.68759	631440.87	4175316.64	0.67205
631456.68	4175306.56	0.65696	631472.49	4175296.47	0.64227
631488.30	4175286.39	0.62799	631504.11	4175276.30	0.61408
631519.92	4175266.22	0.60055	631535.73	4175256.13	0.58737
631551.54	4175246.05	0.57457	631579.95	4175222.15	0.54562
631592.55	4175208.34	0.52986	631605.15	4175194.53	0.51479
631617.74	4175180.72	0.50038	631630.34	4175166.91	0.48658
631642.94	4175153.10	0.47338	631655.54	4175139.29	0.46073
631668.14	4175125.47	0.44861	631680.74	4175111.66	0.43700
631693.34	4175097.85	0.42587	631705.94	4175084.04	0.41518
631718.53	4175070.23	0.40492	631731.13	4175056.42	0.39506
631743.73	4175042.61	0.38559	631773.29	4175020.32	0.37097
631790.26	4175011.84	0.36557	631822.21	4174999.50	0.35780
631837.20	4174995.64	0.35532	631852.19	4174991.77	0.35283
631866.84	4175007.53	0.36167	631866.50	4175027.14	0.37359
631866.16	4175046.76	0.38614	631865.83	4175066.37	0.39936

631865.49	4175085.99	0.41331	631865.15	4175105.60	0.42805
631864.81	4175125.22	0.44363	631864.47	4175144.83	0.46011
631864.13	4175164.45	0.47758	631863.80	4175184.06	0.49610
631863.46	4175203.68	0.51578	631863.12	4175223.29	0.53670
631862.78	4175242.91	0.55897	631862.44	4175262.52	0.58270

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	0.60805	631861.77	4175301.75	0.63513
631861.43	4175321.37	0.66413	631861.09	4175340.98	0.69521
631860.75	4175360.60	0.72860	631860.41	4175380.21	0.76450
631860.07	4175399.83	0.80319	631859.73	4175419.44	0.84492
631859.40	4175439.06	0.89005	631859.06	4175458.67	0.93890
631858.72	4175478.29	0.99194	631858.38	4175497.90	1.04959
631858.04	4175517.52	1.11245	631857.70	4175537.13	1.18108
631857.37	4175556.75	1.25630	631857.03	4175576.36	1.33890
631856.69	4175595.98	1.42999	631856.35	4175615.59	1.53072
631856.01	4175635.21	1.64266	631855.67	4175654.82	1.76752
631855.33	4175674.44	1.90766	631855.00	4175694.05	2.06568
631854.66	4175713.67	2.24528	631854.32	4175733.28	2.45077
631853.98	4175752.90	2.68820	631853.64	4175772.51	2.96514
631853.30	4175792.13	3.29252	631852.97	4175811.74	3.68483
631852.63	4175831.36	4.16413	631852.29	4175850.97	4.76238
631851.95	4175870.59	5.53153	631851.61	4175890.20	6.55717
631851.27	4175909.82	8.00012	631850.94	4175929.43	10.19890
631850.60	4175949.05	14.04375	631850.26	4175968.66	22.66475
631830.54	4175988.13	85.95669	631811.15	4175987.98	79.06883
631791.77	4175987.83	83.11126	631772.39	4175987.67	93.04582
631753.00	4175987.52	95.22375	631733.62	4175987.37	82.77294
631714.24	4175987.22	85.32635	631694.85	4175987.07	93.58945
631675.47	4175986.92	81.53392	631656.09	4175986.77	83.68001
631636.70	4175986.62	91.77683	631617.32	4175986.46	93.09967
631597.94	4175986.31	81.95446	631578.55	4175986.16	89.92956
631559.17	4175986.01	91.09736	631539.79	4175985.86	92.25792
631520.40	4175985.71	88.25239	631501.02	4175985.56	89.20100
631481.64	4175985.40	90.15222	631462.25	4175985.25	97.14841
631442.87	4175985.10	87.34293	631423.49	4175984.95	95.88661
631404.10	4175984.80	95.37476	631384.72	4175984.65	94.77535
631365.34	4175984.50	94.17501	631345.95	4175984.35	93.66128
631326.57	4175984.19	93.01820	631307.19	4175984.04	92.44444

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.57811	632304.44	4174354.52	0.19413
632192.15	4174956.32	0.62639	632420.62	4175510.15	2.53324
632418.97	4175552.92	2.87821	631187.00	4175727.00	0.64333
631166.00	4175729.00	0.60778	631121.00	4175719.00	0.53464
631035.00	4174830.00	0.17231	631106.00	4174825.00	0.18283
631937.00	4174528.00	0.20021	631322.00	4174522.00	0.15341
629800.63	4173850.44	0.04391	630150.63	4173850.44	0.05009
630500.63	4173850.44	0.05846	630850.63	4173850.44	0.06889
631200.63	4173850.44	0.07695	631550.63	4173850.44	0.07671
631900.63	4173850.44	0.08552	632250.63	4173850.44	0.10329
632600.63	4173850.44	0.11142	632950.63	4173850.44	0.11972
633300.63	4173850.44	0.12302	629800.63	4174200.44	0.05134
630150.63	4174200.44	0.05915	630500.63	4174200.44	0.07051
630850.63	4174200.44	0.08689	631200.63	4174200.44	0.10450
631550.63	4174200.44	0.10769	631900.63	4174200.44	0.12348
632250.63	4174200.44	0.15369	632600.63	4174200.44	0.16836
632950.63	4174200.44	0.17669	633300.63	4174200.44	0.16424
629800.63	4174550.44	0.06093	630150.63	4174550.44	0.07203
630500.63	4174550.44	0.08792	630850.63	4174550.44	0.11328
631200.63	4174550.44	0.14840	631550.63	4174550.44	0.16511
631900.63	4174550.44	0.19850	632250.63	4174550.44	0.26265
632600.63	4174550.44	0.29211	632950.63	4174550.44	0.26590
633300.63	4174550.44	0.22321	629800.63	4174900.44	0.07157
630150.63	4174900.44	0.08886	630500.63	4174900.44	0.11444
630850.63	4174900.44	0.15471	631200.63	4174900.44	0.21786
631550.63	4174900.44	0.27939	631900.63	4174900.44	0.36987
632250.63	4174900.44	0.56316	632600.63	4174900.44	0.54610
632950.63	4174900.44	0.41082	633300.63	4174900.44	0.34031
629800.63	4175250.44	0.08034	630150.63	4175250.44	0.10476
630500.63	4175250.44	0.14636	630850.63	4175250.44	0.22276
631200.63	4175250.44	0.34643	631550.63	4175250.44	0.57988
631900.63	4175250.44	1.01355	632250.63	4175250.44	1.53013
632600.63	4175250.44	1.03884	632950.63	4175250.44	0.73428
633300.63	4175250.44	0.56818	629800.63	4175600.44	0.08775
630150.63	4175600.44	0.11710	630500.63	4175600.44	0.16887
630850.63	4175600.44	0.28278	631200.63	4175600.44	0.58841
631550.63	4175600.44	2.70895	631900.63	4175600.44	2.35683
632250.63	4175600.44	4.62177	632600.63	4175600.44	2.21289
632950.63	4175600.44	1.25088	633300.63	4175600.44	0.84154

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.18252	630850.63	4175950.44	0.32105
631200.63	4175950.44	0.78426	631550.63	4175950.44	3.66602
631900.63	4175950.44	5.58982	632250.63	4175950.44	4.23421
632600.63	4175950.44	2.13015	632950.63	4175950.44	1.26093
633300.63	4175950.44	0.85055	629800.63	4176300.44	0.09499
630150.63	4176300.44	0.13310	630500.63	4176300.44	0.21111
630850.63	4176300.44	0.40152	631200.63	4176300.44	0.87883
631550.63	4176300.44	1.42902	631900.63	4176300.44	1.48044
632250.63	4176300.44	1.29652	632600.63	4176300.44	0.97508
632950.63	4176300.44	0.74653	633300.63	4176300.44	0.58140
629800.63	4176650.44	0.10520	630150.63	4176650.44	0.15113
630500.63	4176650.44	0.23401	630850.63	4176650.44	0.39547
631200.63	4176650.44	0.62007	631550.63	4176650.44	0.75880
631900.63	4176650.44	0.76753	632250.63	4176650.44	0.71298
632600.63	4176650.44	0.58125	632950.63	4176650.44	0.45250
633300.63	4176650.44	0.37506	629800.63	4177000.44	0.11272
630150.63	4177000.44	0.15447	630500.63	4177000.44	0.22225
630850.63	4177000.44	0.31639	631200.63	4177000.44	0.40442
631550.63	4177000.44	0.47335	631900.63	4177000.44	0.46402
632250.63	4177000.44	0.42254	632600.63	4177000.44	0.39302
632950.63	4177000.44	0.32486	633300.63	4177000.44	0.27165
629800.63	4177350.44	0.11170	630150.63	4177350.44	0.14674
630500.63	4177350.44	0.19133	630850.63	4177350.44	0.23936
631200.63	4177350.44	0.28317	631550.63	4177350.44	0.31558
631900.63	4177350.44	0.30951	632250.63	4177350.44	0.29209
632600.63	4177350.44	0.26682	632950.63	4177350.44	0.24604
633300.63	4177350.44	0.21326	631670.70	4175493.59	1.57845
631669.80	4175641.41	5.19767	631665.32	4175796.39	1.51735
631417.17	4175826.85	1.53406	631417.17	4175673.66	1.38579
631422.55	4175484.63	0.90267	631268.42	4175983.74	1.01273
631275.69	4175523.99	0.64295	631345.65	4175419.50	0.59865
631384.72	4175441.30	0.73510	631491.93	4175442.21	1.14090
631491.93	4175414.95	0.97694	631385.63	4175413.14	0.64325
631358.37	4175395.87	0.57578	631409.25	4175336.81	0.58146
631567.35	4175235.96	0.57188	631756.33	4175028.80	0.37817
631807.22	4175003.36	0.38679	631867.18	4174987.91	0.41960
631849.92	4175988.28	4.68707	631268.74	4175963.75	0.99658
631269.05	4175943.76	0.97988	631269.37	4175923.77	0.96319
631269.68	4175903.78	0.94685	631270.00	4175883.79	0.93161

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	0.89625	631271.26	4175803.84	0.89155
631271.58	4175783.85	0.88762	631271.90	4175763.86	0.87388
631272.21	4175743.87	0.86043	631272.53	4175723.88	0.83652
631272.85	4175703.89	0.80836	631273.16	4175683.90	0.78512
631273.48	4175663.91	0.77515	631273.79	4175643.92	0.76662
631274.11	4175623.94	0.75651	631274.43	4175603.95	0.72059
631274.74	4175583.96	0.68176	631275.06	4175563.97	0.66818
631275.37	4175543.98	0.66099	631285.68	4175509.06	0.63233
631295.68	4175494.14	0.61932	631305.67	4175479.21	0.61163
631315.67	4175464.28	0.60123	631325.66	4175449.35	0.60042
631335.66	4175434.43	0.59541	631358.67	4175426.77	0.60619
631371.70	4175434.03	0.67999	631402.59	4175441.45	0.73299
631420.46	4175441.60	0.82288	631438.33	4175441.76	0.87631
631456.19	4175441.91	0.94833	631474.06	4175442.06	1.04637
631491.93	4175428.58	1.06391	631474.21	4175414.65	0.94359
631456.50	4175414.35	0.84434	631438.78	4175414.05	0.75420
631421.06	4175413.74	0.73486	631403.35	4175413.44	0.74959
631372.00	4175404.51	0.60849	631371.09	4175381.11	0.57419
631383.81	4175366.34	0.57126	631396.53	4175351.58	0.57525
631425.06	4175326.73	0.58557	631440.87	4175316.64	0.59000
631456.68	4175306.56	0.59288	631472.49	4175296.47	0.59117
631488.30	4175286.39	0.58197	631504.11	4175276.30	0.57746
631519.92	4175266.22	0.57688	631535.73	4175256.13	0.57407
631551.54	4175246.05	0.57325	631579.95	4175222.15	0.56312
631592.55	4175208.34	0.54854	631605.15	4175194.53	0.53483
631617.74	4175180.72	0.51502	631630.34	4175166.91	0.49673
631642.94	4175153.10	0.48196	631655.54	4175139.29	0.46531
631668.14	4175125.47	0.45161	631680.74	4175111.66	0.43832
631693.34	4175097.85	0.42588	631705.94	4175084.04	0.41183
631718.53	4175070.23	0.40121	631731.13	4175056.42	0.39229
631743.73	4175042.61	0.38470	631773.29	4175020.32	0.37967
631790.26	4175011.84	0.38247	631822.21	4174999.50	0.39397
631837.20	4174995.64	0.40010	631852.19	4174991.77	0.40961
631866.84	4175007.53	0.43931	631866.50	4175027.14	0.46080
631866.16	4175046.76	0.48409	631865.83	4175066.37	0.50943
631865.49	4175085.99	0.53680	631865.15	4175105.60	0.56638
631864.81	4175125.22	0.59848	631864.47	4175144.83	0.63454
631864.13	4175164.45	0.67325	631863.80	4175184.06	0.71585
631863.46	4175203.68	0.76372	631863.12	4175223.29	0.81560

631862.78 4175242.91 0.87735 631862.44 4175262.52 0.96047

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.10487	631861.77	4175301.75	1.30648
631861.43	4175321.37	1.22813	631861.09	4175340.98	0.99725
631860.75	4175360.60	0.87742	631860.41	4175380.21	0.90286
631860.07	4175399.83	0.98924	631859.73	4175419.44	1.02512
631859.40	4175439.06	1.13657	631859.06	4175458.67	1.18357
631858.72	4175478.29	1.37137	631858.38	4175497.90	1.54480
631858.04	4175517.52	1.60436	631857.70	4175537.13	1.77306
631857.37	4175556.75	1.82870	631857.03	4175576.36	1.88335
631856.69	4175595.98	1.93674	631856.35	4175615.59	2.17831
631856.01	4175635.21	2.69634	631855.67	4175654.82	3.19623
631855.33	4175674.44	3.58934	631855.00	4175694.05	4.47835
631854.66	4175713.67	4.55790	631854.32	4175733.28	5.72435
631853.98	4175752.90	4.74129	631853.64	4175772.51	8.12587
631853.30	4175792.13	29.20670	631852.97	4175811.74	38.47248
631852.63	4175831.36	23.96028	631852.29	4175850.97	18.04640
631851.95	4175870.59	14.96747	631851.61	4175890.20	11.48198
631851.27	4175909.82	9.80118	631850.94	4175929.43	7.84236
631850.60	4175949.05	6.19877	631850.26	4175968.66	5.33614
631830.54	4175988.13	4.89535	631811.15	4175987.98	5.20065
631791.77	4175987.83	5.50676	631772.39	4175987.67	5.65153
631753.00	4175987.52	5.45106	631733.62	4175987.37	4.69668
631714.24	4175987.22	3.63313	631694.85	4175987.07	3.39334
631675.47	4175986.92	2.49975	631656.09	4175986.77	1.87974
631636.70	4175986.62	2.27407	631617.32	4175986.46	3.04246
631597.94	4175986.31	3.44157	631578.55	4175986.16	3.78188
631559.17	4175986.01	3.61304	631539.79	4175985.86	3.24456
631520.40	4175985.71	2.92991	631501.02	4175985.56	2.66178
631481.64	4175985.40	2.42162	631462.25	4175985.25	2.20849
631442.87	4175985.10	2.02419	631423.49	4175984.95	1.85983
631404.10	4175984.80	1.71058	631384.72	4175984.65	1.57546
631365.34	4175984.50	1.45521	631345.95	4175984.35	1.34669
631326.57	4175984.19	1.25145	631307.19	4175984.04	1.16415
631287.80	4175983.89	1.08519			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.70617	632304.44	4174354.52	0.40660
632192.15	4174956.32	1.59951	632420.62	4175510.15	2.20577
632418.97	4175552.92	2.09199	631187.00	4175727.00	1.74345
631166.00	4175729.00	1.63024	631121.00	4175719.00	1.40926
631035.00	4174830.00	0.36548	631106.00	4174825.00	0.40652
631937.00	4174528.00	0.53785	631322.00	4174522.00	0.29113
629800.63	4173850.44	0.05755	630150.63	4173850.44	0.06730
630500.63	4173850.44	0.08137	630850.63	4173850.44	0.09995
631200.63	4173850.44	0.11068	631550.63	4173850.44	0.11700
631900.63	4173850.44	0.14854	632250.63	4173850.44	0.16906
632600.63	4173850.44	0.18426	632950.63	4173850.44	0.17727
633300.63	4173850.44	0.15738	629800.63	4174200.44	0.06955
630150.63	4174200.44	0.08328	630500.63	4174200.44	0.10370
630850.63	4174200.44	0.13617	631200.63	4174200.44	0.16903
631550.63	4174200.44	0.18520	631900.63	4174200.44	0.25303
632250.63	4174200.44	0.29866	632600.63	4174200.44	0.29288
632950.63	4174200.44	0.24704	633300.63	4174200.44	0.21704
629800.63	4174550.44	0.08396	630150.63	4174550.44	0.10604
630500.63	4174550.44	0.13905	630850.63	4174550.44	0.19616
631200.63	4174550.44	0.28756	631550.63	4174550.44	0.35164
631900.63	4174550.44	0.55425	632250.63	4174550.44	0.61521
632600.63	4174550.44	0.47956	632950.63	4174550.44	0.38696
633300.63	4174550.44	0.33386	629800.63	4174900.44	0.09644
630150.63	4174900.44	0.13044	630500.63	4174900.44	0.19023
630850.63	4174900.44	0.30406	631200.63	4174900.44	0.55635
631550.63	4174900.44	0.92301	631900.63	4174900.44	1.73571
632250.63	4174900.44	1.30790	632600.63	4174900.44	0.91818
632950.63	4174900.44	0.66965	633300.63	4174900.44	0.52224
629800.63	4175250.44	0.10651	630150.63	4175250.44	0.14922
630500.63	4175250.44	0.23245	630850.63	4175250.44	0.44056
631200.63	4175250.44	1.21370	631550.63	4175250.44	6.68726
631900.63	4175250.44	6.98481	632250.63	4175250.44	3.44481
632600.63	4175250.44	1.59647	632950.63	4175250.44	0.98755
633300.63	4175250.44	0.69649	629800.63	4175600.44	0.11099
630150.63	4175600.44	0.15923	630500.63	4175600.44	0.26115
630850.63	4175600.44	0.56042	631200.63	4175600.44	1.86219
631550.63	4175600.44	3.10218	631900.63	4175600.44	3.16582
632250.63	4175600.44	2.56019	632600.63	4175600.44	1.42628
632950.63	4175600.44	0.92300	633300.63	4175600.44	0.66482
629800.63	4175950.44	0.11915	630150.63	4175950.44	0.18093

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.32182	630850.63	4175950.44	0.66840
631200.63	4175950.44	1.23549	631550.63	4175950.44	1.24842
631900.63	4175950.44	1.05763	632250.63	4175950.44	0.90650
632600.63	4175950.44	0.76842	632950.63	4175950.44	0.59560
633300.63	4175950.44	0.47330	629800.63	4176300.44	0.13422
630150.63	4176300.44	0.20060	630500.63	4176300.44	0.32949
630850.63	4176300.44	0.54145	631200.63	4176300.44	0.66886
631550.63	4176300.44	0.66052	631900.63	4176300.44	0.58072
632250.63	4176300.44	0.57405	632600.63	4176300.44	0.47522
632950.63	4176300.44	0.37898	633300.63	4176300.44	0.32344
629800.63	4176650.44	0.13778	630150.63	4176650.44	0.19475
630500.63	4176650.44	0.28081	630850.63	4176650.44	0.37235
631200.63	4176650.44	0.44240	631550.63	4176650.44	0.43735
631900.63	4176650.44	0.41564	632250.63	4176650.44	0.38560
632600.63	4176650.44	0.33700	632950.63	4176650.44	0.28254
633300.63	4176650.44	0.23634	629800.63	4177000.44	0.13251
630150.63	4177000.44	0.17290	630500.63	4177000.44	0.21970
630850.63	4177000.44	0.26328	631200.63	4177000.44	0.30956
631550.63	4177000.44	0.30311	631900.63	4177000.44	0.29628
632250.63	4177000.44	0.25942	632600.63	4177000.44	0.25253
632950.63	4177000.44	0.21772	633300.63	4177000.44	0.19072
629800.63	4177350.44	0.12113	630150.63	4177350.44	0.14641
630500.63	4177350.44	0.17236	630850.63	4177350.44	0.19770
631200.63	4177350.44	0.22330	631550.63	4177350.44	0.21884
631900.63	4177350.44	0.21651	632250.63	4177350.44	0.19458
632600.63	4177350.44	0.18501	632950.63	4177350.44	0.17561
633300.63	4177350.44	0.15541	631670.70	4175493.59	6.66059
631669.80	4175641.41	4.17793	631665.32	4175796.39	1.77718
631417.17	4175826.85	0.98252	631417.17	4175673.66	1.42957
631422.55	4175484.63	2.86383	631268.42	4175983.74	1.17442
631275.69	4175523.99	2.63561	631345.65	4175419.50	3.68206
631384.72	4175441.30	3.51613	631491.93	4175442.21	6.77830
631491.93	4175414.95	10.78339	631385.63	4175413.14	4.13378
631358.37	4175395.87	3.72541	631409.25	4175336.81	5.30747
631567.35	4175235.96	6.31028	631756.33	4175028.80	2.75465
631807.22	4175003.36	2.55493	631867.18	4174987.91	2.41357
631849.92	4175988.28	0.95725	631268.74	4175963.75	1.22814
631269.05	4175943.76	1.28606	631269.37	4175923.77	1.34856
631269.68	4175903.78	1.41471	631270.00	4175883.79	1.48413
631270.32	4175863.81	1.55742	631270.63	4175843.82	1.63692

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.73092	631271.26	4175803.84	1.84322
631271.58	4175783.85	1.95870	631271.90	4175763.86	1.91566
631272.21	4175743.87	2.18127	631272.53	4175723.88	2.32956
631272.85	4175703.89	2.45507	631273.16	4175683.90	1.78407
631273.48	4175663.91	1.96920	631273.79	4175643.92	2.24282
631274.11	4175623.94	2.49141	631274.43	4175603.95	2.67298
631274.74	4175583.96	1.99796	631275.06	4175563.97	2.25243
631275.37	4175543.98	2.45495	631285.68	4175509.06	2.77629
631295.68	4175494.14	2.86728	631305.67	4175479.21	2.48858
631315.67	4175464.28	2.77868	631325.66	4175449.35	3.06888
631335.66	4175434.43	3.38028	631358.67	4175426.77	3.94379
631371.70	4175434.03	3.78510	631402.59	4175441.45	3.95350
631420.46	4175441.60	4.37407	631438.33	4175441.76	5.23646
631456.19	4175441.91	5.94666	631474.06	4175442.06	5.25362
631491.93	4175428.58	8.52935	631474.21	4175414.65	8.23032
631456.50	4175414.35	8.46165	631438.78	4175414.05	6.77068
631421.06	4175413.74	5.65239	631403.35	4175413.44	4.75654
631372.00	4175404.51	3.90562	631371.09	4175381.11	3.96555
631383.81	4175366.34	4.43814	631396.53	4175351.58	4.90226
631425.06	4175326.73	5.97305	631440.87	4175316.64	6.69869
631456.68	4175306.56	7.22863	631472.49	4175296.47	7.51622
631488.30	4175286.39	7.77259	631504.11	4175276.30	7.49109
631519.92	4175266.22	6.98545	631535.73	4175256.13	6.69980
631551.54	4175246.05	6.41488	631579.95	4175222.15	5.88532
631592.55	4175208.34	5.54153	631605.15	4175194.53	5.19577
631617.74	4175180.72	4.90552	631630.34	4175166.91	4.64782
631642.94	4175153.10	4.44437	631655.54	4175139.29	4.24773
631668.14	4175125.47	4.03968	631680.74	4175111.66	3.83077
631693.34	4175097.85	3.62692	631705.94	4175084.04	3.43213
631718.53	4175070.23	3.24715	631731.13	4175056.42	3.07260
631743.73	4175042.61	2.90819	631773.29	4175020.32	2.69412
631790.26	4175011.84	2.62718	631822.21	4174999.50	2.52831
631837.20	4174995.64	2.49530	631852.19	4174991.77	2.45651
631866.84	4175007.53	2.60410	631866.50	4175027.14	2.80674
631866.16	4175046.76	3.02255	631865.83	4175066.37	3.25121
631865.49	4175085.99	3.49288	631865.15	4175105.60	3.74942
631864.81	4175125.22	4.02376	631864.47	4175144.83	4.32198
631864.13	4175164.45	4.65476	631863.80	4175184.06	5.04255
631863.46	4175203.68	5.51582	631863.12	4175223.29	6.11641
631862.78	4175242.91	6.89965	631862.44	4175262.52	7.93018

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	9.24993	631861.77	4175301.75	10.82440
631861.43	4175321.37	12.51444	631861.09	4175340.98	14.16411
631860.75	4175360.60	15.54194	631860.41	4175380.21	16.48178
631860.07	4175399.83	16.94317	631859.73	4175419.44	17.16308
631859.40	4175439.06	16.01653	631859.06	4175458.67	13.62577
631858.72	4175478.29	10.35256	631858.38	4175497.90	7.37328
631858.04	4175517.52	5.10288	631857.70	4175537.13	3.85699
631857.37	4175556.75	3.16103	631857.03	4175576.36	2.84460
631856.69	4175595.98	2.70925	631856.35	4175615.59	2.67657
631856.01	4175635.21	2.69305	631855.67	4175654.82	2.71206
631855.33	4175674.44	2.70949	631855.00	4175694.05	2.68646
631854.66	4175713.67	2.64658	631854.32	4175733.28	2.60026
631853.98	4175752.90	2.53094	631853.64	4175772.51	2.45166
631853.30	4175792.13	2.36648	631852.97	4175811.74	2.27977
631852.63	4175831.36	2.17618	631852.29	4175850.97	2.11137
631851.95	4175870.59	2.01177	631851.61	4175890.20	1.83595
631851.27	4175909.82	1.57764	631850.94	4175929.43	1.19109
631850.60	4175949.05	1.07702	631850.26	4175968.66	1.01162
631830.54	4175988.13	0.95643	631811.15	4175987.98	0.96135
631791.77	4175987.83	0.97133	631772.39	4175987.67	0.98856
631753.00	4175987.52	1.00871	631733.62	4175987.37	1.03636
631714.24	4175987.22	1.06498	631694.85	4175987.07	1.14602
631675.47	4175986.92	1.27291	631656.09	4175986.77	1.27043
631636.70	4175986.62	1.29739	631617.32	4175986.46	1.33273
631597.94	4175986.31	1.31430	631578.55	4175986.16	1.25260
631559.17	4175986.01	1.18923	631539.79	4175985.86	1.15770
631520.40	4175985.71	1.14316	631501.02	4175985.56	1.13848
631481.64	4175985.40	1.15777	631462.25	4175985.25	1.17415
631442.87	4175985.10	1.18821	631423.49	4175984.95	1.19709
631404.10	4175984.80	1.20015	631384.72	4175984.65	1.19515
631365.34	4175984.50	1.18904	631345.95	4175984.35	1.18384
631326.57	4175984.19	1.17903	631307.19	4175984.04	1.17692
631287.80	4175983.89	1.17624			

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.72101	632304.44	4174354.52	0.22891
632192.15	4174956.32	0.68629	632420.62	4175510.15	1.71327
632418.97	4175552.92	1.81563	631187.00	4175727.00	2.66629
631166.00	4175729.00	2.36261	631121.00	4175719.00	1.77572
631035.00	4174830.00	0.24424	631106.00	4174825.00	0.25959
631937.00	4174528.00	0.26885	631322.00	4174522.00	0.17342
629800.63	4173850.44	0.05118	630150.63	4173850.44	0.05946
630500.63	4173850.44	0.07007	630850.63	4173850.44	0.08022
631200.63	4173850.44	0.08212	631550.63	4173850.44	0.08895
631900.63	4173850.44	0.10817	632250.63	4173850.44	0.11925
632600.63	4173850.44	0.13006	632950.63	4173850.44	0.13380
633300.63	4173850.44	0.12476	629800.63	4174200.44	0.06080
630150.63	4174200.44	0.07147	630500.63	4174200.44	0.08664
630850.63	4174200.44	0.10588	631200.63	4174200.44	0.11485
631550.63	4174200.44	0.12720	631900.63	4174200.44	0.15965
632250.63	4174200.44	0.18029	632600.63	4174200.44	0.19291
632950.63	4174200.44	0.17953	633300.63	4174200.44	0.15980
629800.63	4174550.44	0.07403	630150.63	4174550.44	0.08915
630500.63	4174550.44	0.11131	630850.63	4174550.44	0.14630
631200.63	4174550.44	0.17792	631550.63	4174550.44	0.20756
631900.63	4174550.44	0.27563	632250.63	4174550.44	0.31162
632600.63	4174550.44	0.28856	632950.63	4174550.44	0.24872
633300.63	4174550.44	0.22435	629800.63	4174900.44	0.08997
630150.63	4174900.44	0.11477	630500.63	4174900.44	0.15128
630850.63	4174900.44	0.21745	631200.63	4174900.44	0.32052
631550.63	4174900.44	0.43190	631900.63	4174900.44	0.63856
632250.63	4174900.44	0.58651	632600.63	4174900.44	0.45830
632950.63	4174900.44	0.39553	633300.63	4174900.44	0.34597
629800.63	4175250.44	0.10361	630150.63	4175250.44	0.14225
630500.63	4175250.44	0.21141	630850.63	4175250.44	0.36003
631200.63	4175250.44	0.70502	631550.63	4175250.44	1.36322
631900.63	4175250.44	2.03723	632250.63	4175250.44	1.22912
632600.63	4175250.44	0.88018	632950.63	4175250.44	0.67278
633300.63	4175250.44	0.52538	629800.63	4175600.44	0.11430
630150.63	4175600.44	0.16333	630500.63	4175600.44	0.26131
630850.63	4175600.44	0.53630	631200.63	4175600.44	2.20724
631550.63	4175600.44	25.97704	631900.63	4175600.44	7.63354
632250.63	4175600.44	2.59905	632600.63	4175600.44	1.43940
632950.63	4175600.44	0.93560	633300.63	4175600.44	0.66583
629800.63	4175950.44	0.11929	630150.63	4175950.44	0.17479

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.29557	630850.63	4175950.44	0.72843
631200.63	4175950.44	2.98003	631550.63	4175950.44	3.30170
631900.63	4175950.44	2.85038	632250.63	4175950.44	1.80952
632600.63	4175950.44	1.17377	632950.63	4175950.44	0.82027
633300.63	4175950.44	0.60629	629800.63	4176300.44	0.13049
630150.63	4176300.44	0.20160	630500.63	4176300.44	0.35623
630850.63	4176300.44	0.76724	631200.63	4176300.44	1.25130
631550.63	4176300.44	1.21731	631900.63	4176300.44	1.07423
632250.63	4176300.44	0.81893	632600.63	4176300.44	0.64207
632950.63	4176300.44	0.52536	633300.63	4176300.44	0.42995
629800.63	4176650.44	0.14521	630150.63	4176650.44	0.21400
630500.63	4176650.44	0.33754	630850.63	4176650.44	0.52067
631200.63	4176650.44	0.67070	631550.63	4176650.44	0.66781
631900.63	4176650.44	0.57405	632250.63	4176650.44	0.50732
632600.63	4176650.44	0.41145	632950.63	4176650.44	0.34197
633300.63	4176650.44	0.29757	629800.63	4177000.44	0.14561
630150.63	4177000.44	0.20095	630500.63	4177000.44	0.27209
630850.63	4177000.44	0.34701	631200.63	4177000.44	0.41641
631550.63	4177000.44	0.40964	631900.63	4177000.44	0.37006
632250.63	4177000.44	0.34153	632600.63	4177000.44	0.29934
632950.63	4177000.44	0.25759	633300.63	4177000.44	0.22061
629800.63	4177350.44	0.13751	630150.63	4177350.44	0.17426
630500.63	4177350.44	0.21252	630850.63	4177350.44	0.24896
631200.63	4177350.44	0.28224	631550.63	4177350.44	0.27881
631900.63	4177350.44	0.26323	632250.63	4177350.44	0.23626
632600.63	4177350.44	0.22935	632950.63	4177350.44	0.20245
633300.63	4177350.44	0.17979	631670.70	4175493.59	7.97556
631669.80	4175641.41	27.01346	631665.32	4175796.39	10.16858
631417.17	4175826.85	11.91044	631417.17	4175673.66	45.79931
631422.55	4175484.63	2.51052	631268.42	4175983.74	3.36221
631275.69	4175523.99	2.32345	631345.65	4175419.50	1.88226
631384.72	4175441.30	3.60878	631491.93	4175442.21	4.32336
631491.93	4175414.95	2.64215	631385.63	4175413.14	2.12946
631358.37	4175395.87	1.73370	631409.25	4175336.81	1.44130
631567.35	4175235.96	1.34402	631756.33	4175028.80	0.86442
631807.22	4175003.36	0.83244	631867.18	4174987.91	0.82447
631849.92	4175988.28	2.46914	631268.74	4175963.75	3.62080
631269.05	4175943.76	3.89204	631269.37	4175923.77	4.19378
631269.68	4175903.78	4.76178	631270.00	4175883.79	5.37673
631270.32	4175863.81	6.61178	631270.63	4175843.82	6.44783

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	7.90494	631271.26	4175803.84	7.28573
631271.58	4175783.85	6.87337	631271.90	4175763.86	7.28859
631272.21	4175743.87	6.78860	631272.53	4175723.88	6.05872
631272.85	4175703.89	5.58392	631273.16	4175683.90	5.17343
631273.48	4175663.91	4.85802	631273.79	4175643.92	4.24422
631274.11	4175623.94	4.10377	631274.43	4175603.95	3.78186
631274.74	4175583.96	3.26159	631275.06	4175563.97	2.96717
631275.37	4175543.98	2.64200	631285.68	4175509.06	2.27942
631295.68	4175494.14	2.27078	631305.67	4175479.21	2.28954
631315.67	4175464.28	2.37290	631325.66	4175449.35	2.12205
631335.66	4175434.43	1.95706	631358.67	4175426.77	2.08269
631371.70	4175434.03	2.44593	631402.59	4175441.45	4.04218
631420.46	4175441.60	4.05979	631438.33	4175441.76	3.92370
631456.19	4175441.91	3.83395	631474.06	4175442.06	4.09246
631491.93	4175428.58	2.99678	631474.21	4175414.65	2.60782
631456.50	4175414.35	2.62361	631438.78	4175414.05	2.60007
631421.06	4175413.74	2.44949	631403.35	4175413.44	2.29744
631372.00	4175404.51	1.88251	631371.09	4175381.11	1.66364
631383.81	4175366.34	1.59334	631396.53	4175351.58	1.51398
631425.06	4175326.73	1.40710	631440.87	4175316.64	1.37637
631456.68	4175306.56	1.35382	631472.49	4175296.47	1.34275
631488.30	4175286.39	1.32741	631504.11	4175276.30	1.32361
631519.92	4175266.22	1.32616	631535.73	4175256.13	1.33314
631551.54	4175246.05	1.34090	631579.95	4175222.15	1.31072
631592.55	4175208.34	1.27737	631605.15	4175194.53	1.24440
631617.74	4175180.72	1.21146	631630.34	4175166.91	1.17960
631642.94	4175153.10	1.14728	631655.54	4175139.29	1.11442
631668.14	4175125.47	1.08177	631680.74	4175111.66	1.04974
631693.34	4175097.85	1.01804	631705.94	4175084.04	0.98659
631718.53	4175070.23	0.95552	631731.13	4175056.42	0.92482
631743.73	4175042.61	0.89471	631773.29	4175020.32	0.85439
631790.26	4175011.84	0.84397	631822.21	4174999.50	0.83168
631837.20	4174995.64	0.83029	631852.19	4174991.77	0.82787
631866.84	4175007.53	0.88037	631866.50	4175027.14	0.94077
631866.16	4175046.76	1.00716	631865.83	4175066.37	1.07867
631865.49	4175085.99	1.15732	631865.15	4175105.60	1.24288
631864.81	4175125.22	1.33571	631864.47	4175144.83	1.43613
631864.13	4175164.45	1.54470	631863.80	4175184.06	1.66036
631863.46	4175203.68	1.78469	631863.12	4175223.29	1.91999
631862.78	4175242.91	2.06375	631862.44	4175262.52	2.21689

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.38119	631861.77	4175301.75	2.55669
631861.43	4175321.37	2.74429	631861.09	4175340.98	2.94612
631860.75	4175360.60	3.16507	631860.41	4175380.21	3.40284
631860.07	4175399.83	3.66739	631859.73	4175419.44	3.96167
631859.40	4175439.06	4.29174	631859.06	4175458.67	4.66769
631858.72	4175478.29	5.09867	631858.38	4175497.90	5.59413
631858.04	4175517.52	6.16155	631857.70	4175537.13	6.79788
631857.37	4175556.75	7.50021	631857.03	4175576.36	8.25239
631856.69	4175595.98	9.01552	631856.35	4175615.59	9.72051
631856.01	4175635.21	10.28048	631855.67	4175654.82	10.62011
631855.33	4175674.44	10.71469	631855.00	4175694.05	10.58721
631854.66	4175713.67	10.27816	631854.32	4175733.28	9.80946
631853.98	4175752.90	9.18674	631853.64	4175772.51	8.42872
631853.30	4175792.13	7.58471	631852.97	4175811.74	6.73250
631852.63	4175831.36	5.93939	631852.29	4175850.97	5.23488
631851.95	4175870.59	4.61770	631851.61	4175890.20	4.08369
631851.27	4175909.82	3.62934	631850.94	4175929.43	3.25033
631850.60	4175949.05	2.93754	631850.26	4175968.66	2.68093
631830.54	4175988.13	2.49171	631811.15	4175987.98	2.51161
631791.77	4175987.83	2.53187	631772.39	4175987.67	2.54989
631753.00	4175987.52	2.56580	631733.62	4175987.37	2.57765
631714.24	4175987.22	2.58822	631694.85	4175987.07	2.59461
631675.47	4175986.92	2.60104	631656.09	4175986.77	2.60194
631636.70	4175986.62	2.59544	631617.32	4175986.46	2.59101
631597.94	4175986.31	2.61468	631578.55	4175986.16	2.65917
631559.17	4175986.01	2.71451	631539.79	4175985.86	2.79965
631520.40	4175985.71	2.89725	631501.02	4175985.56	3.00544
631481.64	4175985.40	3.21335	631462.25	4175985.25	3.55579
631442.87	4175985.10	3.82323	631423.49	4175984.95	3.89273
631404.10	4175984.80	3.93225	631384.72	4175984.65	3.73260
631365.34	4175984.50	3.64439	631345.95	4175984.35	3.58907
631326.57	4175984.19	3.55576	631307.19	4175984.04	3.52136
631287.80	4175983.89	3.45880			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.87885	632304.44	4174354.52	0.26646
632192.15	4174956.32	0.82216	632420.62	4175510.15	1.90976
632418.97	4175552.92	1.95665	631187.00	4175727.00	3.14477
631166.00	4175729.00	2.73883	631121.00	4175719.00	1.99045

631035.00	4174830.00	0.27834	631106.00	4174825.00	0.30004
631937.00	4174528.00	0.32269	631322.00	4174522.00	0.19994
629800.63	4173850.44	0.05360	630150.63	4173850.44	0.06248
630500.63	4173850.44	0.07421	630850.63	4173850.44	0.08645
631200.63	4173850.44	0.08959	631550.63	4173850.44	0.09750
631900.63	4173850.44	0.11947	632250.63	4173850.44	0.13254
632600.63	4173850.44	0.14493	632950.63	4173850.44	0.14572
633300.63	4173850.44	0.13323	629800.63	4174200.44	0.06418
630150.63	4174200.44	0.07579	630500.63	4174200.44	0.09250
630850.63	4174200.44	0.11502	631200.63	4174200.44	0.12799
631550.63	4174200.44	0.14301	631900.63	4174200.44	0.18185
632250.63	4174200.44	0.20736	632600.63	4174200.44	0.21657
632950.63	4174200.44	0.19541	633300.63	4174200.44	0.17400
629800.63	4174550.44	0.07847	630150.63	4174550.44	0.09563
630500.63	4174550.44	0.12039	630850.63	4174550.44	0.16069
631200.63	4174550.44	0.20409	631550.63	4174550.44	0.24373
631900.63	4174550.44	0.33187	632250.63	4174550.44	0.36903
632600.63	4174550.44	0.32384	632950.63	4174550.44	0.27942
633300.63	4174550.44	0.25221	629800.63	4174900.44	0.09433
630150.63	4174900.44	0.12306	630500.63	4174900.44	0.16633
630850.63	4174900.44	0.24379	631200.63	4174900.44	0.38279
631550.63	4174900.44	0.55524	631900.63	4174900.44	0.84430
632250.63	4174900.44	0.69382	632600.63	4174900.44	0.54281
632950.63	4174900.44	0.46154	633300.63	4174900.44	0.39339
629800.63	4175250.44	0.10703	630150.63	4175250.44	0.14878
630500.63	4175250.44	0.22724	630850.63	4175250.44	0.41068
631200.63	4175250.44	0.91949	631550.63	4175250.44	2.25152
631900.63	4175250.44	2.74840	632250.63	4175250.44	1.57128
632600.63	4175250.44	1.05772	632950.63	4175250.44	0.76428
633300.63	4175250.44	0.57668	629800.63	4175600.44	0.11581
630150.63	4175600.44	0.16686	630500.63	4175600.44	0.27057
630850.63	4175600.44	0.56786	631200.63	4175600.44	2.79506
631550.63	4175600.44	135.87124	631900.63	4175600.44	8.22097
632250.63	4175600.44	2.70478	632600.63	4175600.44	1.47501
632950.63	4175600.44	0.94969	633300.63	4175600.44	0.67250
629800.63	4175950.44	0.12132	630150.63	4175950.44	0.18021

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.31640	630850.63	4175950.44	0.80314
631200.63	4175950.44	2.47601	631550.63	4175950.44	2.19667
631900.63	4175950.44	1.83121	632250.63	4175950.44	1.40274
632600.63	4175950.44	0.99338	632950.63	4175950.44	0.73110

633300.63	4175950.44	0.55757	629800.63	4176300.44	0.13560
630150.63	4176300.44	0.20892	630500.63	4176300.44	0.36127
630850.63	4176300.44	0.72567	631200.63	4176300.44	1.04249
631550.63	4176300.44	1.00600	631900.63	4176300.44	0.87242
632250.63	4176300.44	0.70078	632600.63	4176300.44	0.54958
632950.63	4176300.44	0.46045	633300.63	4176300.44	0.38630
629800.63	4176650.44	0.14662	630150.63	4176650.44	0.21248
630500.63	4176650.44	0.32354	630850.63	4176650.44	0.47241
631200.63	4176650.44	0.59536	631550.63	4176650.44	0.58311
631900.63	4176650.44	0.50118	632250.63	4176650.44	0.45410
632600.63	4176650.44	0.37395	632950.63	4176650.44	0.31143
633300.63	4176650.44	0.26980	629800.63	4177000.44	0.14405
630150.63	4177000.44	0.19425	630500.63	4177000.44	0.25469
630850.63	4177000.44	0.31647	631200.63	4177000.44	0.37569
631550.63	4177000.44	0.36775	631900.63	4177000.44	0.33592
632250.63	4177000.44	0.30595	632600.63	4177000.44	0.27692
632950.63	4177000.44	0.24001	633300.63	4177000.44	0.20712
629800.63	4177350.44	0.13392	630150.63	4177350.44	0.16606
630500.63	4177350.44	0.19876	630850.63	4177350.44	0.23074
631200.63	4177350.44	0.25801	631550.63	4177350.44	0.25473
631900.63	4177350.44	0.24242	632250.63	4177350.44	0.21651
632600.63	4177350.44	0.21238	632950.63	4177350.44	0.19040
633300.63	4177350.44	0.16990	631670.70	4175493.59	15.31483
631669.80	4175641.41	24.26039	631665.32	4175796.39	4.01429
631417.17	4175826.85	5.52356	631417.17	4175673.66	31.30458
631422.55	4175484.63	4.07366	631268.42	4175983.74	2.39878
631275.69	4175523.99	3.66097	631345.65	4175419.50	3.11244
631384.72	4175441.30	5.87652	631491.93	4175442.21	11.69526
631491.93	4175414.95	5.39674	631385.63	4175413.14	3.70784
631358.37	4175395.87	2.85708	631409.25	4175336.81	2.36209
631567.35	4175235.96	2.20768	631756.33	4175028.80	1.22845
631807.22	4175003.36	1.16064	631867.18	4174987.91	1.12703
631849.92	4175988.28	1.67128	631268.74	4175963.75	2.58222
631269.05	4175943.76	2.81253	631269.37	4175923.77	3.22852
631269.68	4175903.78	4.78394	631270.00	4175883.79	6.02797
631270.32	4175863.81	5.93508	631270.63	4175843.82	6.42716

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	6.93601	631271.26	4175803.84	7.44706
631271.58	4175783.85	7.89747	631271.90	4175763.86	8.08379
631272.21	4175743.87	8.41545	631272.53	4175723.88	8.52033
631272.85	4175703.89	8.23877	631273.16	4175683.90	7.45368

631273.48	4175663.91	7.01121	631273.79	4175643.92	6.17474
631274.11	4175623.94	5.80671	631274.43	4175603.95	5.70824
631274.74	4175583.96	5.21277	631275.06	4175563.97	4.55007
631275.37	4175543.98	4.02236	631285.68	4175509.06	3.59751
631295.68	4175494.14	3.49278	631305.67	4175479.21	3.64202
631315.67	4175464.28	3.65209	631325.66	4175449.35	3.43272
631335.66	4175434.43	3.24113	631358.67	4175426.77	3.53006
631371.70	4175434.03	4.30099	631402.59	4175441.45	6.62329
631420.46	4175441.60	6.76845	631438.33	4175441.76	6.93238
631456.19	4175441.91	7.18093	631474.06	4175442.06	9.14426
631491.93	4175428.58	6.34705	631474.21	4175414.65	5.07905
631456.50	4175414.35	4.97513	631438.78	4175414.05	4.76947
631421.06	4175413.74	4.43888	631403.35	4175413.44	4.02663
631372.00	4175404.51	3.19189	631371.09	4175381.11	2.74988
631383.81	4175366.34	2.62221	631396.53	4175351.58	2.48756
631425.06	4175326.73	2.29727	631440.87	4175316.64	2.24123
631456.68	4175306.56	2.20120	631472.49	4175296.47	2.17638
631488.30	4175286.39	2.16149	631504.11	4175276.30	2.15556
631519.92	4175266.22	2.17558	631535.73	4175256.13	2.19264
631551.54	4175246.05	2.20399	631579.95	4175222.15	2.13665
631592.55	4175208.34	2.06322	631605.15	4175194.53	1.99180
631617.74	4175180.72	1.91853	631630.34	4175166.91	1.84910
631642.94	4175153.10	1.77970	631655.54	4175139.29	1.71032
631668.14	4175125.47	1.64303	631680.74	4175111.66	1.57748
631693.34	4175097.85	1.51471	631705.94	4175084.04	1.45335
631718.53	4175070.23	1.39391	631731.13	4175056.42	1.33668
631743.73	4175042.61	1.28145	631773.29	4175020.32	1.20756
631790.26	4175011.84	1.18540	631822.21	4174999.50	1.15474
631837.20	4174995.64	1.14782	631852.19	4174991.77	1.13847
631866.84	4175007.53	1.20998	631866.50	4175027.14	1.29903
631866.16	4175046.76	1.39491	631865.83	4175066.37	1.49923
631865.49	4175085.99	1.61206	631865.15	4175105.60	1.73255
631864.81	4175125.22	1.86227	631864.47	4175144.83	2.00065
631864.13	4175164.45	2.14853	631863.80	4175184.06	2.30674
631863.46	4175203.68	2.47564	631863.12	4175223.29	2.65683
631862.78	4175242.91	2.85264	631862.44	4175262.52	3.06550

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	3.29903	631861.77	4175301.75	3.55748
631861.43	4175321.37	3.84700	631861.09	4175340.98	4.17347
631860.75	4175360.60	4.54640	631860.41	4175380.21	4.97508
631860.07	4175399.83	5.46786	631859.73	4175419.44	6.02916

631859.40	4175439.06	6.65738	631859.06	4175458.67	7.34284
631858.72	4175478.29	8.06784	631858.38	4175497.90	8.79746
631858.04	4175517.52	9.47385	631857.70	4175537.13	10.02039
631857.37	4175556.75	10.37106	631857.03	4175576.36	10.50218
631856.69	4175595.98	10.42959	631856.35	4175615.59	10.17480
631856.01	4175635.21	9.73888	631855.67	4175654.82	9.12237
631855.33	4175674.44	8.34655	631855.00	4175694.05	7.47235
631854.66	4175713.67	6.58265	631854.32	4175733.28	5.75550
631853.98	4175752.90	5.02528	631853.64	4175772.51	4.39830
631853.30	4175792.13	3.86633	631852.97	4175811.74	3.41962
631852.63	4175831.36	3.04979	631852.29	4175850.97	2.74783
631851.95	4175870.59	2.50242	631851.61	4175890.20	2.30037
631851.27	4175909.82	2.13498	631850.94	4175929.43	1.99405
631850.60	4175949.05	1.87246	631850.26	4175968.66	1.76472
631830.54	4175988.13	1.68306	631811.15	4175987.98	1.69417
631791.77	4175987.83	1.70652	631772.39	4175987.67	1.71660
631753.00	4175987.52	1.72229	631733.62	4175987.37	1.72276
631714.24	4175987.22	1.72213	631694.85	4175987.07	1.72101
631675.47	4175986.92	1.72095	631656.09	4175986.77	1.73090
631636.70	4175986.62	1.74542	631617.32	4175986.46	1.77577
631597.94	4175986.31	1.81359	631578.55	4175986.16	1.85886
631559.17	4175986.01	1.91254	631539.79	4175985.86	1.95944
631520.40	4175985.71	2.01406	631501.02	4175985.56	2.09252
631481.64	4175985.40	2.21736	631462.25	4175985.25	2.37371
631442.87	4175985.10	2.48602	631423.49	4175984.95	2.50916
631404.10	4175984.80	2.51421	631384.72	4175984.65	2.52431
631365.34	4175984.50	2.49972	631345.95	4175984.35	2.45989
631326.57	4175984.19	2.42955	631307.19	4175984.04	2.41989
631287.80	4175983.89	2.41233			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.67298	632304.44	4174354.52	0.23405
632192.15	4174956.32	0.63161	632420.62	4175510.15	1.44333
632418.97	4175552.92	1.51442	631187.00	4175727.00	6.14503
631166.00	4175729.00	5.00638	631121.00	4175719.00	3.21830
631035.00	4174830.00	0.26931	631106.00	4174825.00	0.27869
631937.00	4174528.00	0.28537	631322.00	4174522.00	0.18021
629800.63	4173850.44	0.05375	630150.63	4173850.44	0.06286
630500.63	4173850.44	0.07395	630850.63	4173850.44	0.08183
631200.63	4173850.44	0.08249	631550.63	4173850.44	0.09565
631900.63	4173850.44	0.11271	632250.63	4173850.44	0.12287
632600.63	4173850.44	0.13286	632950.63	4173850.44	0.13177

633300.63	4173850.44	0.12055	629800.63	4174200.44	0.06406
630150.63	4174200.44	0.07608	630500.63	4174200.44	0.09292
630850.63	4174200.44	0.11111	631200.63	4174200.44	0.11558
631550.63	4174200.44	0.13929	631900.63	4174200.44	0.16737
632250.63	4174200.44	0.18711	632600.63	4174200.44	0.19096
632950.63	4174200.44	0.17226	633300.63	4174200.44	0.15457
629800.63	4174550.44	0.07872	630150.63	4174550.44	0.09558
630500.63	4174550.44	0.12125	630850.63	4174550.44	0.15950
631200.63	4174550.44	0.18024	631550.63	4174550.44	0.23434
631900.63	4174550.44	0.29348	632250.63	4174550.44	0.31328
632600.63	4174550.44	0.27365	632950.63	4174550.44	0.23907
633300.63	4174550.44	0.21777	629800.63	4174900.44	0.09755
630150.63	4174900.44	0.12536	630500.63	4174900.44	0.16791
630850.63	4174900.44	0.24720	631200.63	4174900.44	0.33587
631550.63	4174900.44	0.52113	631900.63	4174900.44	0.68023
632250.63	4174900.44	0.54292	632600.63	4174900.44	0.43450
632950.63	4174900.44	0.37795	633300.63	4174900.44	0.33019
629800.63	4175250.44	0.11470	630150.63	4175250.44	0.16101
630500.63	4175250.44	0.24607	630850.63	4175250.44	0.43415
631200.63	4175250.44	0.85203	631550.63	4175250.44	1.94104
631900.63	4175250.44	1.79756	632250.63	4175250.44	1.10537
632600.63	4175250.44	0.80173	632950.63	4175250.44	0.61650
633300.63	4175250.44	0.48533	629800.63	4175600.44	0.12797
630150.63	4175600.44	0.18885	630500.63	4175600.44	0.31953
630850.63	4175600.44	0.73953	631200.63	4175600.44	4.55112
631550.63	4175600.44	27.41590	631900.63	4175600.44	5.38267
632250.63	4175600.44	2.06961	632600.63	4175600.44	1.22521
632950.63	4175600.44	0.82578	633300.63	4175600.44	0.60135
629800.63	4175950.44	0.13449	630150.63	4175950.44	0.20493

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.37519	630850.63	4175950.44	1.08384
631200.63	4175950.44	4.01815	631550.63	4175950.44	3.02850
631900.63	4175950.44	2.59956	632250.63	4175950.44	1.55231
632600.63	4175950.44	1.03040	632950.63	4175950.44	0.73532
633300.63	4175950.44	0.55246	629800.63	4176300.44	0.14964
630150.63	4176300.44	0.24030	630500.63	4176300.44	0.44621
630850.63	4176300.44	0.95138	631200.63	4176300.44	1.30250
631550.63	4176300.44	1.11726	631900.63	4176300.44	0.99378
632250.63	4176300.44	0.75069	632600.63	4176300.44	0.60047
632950.63	4176300.44	0.49009	633300.63	4176300.44	0.40243
629800.63	4176650.44	0.16480	630150.63	4176650.44	0.24785

630500.63	4176650.44	0.39142	630850.63	4176650.44	0.57161
631200.63	4176650.44	0.69001	631550.63	4176650.44	0.64836
631900.63	4176650.44	0.56697	632250.63	4176650.44	0.47278
632600.63	4176650.44	0.38459	632950.63	4176650.44	0.32503
633300.63	4176650.44	0.28454	629800.63	4177000.44	0.16236
630150.63	4177000.44	0.22372	630500.63	4177000.44	0.29691
630850.63	4177000.44	0.36807	631200.63	4177000.44	0.41584
631550.63	4177000.44	0.40497	631900.63	4177000.44	0.35207
632250.63	4177000.44	0.33262	632600.63	4177000.44	0.28424
632950.63	4177000.44	0.24404	633300.63	4177000.44	0.21054
629800.63	4177350.44	0.14965	630150.63	4177350.44	0.18731
630500.63	4177350.44	0.22490	630850.63	4177350.44	0.26401
631200.63	4177350.44	0.27983	631550.63	4177350.44	0.27708
631900.63	4177350.44	0.25214	632250.63	4177350.44	0.23562
632600.63	4177350.44	0.22081	632950.63	4177350.44	0.19435
633300.63	4177350.44	0.17200	631670.70	4175493.59	6.27951
631669.80	4175641.41	17.42970	631665.32	4175796.39	9.51932
631417.17	4175826.85	6.53609	631417.17	4175673.66	76.09948
631422.55	4175484.63	4.85047	631268.42	4175983.74	3.42585
631275.69	4175523.99	4.14953	631345.65	4175419.50	2.32756
631384.72	4175441.30	3.93089	631491.93	4175442.21	11.04080
631491.93	4175414.95	4.55510	631385.63	4175413.14	2.90544
631358.37	4175395.87	2.16406	631409.25	4175336.81	1.95874
631567.35	4175235.96	1.86653	631756.33	4175028.80	0.98244
631807.22	4175003.36	0.91879	631867.18	4174987.91	0.87843
631849.92	4175988.28	2.30214	631268.74	4175963.75	3.79377
631269.05	4175943.76	4.26591	631269.37	4175923.77	5.44819
631269.68	4175903.78	7.14035	631270.00	4175883.79	7.03353
631270.32	4175863.81	7.43876	631270.63	4175843.82	8.85411

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	10.85780	631271.26	4175803.84	13.21008
631271.58	4175783.85	15.90604	631271.90	4175763.86	19.06022
631272.21	4175743.87	22.56734	631272.53	4175723.88	23.73647
631272.85	4175703.89	23.32171	631273.16	4175683.90	20.84602
631273.48	4175663.91	16.48820	631273.79	4175643.92	12.26186
631274.11	4175623.94	10.16935	631274.43	4175603.95	8.20277
631274.74	4175583.96	6.61786	631275.06	4175563.97	5.55653
631275.37	4175543.98	4.82586	631285.68	4175509.06	3.60567
631295.68	4175494.14	3.49794	631305.67	4175479.21	3.65898
631315.67	4175464.28	3.38445	631325.66	4175449.35	2.99974
631335.66	4175434.43	2.48731	631358.67	4175426.77	2.63259

631371.70	4175434.03	3.24004	631402.59	4175441.45	4.37151
631420.46	4175441.60	5.30351	631438.33	4175441.76	6.59000
631456.19	4175441.91	8.61270	631474.06	4175442.06	9.97440
631491.93	4175428.58	5.36179	631474.21	4175414.65	4.46218
631456.50	4175414.35	4.90778	631438.78	4175414.05	4.94873
631421.06	4175413.74	4.42618	631403.35	4175413.44	3.63093
631372.00	4175404.51	2.45904	631371.09	4175381.11	2.13875
631383.81	4175366.34	2.08046	631396.53	4175351.58	2.01712
631425.06	4175326.73	1.98095	631440.87	4175316.64	1.99177
631456.68	4175306.56	1.99750	631472.49	4175296.47	1.99326
631488.30	4175286.39	1.98763	631504.11	4175276.30	1.97605
631519.92	4175266.22	1.95601	631535.73	4175256.13	1.93356
631551.54	4175246.05	1.90062	631579.95	4175222.15	1.78586
631592.55	4175208.34	1.70932	631605.15	4175194.53	1.63648
631617.74	4175180.72	1.56685	631630.34	4175166.91	1.50212
631642.94	4175153.10	1.43874	631655.54	4175139.29	1.37811
631668.14	4175125.47	1.32011	631680.74	4175111.66	1.26507
631693.34	4175097.85	1.21230	631705.94	4175084.04	1.16200
631718.53	4175070.23	1.11396	631731.13	4175056.42	1.06809
631743.73	4175042.61	1.02430	631773.29	4175020.32	0.96190
631790.26	4175011.84	0.94001	631822.21	4174999.50	0.90967
631837.20	4174995.64	0.90001	631852.19	4174991.77	0.88920
631866.84	4175007.53	0.93146	631866.50	4175027.14	0.98811
631866.16	4175046.76	1.04792	631865.83	4175066.37	1.11110
631865.49	4175085.99	1.17789	631865.15	4175105.60	1.24871
631864.81	4175125.22	1.32400	631864.47	4175144.83	1.40210
631864.13	4175164.45	1.48437	631863.80	4175184.06	1.57095
631863.46	4175203.68	1.66217	631863.12	4175223.29	1.75906
631862.78	4175242.91	1.86208	631862.44	4175262.52	1.97189

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.09009	631861.77	4175301.75	2.21791
631861.43	4175321.37	2.35759	631861.09	4175340.98	2.51060
631860.75	4175360.60	2.67927	631860.41	4175380.21	2.86591
631860.07	4175399.83	3.07376	631859.73	4175419.44	3.30523
631859.40	4175439.06	3.56306	631859.06	4175458.67	3.84904
631858.72	4175478.29	4.16366	631858.38	4175497.90	4.50483
631858.04	4175517.52	4.86916	631857.70	4175537.13	5.24943
631857.37	4175556.75	5.63514	631857.03	4175576.36	6.01065
631856.69	4175595.98	6.35703	631856.35	4175615.59	6.65431
631856.01	4175635.21	6.88529	631855.67	4175654.82	7.03579
631855.33	4175674.44	7.09481	631855.00	4175694.05	7.05391

631854.66	4175713.67	6.91110	631854.32	4175733.28	6.67281
631853.98	4175752.90	6.35677	631853.64	4175772.51	5.98616
631853.30	4175792.13	5.58109	631852.97	4175811.74	5.15833
631852.63	4175831.36	4.73413	631852.29	4175850.97	4.32547
631851.95	4175870.59	3.94453	631851.61	4175890.20	3.59685
631851.27	4175909.82	3.28102	631850.94	4175929.43	2.99453
631850.60	4175949.05	2.73570	631850.26	4175968.66	2.50487
631830.54	4175988.13	2.32148	631811.15	4175987.98	2.33704
631791.77	4175987.83	2.34990	631772.39	4175987.67	2.36116
631753.00	4175987.52	2.37196	631733.62	4175987.37	2.38302
631714.24	4175987.22	2.39543	631694.85	4175987.07	2.40872
631675.47	4175986.92	2.42346	631656.09	4175986.77	2.43906
631636.70	4175986.62	2.45620	631617.32	4175986.46	2.47475
631597.94	4175986.31	2.49495	631578.55	4175986.16	2.51754
631559.17	4175986.01	2.53988	631539.79	4175985.86	2.55910
631520.40	4175985.71	2.58068	631501.02	4175985.56	2.61559
631481.64	4175985.40	2.67489	631462.25	4175985.25	2.77680
631442.87	4175985.10	2.99735	631423.49	4175984.95	3.18855
631404.10	4175984.80	3.34850	631384.72	4175984.65	3.33708
631365.34	4175984.50	3.26395	631345.95	4175984.35	3.25531
631326.57	4175984.19	3.30870	631307.19	4175984.04	3.35926
631287.80	4175983.89	3.40839			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.79532	632304.44	4174354.52	0.26852
632192.15	4174956.32	0.74690	632420.62	4175510.15	1.57832
632418.97	4175552.92	1.60980	631187.00	4175727.00	5.58430
631166.00	4175729.00	5.09144	631121.00	4175719.00	3.55623
631035.00	4174830.00	0.31939	631106.00	4174825.00	0.33568
631937.00	4174528.00	0.34248	631322.00	4174522.00	0.20870
629800.63	4173850.44	0.05633	630150.63	4173850.44	0.06618
630500.63	4173850.44	0.07870	630850.63	4173850.44	0.08879
631200.63	4173850.44	0.09005	631550.63	4173850.44	0.10526
631900.63	4173850.44	0.12458	632250.63	4173850.44	0.13700
632600.63	4173850.44	0.14723	632950.63	4173850.44	0.14222
633300.63	4173850.44	0.12852	629800.63	4174200.44	0.06776
630150.63	4174200.44	0.08083	630500.63	4174200.44	0.09969
630850.63	4174200.44	0.12216	631200.63	4174200.44	0.12906
631550.63	4174200.44	0.15748	631900.63	4174200.44	0.19102
632250.63	4174200.44	0.21447	632600.63	4174200.44	0.21137
632950.63	4174200.44	0.18707	633300.63	4174200.44	0.16869
629800.63	4174550.44	0.08381	630150.63	4174550.44	0.10289

630500.63	4174550.44	0.13191	630850.63	4174550.44	0.17831
631200.63	4174550.44	0.20883	631550.63	4174550.44	0.27763
631900.63	4174550.44	0.35360	632250.63	4174550.44	0.36169
632600.63	4174550.44	0.30605	632950.63	4174550.44	0.26907
633300.63	4174550.44	0.24416	629800.63	4174900.44	0.10298
630150.63	4174900.44	0.13569	630500.63	4174900.44	0.18635
630850.63	4174900.44	0.28412	631200.63	4174900.44	0.41815
631550.63	4174900.44	0.68292	631900.63	4174900.44	0.85563
632250.63	4174900.44	0.63601	632600.63	4174900.44	0.51324
632950.63	4174900.44	0.43714	633300.63	4174900.44	0.37225
629800.63	4175250.44	0.11887	630150.63	4175250.44	0.16968
630500.63	4175250.44	0.26932	630850.63	4175250.44	0.51510
631200.63	4175250.44	1.24937	631550.63	4175250.44	3.17678
631900.63	4175250.44	2.30748	632250.63	4175250.44	1.37296
632600.63	4175250.44	0.94164	632950.63	4175250.44	0.69077
633300.63	4175250.44	0.52822	629800.63	4175600.44	0.12997
630150.63	4175600.44	0.19371	630500.63	4175600.44	0.33372
630850.63	4175600.44	0.79526	631200.63	4175600.44	5.75581
631550.63	4175600.44	55.50322	631900.63	4175600.44	5.63870
632250.63	4175600.44	2.13407	632600.63	4175600.44	1.25043
632950.63	4175600.44	0.83650	633300.63	4175600.44	0.60666
629800.63	4175950.44	0.13725	630150.63	4175950.44	0.21306

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.40630	630850.63	4175950.44	1.11463
631200.63	4175950.44	2.55431	631550.63	4175950.44	2.14821
631900.63	4175950.44	1.80128	632250.63	4175950.44	1.26320
632600.63	4175950.44	0.89068	632950.63	4175950.44	0.66361
633300.63	4175950.44	0.51202	629800.63	4176300.44	0.15569
630150.63	4176300.44	0.24716	630500.63	4176300.44	0.44385
630850.63	4176300.44	0.83510	631200.63	4176300.44	1.07246
631550.63	4176300.44	0.95992	631900.63	4176300.44	0.86689
632250.63	4176300.44	0.65545	632600.63	4176300.44	0.51710
632950.63	4176300.44	0.43381	633300.63	4176300.44	0.36378
629800.63	4176650.44	0.16544	630150.63	4176650.44	0.24377
630500.63	4176650.44	0.36607	630850.63	4176650.44	0.50488
631200.63	4176650.44	0.60004	631550.63	4176650.44	0.57642
631900.63	4176650.44	0.49852	632250.63	4176650.44	0.42909
632600.63	4176650.44	0.35195	632950.63	4176650.44	0.29500
633300.63	4176650.44	0.25872	629800.63	4177000.44	0.15968
630150.63	4177000.44	0.21378	630500.63	4177000.44	0.27471
630850.63	4177000.44	0.33407	631200.63	4177000.44	0.37137

631550.63	4177000.44	0.36577	631900.63	4177000.44	0.32007
632250.63	4177000.44	0.30363	632600.63	4177000.44	0.26320
632950.63	4177000.44	0.22859	633300.63	4177000.44	0.19720
629800.63	4177350.44	0.14469	630150.63	4177350.44	0.17717
630500.63	4177350.44	0.20891	630850.63	4177350.44	0.24405
631200.63	4177350.44	0.25513	631550.63	4177350.44	0.25371
631900.63	4177350.44	0.23352	632250.63	4177350.44	0.21512
632600.63	4177350.44	0.20666	632950.63	4177350.44	0.18268
633300.63	4177350.44	0.16330	631670.70	4175493.59	11.38549
631669.80	4175641.41	16.92300	631665.32	4175796.39	3.98796
631417.17	4175826.85	3.66093	631417.17	4175673.66	15.85179
631422.55	4175484.63	5.53296	631268.42	4175983.74	2.27893
631275.69	4175523.99	9.72484	631345.65	4175419.50	4.78315
631384.72	4175441.30	7.97096	631491.93	4175442.21	14.87789
631491.93	4175414.95	9.07818	631385.63	4175413.14	5.59809
631358.37	4175395.87	4.11791	631409.25	4175336.81	3.47923
631567.35	4175235.96	2.99871	631756.33	4175028.80	1.32664
631807.22	4175003.36	1.20599	631867.18	4174987.91	1.11670
631849.92	4175988.28	1.66385	631268.74	4175963.75	2.44678
631269.05	4175943.76	2.64587	631269.37	4175923.77	3.10689
631269.68	4175903.78	3.46953	631270.00	4175883.79	2.72617
631270.32	4175863.81	2.41845	631270.63	4175843.82	2.44797

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.69067	631271.26	4175803.84	2.92446
631271.58	4175783.85	3.24147	631271.90	4175763.86	3.75108
631272.21	4175743.87	4.41965	631272.53	4175723.88	5.13541
631272.85	4175703.89	5.78448	631273.16	4175683.90	6.82146
631273.48	4175663.91	8.55131	631273.79	4175643.92	10.77625
631274.11	4175623.94	13.72654	631274.43	4175603.95	16.75059
631274.74	4175583.96	16.66788	631275.06	4175563.97	14.37319
631275.37	4175543.98	12.15859	631285.68	4175509.06	9.36985
631295.68	4175494.14	8.78129	631305.67	4175479.21	8.22836
631315.67	4175464.28	7.94316	631325.66	4175449.35	6.53015
631335.66	4175434.43	5.28526	631358.67	4175426.77	5.48814
631371.70	4175434.03	6.66681	631402.59	4175441.45	7.71661
631420.46	4175441.60	7.86843	631438.33	4175441.76	6.65622
631456.19	4175441.91	11.56206	631474.06	4175442.06	14.68014
631491.93	4175428.58	10.83766	631474.21	4175414.65	9.41185
631456.50	4175414.35	9.75025	631438.78	4175414.05	9.05865
631421.06	4175413.74	7.96277	631403.35	4175413.44	6.68792
631372.00	4175404.51	4.68128	631371.09	4175381.11	3.91396

631383.81	4175366.34	3.74932	631396.53	4175351.58	3.61199
631425.06	4175326.73	3.50206	631440.87	4175316.64	3.52004
631456.68	4175306.56	3.51449	631472.49	4175296.47	3.48719
631488.30	4175286.39	3.43682	631504.11	4175276.30	3.37300
631519.92	4175266.22	3.29408	631535.73	4175256.13	3.20227
631551.54	4175246.05	3.10298	631579.95	4175222.15	2.82505
631592.55	4175208.34	2.66391	631605.15	4175194.53	2.51369
631617.74	4175180.72	2.37414	631630.34	4175166.91	2.24519
631642.94	4175153.10	2.12366	631655.54	4175139.29	2.01022
631668.14	4175125.47	1.90410	631680.74	4175111.66	1.80482
631693.34	4175097.85	1.71191	631705.94	4175084.04	1.62479
631718.53	4175070.23	1.54302	631731.13	4175056.42	1.46631
631743.73	4175042.61	1.39428	631773.29	4175020.32	1.28634
631790.26	4175011.84	1.24564	631822.21	4174999.50	1.18478
631837.20	4174995.64	1.16266	631852.19	4174991.77	1.13999
631866.84	4175007.53	1.18251	631866.50	4175027.14	1.25212
631866.16	4175046.76	1.32547	631865.83	4175066.37	1.40272
631865.49	4175085.99	1.48436	631865.15	4175105.60	1.57142
631864.81	4175125.22	1.66478	631864.47	4175144.83	1.76293
631864.13	4175164.45	1.86823	631863.80	4175184.06	1.98206
631863.46	4175203.68	2.10459	631863.12	4175223.29	2.23926
631862.78	4175242.91	2.38652	631862.44	4175262.52	2.54827

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.72695	631861.77	4175301.75	2.92488
631861.43	4175321.37	3.14430	631861.09	4175340.98	3.38911
631860.75	4175360.60	3.65910	631860.41	4175380.21	3.95558
631860.07	4175399.83	4.27892	631859.73	4175419.44	4.62782
631859.40	4175439.06	4.99441	631859.06	4175458.67	5.37178
631858.72	4175478.29	5.74491	631858.38	4175497.90	6.09713
631858.04	4175517.52	6.41106	631857.70	4175537.13	6.67092
631857.37	4175556.75	6.86095	631857.03	4175576.36	6.96476
631856.69	4175595.98	6.96859	631856.35	4175615.59	6.86613
631856.01	4175635.21	6.66256	631855.67	4175654.82	6.37456
631855.33	4175674.44	6.02365	631855.00	4175694.05	5.62951
631854.66	4175713.67	5.20963	631854.32	4175733.28	4.78372
631853.98	4175752.90	4.37086	631853.64	4175772.51	3.98620
631853.30	4175792.13	3.63455	631852.97	4175811.74	3.31452
631852.63	4175831.36	3.02257	631852.29	4175850.97	2.75773
631851.95	4175870.59	2.52091	631851.61	4175890.20	2.31351
631851.27	4175909.82	2.13555	631850.94	4175929.43	1.98543
631850.60	4175949.05	1.85958	631850.26	4175968.66	1.75382

631830.54	4175988.13	1.68589	631811.15	4175987.98	1.70652
631791.77	4175987.83	1.72522	631772.39	4175987.67	1.74222
631753.00	4175987.52	1.75712	631733.62	4175987.37	1.77125
631714.24	4175987.22	1.78517	631694.85	4175987.07	1.79939
631675.47	4175986.92	1.81295	631656.09	4175986.77	1.82504
631636.70	4175986.62	1.83407	631617.32	4175986.46	1.83946
631597.94	4175986.31	1.84032	631578.55	4175986.16	1.83922
631559.17	4175986.01	1.83843	631539.79	4175985.86	1.84407
631520.40	4175985.71	1.86321	631501.02	4175985.56	1.89863
631481.64	4175985.40	1.95350	631462.25	4175985.25	2.02647
631442.87	4175985.10	2.10534	631423.49	4175984.95	2.20370
631404.10	4175984.80	2.28535	631384.72	4175984.65	2.28505
631365.34	4175984.50	2.23697	631345.95	4175984.35	2.21429
631326.57	4175984.19	2.22358	631307.19	4175984.04	2.24445
631287.80	4175983.89	2.26316			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.60659	632304.44	4174354.52	0.20689
632192.15	4174956.32	0.65325	632420.62	4175510.15	2.61418
632418.97	4175552.92	2.96775	631187.00	4175727.00	0.72807
631166.00	4175729.00	0.68624	631121.00	4175719.00	0.60278
631035.00	4174830.00	0.19547	631106.00	4174825.00	0.20747
631937.00	4174528.00	0.21852	631322.00	4174522.00	0.17309
629800.63	4173850.44	0.04695	630150.63	4173850.44	0.05423
630500.63	4173850.44	0.06372	630850.63	4173850.44	0.07506
631200.63	4173850.44	0.08414	631550.63	4173850.44	0.08446
631900.63	4173850.44	0.09291	632250.63	4173850.44	0.11001
632600.63	4173850.44	0.11686	632950.63	4173850.44	0.12315
633300.63	4173850.44	0.12449	629800.63	4174200.44	0.05465
630150.63	4174200.44	0.06388	630500.63	4174200.44	0.07741
630850.63	4174200.44	0.09631	631200.63	4174200.44	0.11598
631550.63	4174200.44	0.11981	631900.63	4174200.44	0.13480
632250.63	4174200.44	0.16447	632600.63	4174200.44	0.17600
632950.63	4174200.44	0.18087	633300.63	4174200.44	0.16574
629800.63	4174550.44	0.06462	630150.63	4174550.44	0.07744
630500.63	4174550.44	0.09643	630850.63	4174550.44	0.12689
631200.63	4174550.44	0.16777	631550.63	4174550.44	0.18532
631900.63	4174550.44	0.21650	632250.63	4174550.44	0.27955
632600.63	4174550.44	0.30358	632950.63	4174550.44	0.27184
633300.63	4174550.44	0.22441	629800.63	4174900.44	0.07600
630150.63	4174900.44	0.09538	630500.63	4174900.44	0.12536
630850.63	4174900.44	0.17403	631200.63	4174900.44	0.24787

631550.63	4174900.44	0.31406	631900.63	4174900.44	0.39885
632250.63	4174900.44	0.58757	632600.63	4174900.44	0.56568
632950.63	4174900.44	0.41830	633300.63	4174900.44	0.34084
629800.63	4175250.44	0.08556	630150.63	4175250.44	0.11288
630500.63	4175250.44	0.16081	630850.63	4175250.44	0.25213
631200.63	4175250.44	0.39501	631550.63	4175250.44	0.65113
631900.63	4175250.44	1.07341	632250.63	4175250.44	1.58144
632600.63	4175250.44	1.06906	632950.63	4175250.44	0.74228
633300.63	4175250.44	0.56770	629800.63	4175600.44	0.09278
630150.63	4175600.44	0.12525	630500.63	4175600.44	0.18349
630850.63	4175600.44	0.31563	631200.63	4175600.44	0.68060
631550.63	4175600.44	3.44568	631900.63	4175600.44	2.52073
632250.63	4175600.44	4.80519	632600.63	4175600.44	2.24948
632950.63	4175600.44	1.25576	633300.63	4175600.44	0.84032
629800.63	4175950.44	0.09564	630150.63	4175950.44	0.13099

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.19552	630850.63	4175950.44	0.34782
631200.63	4175950.44	0.86209	631550.63	4175950.44	3.99556
631900.63	4175950.44	6.34522	632250.63	4175950.44	4.69493
632600.63	4175950.44	2.19118	632950.63	4175950.44	1.26773
633300.63	4175950.44	0.84779	629800.63	4176300.44	0.09867
630150.63	4176300.44	0.13876	630500.63	4176300.44	0.22118
630850.63	4176300.44	0.42694	631200.63	4176300.44	0.94543
631550.63	4176300.44	1.55058	631900.63	4176300.44	1.58797
632250.63	4176300.44	1.42075	632600.63	4176300.44	1.03858
632950.63	4176300.44	0.75646	633300.63	4176300.44	0.57703
629800.63	4176650.44	0.10738	630150.63	4176650.44	0.15407
630500.63	4176650.44	0.24009	630850.63	4176650.44	0.41319
631200.63	4176650.44	0.65761	631550.63	4176650.44	0.82068
631900.63	4176650.44	0.81468	632250.63	4176650.44	0.75066
632600.63	4176650.44	0.60803	632950.63	4176650.44	0.46192
633300.63	4176650.44	0.37297	629800.63	4177000.44	0.11314
630150.63	4177000.44	0.15567	630500.63	4177000.44	0.22660
630850.63	4177000.44	0.32648	631200.63	4177000.44	0.42308
631550.63	4177000.44	0.50070	631900.63	4177000.44	0.48340
632250.63	4177000.44	0.43640	632600.63	4177000.44	0.40381
632950.63	4177000.44	0.32794	633300.63	4177000.44	0.27028
629800.63	4177350.44	0.11167	630150.63	4177350.44	0.14779
630500.63	4177350.44	0.19374	630850.63	4177350.44	0.24455
631200.63	4177350.44	0.29141	631550.63	4177350.44	0.32511
631900.63	4177350.44	0.31697	632250.63	4177350.44	0.29763

632600.63	4177350.44	0.27004	632950.63	4177350.44	0.24632
633300.63	4177350.44	0.21058	631670.70	4175493.59	1.70392
631669.80	4175641.41	5.88609	631665.32	4175796.39	1.90206
631417.17	4175826.85	1.68875	631417.17	4175673.66	1.57883
631422.55	4175484.63	1.03640	631268.42	4175983.74	1.11323
631275.69	4175523.99	0.73712	631345.65	4175419.50	0.67890
631384.72	4175441.30	0.82819	631491.93	4175442.21	1.28679
631491.93	4175414.95	1.10059	631385.63	4175413.14	0.72328
631358.37	4175395.87	0.65340	631409.25	4175336.81	0.65628
631567.35	4175235.96	0.63992	631756.33	4175028.80	0.40399
631807.22	4175003.36	0.41273	631867.18	4174987.91	0.45000
631849.92	4175988.28	5.18248	631268.74	4175963.75	1.09623
631269.05	4175943.76	1.07900	631269.37	4175923.77	1.06212
631269.68	4175903.78	1.04581	631270.00	4175883.79	1.03016
631270.32	4175863.81	1.01619	631270.63	4175843.82	1.00335

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	0.99533	631271.26	4175803.84	0.99306
631271.58	4175783.85	0.99255	631271.90	4175763.86	0.98304
631272.21	4175743.87	0.97257	631272.53	4175723.88	0.94851
631272.85	4175703.89	0.91883	631273.16	4175683.90	0.89408
631273.48	4175663.91	0.88307	631273.79	4175643.92	0.87635
631274.11	4175623.94	0.86703	631274.43	4175603.95	0.82877
631274.74	4175583.96	0.78541	631275.06	4175563.97	0.76684
631275.37	4175543.98	0.75660	631285.68	4175509.06	0.72490
631295.68	4175494.14	0.70893	631305.67	4175479.21	0.69894
631315.67	4175464.28	0.68523	631325.66	4175449.35	0.68301
631335.66	4175434.43	0.67702	631358.67	4175426.77	0.68638
631371.70	4175434.03	0.76716	631402.59	4175441.45	0.82503
631420.46	4175441.60	0.93625	631438.33	4175441.76	0.99608
631456.19	4175441.91	1.07909	631474.06	4175442.06	1.19035
631491.93	4175428.58	1.19762	631474.21	4175414.65	1.06405
631456.50	4175414.35	0.96020	631438.78	4175414.05	0.85948
631421.06	4175413.74	0.83469	631403.35	4175413.44	0.84946
631372.00	4175404.51	0.68804	631371.09	4175381.11	0.65072
631383.81	4175366.34	0.64629	631396.53	4175351.58	0.65023
631425.06	4175326.73	0.66044	631440.87	4175316.64	0.66419
631456.68	4175306.56	0.66721	631472.49	4175296.47	0.66685
631488.30	4175286.39	0.65937	631504.11	4175276.30	0.65509
631519.92	4175266.22	0.65397	631535.73	4175256.13	0.64790
631551.54	4175246.05	0.64392	631579.95	4175222.15	0.62865
631592.55	4175208.34	0.61285	631605.15	4175194.53	0.59643

631617.74	4175180.72	0.57452	631630.34	4175166.91	0.55353
631642.94	4175153.10	0.53531	631655.54	4175139.29	0.51477
631668.14	4175125.47	0.49744	631680.74	4175111.66	0.48028
631693.34	4175097.85	0.46427	631705.94	4175084.04	0.44655
631718.53	4175070.23	0.43309	631731.13	4175056.42	0.42136
631743.73	4175042.61	0.41184	631773.29	4175020.32	0.40495
631790.26	4175011.84	0.40770	631822.21	4174999.50	0.42090
631837.20	4174995.64	0.42796	631852.19	4174991.77	0.43876
631866.84	4175007.53	0.47085	631866.50	4175027.14	0.49349
631866.16	4175046.76	0.51806	631865.83	4175066.37	0.54484
631865.49	4175085.99	0.57384	631865.15	4175105.60	0.60532
631864.81	4175125.22	0.63939	631864.47	4175144.83	0.67773
631864.13	4175164.45	0.71877	631863.80	4175184.06	0.76406
631863.46	4175203.68	0.81498	631863.12	4175223.29	0.87026
631862.78	4175242.91	0.93460	631862.44	4175262.52	1.02144

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.16990	631861.77	4175301.75	1.37137
631861.43	4175321.37	1.28171	631861.09	4175340.98	1.05099
631860.75	4175360.60	0.93445	631860.41	4175380.21	0.95708
631860.07	4175399.83	1.04986	631859.73	4175419.44	1.08420
631859.40	4175439.06	1.20531	631859.06	4175458.67	1.25271
631858.72	4175478.29	1.45898	631858.38	4175497.90	1.65331
631858.04	4175517.52	1.71921	631857.70	4175537.13	1.90560
631857.37	4175556.75	1.97109	631857.03	4175576.36	2.03757
631856.69	4175595.98	2.10160	631856.35	4175615.59	2.37298
631856.01	4175635.21	2.94896	631855.67	4175654.82	3.51176
631855.33	4175674.44	3.96114	631855.00	4175694.05	4.95195
631854.66	4175713.67	5.01927	631854.32	4175733.28	6.35041
631853.98	4175752.90	5.61667	631853.64	4175772.51	12.81883
631853.30	4175792.13	54.87852	631852.97	4175811.74	68.68354
631852.63	4175831.36	36.11460	631852.29	4175850.97	23.56994
631851.95	4175870.59	18.11573	631851.61	4175890.20	13.32598
631851.27	4175909.82	11.05391	631850.94	4175929.43	8.80238
631850.60	4175949.05	6.90889	631850.26	4175968.66	5.91387
631830.54	4175988.13	5.55592	631811.15	4175987.98	6.11200
631791.77	4175987.83	6.65682	631772.39	4175987.67	6.89332
631753.00	4175987.52	6.58974	631733.62	4175987.37	5.57860
631714.24	4175987.22	4.21696	631694.85	4175987.07	3.85004
631675.47	4175986.92	2.79478	631656.09	4175986.77	2.09762
631636.70	4175986.62	2.51108	631617.32	4175986.46	3.36345
631597.94	4175986.31	3.79978	631578.55	4175986.16	4.16017

631559.17	4175986.01	3.96637	631539.79	4175985.86	3.56869
631520.40	4175985.71	3.22465	631501.02	4175985.56	2.93038
631481.64	4175985.40	2.66593	631462.25	4175985.25	2.43094
631442.87	4175985.10	2.22860	631423.49	4175984.95	2.04802
631404.10	4175984.80	1.88391	631384.72	4175984.65	1.73538
631365.34	4175984.50	1.60307	631345.95	4175984.35	1.48313
631326.57	4175984.19	1.37714	631307.19	4175984.04	1.28076
631287.80	4175983.89	1.19332			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.79749	632304.44	4174354.52	0.23781
632192.15	4174956.32	0.85896	632420.62	4175510.15	3.45863
632418.97	4175552.92	3.82408	631187.00	4175727.00	0.77152
631166.00	4175729.00	0.72258	631121.00	4175719.00	0.62737
631035.00	4174830.00	0.21544	631106.00	4174825.00	0.23068
631937.00	4174528.00	0.25460	631322.00	4174522.00	0.19212
629800.63	4173850.44	0.04893	630150.63	4173850.44	0.05665
630500.63	4173850.44	0.06697	630850.63	4173850.44	0.07974
631200.63	4173850.44	0.09077	631550.63	4173850.44	0.09196
631900.63	4173850.44	0.10168	632250.63	4173850.44	0.12080
632600.63	4173850.44	0.12892	632950.63	4173850.44	0.13614
633300.63	4173850.44	0.13506	629800.63	4174200.44	0.05724
630150.63	4174200.44	0.06724	630500.63	4174200.44	0.08178
630850.63	4174200.44	0.10257	631200.63	4174200.44	0.12607
631550.63	4174200.44	0.13296	631900.63	4174200.44	0.15116
632250.63	4174200.44	0.18545	632600.63	4174200.44	0.20027
632950.63	4174200.44	0.20176	633300.63	4174200.44	0.17923
629800.63	4174550.44	0.06781	630150.63	4174550.44	0.08200
630500.63	4174550.44	0.10322	630850.63	4174550.44	0.13694
631200.63	4174550.44	0.18438	631550.63	4174550.44	0.21132
631900.63	4174550.44	0.25290	632250.63	4174550.44	0.33101
632600.63	4174550.44	0.35557	632950.63	4174550.44	0.30162
633300.63	4174550.44	0.24843	629800.63	4174900.44	0.07909
630150.63	4174900.44	0.10062	630500.63	4174900.44	0.13534
630850.63	4174900.44	0.19177	631200.63	4174900.44	0.27897
631550.63	4174900.44	0.37530	631900.63	4174900.44	0.50404
632250.63	4174900.44	0.75586	632600.63	4174900.44	0.65873
632950.63	4174900.44	0.48084	633300.63	4174900.44	0.39228
629800.63	4175250.44	0.08773	630150.63	4175250.44	0.11671
630500.63	4175250.44	0.16934	630850.63	4175250.44	0.27575
631200.63	4175250.44	0.46936	631550.63	4175250.44	0.86424
631900.63	4175250.44	1.63934	632250.63	4175250.44	2.05575

632600.63	4175250.44	1.31892	632950.63	4175250.44	0.88157
633300.63	4175250.44	0.65035	629800.63	4175600.44	0.09410
630150.63	4175600.44	0.12784	630500.63	4175600.44	0.18835
630850.63	4175600.44	0.32588	631200.63	4175600.44	0.76440
631550.63	4175600.44	5.94831	631900.63	4175600.44	9.69109
632250.63	4175600.44	7.16843	632600.63	4175600.44	2.51681
632950.63	4175600.44	1.35366	633300.63	4175600.44	0.88553
629800.63	4175950.44	0.09628	630150.63	4175950.44	0.13229

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.20003	630850.63	4175950.44	0.37196
631200.63	4175950.44	0.95790	631550.63	4175950.44	4.05083
631900.63	4175950.44	3.20271	632250.63	4175950.44	2.87517
632600.63	4175950.44	1.81500	632950.63	4175950.44	1.12153
633300.63	4175950.44	0.77938	629800.63	4176300.44	0.10051
630150.63	4176300.44	0.14340	630500.63	4176300.44	0.23206
630850.63	4176300.44	0.44006	631200.63	4176300.44	0.89325
631550.63	4176300.44	1.22449	631900.63	4176300.44	1.21499
632250.63	4176300.44	1.10204	632600.63	4176300.44	0.84989
632950.63	4176300.44	0.64553	633300.63	4176300.44	0.50743
629800.63	4176650.44	0.10996	630150.63	4176650.44	0.15632
630500.63	4176650.44	0.24006	630850.63	4176650.44	0.39825
631200.63	4176650.44	0.58169	631550.63	4176650.44	0.70619
631900.63	4176650.44	0.68029	632250.63	4176650.44	0.60853
632600.63	4176650.44	0.52902	632950.63	4176650.44	0.41557
633300.63	4176650.44	0.33443	629800.63	4177000.44	0.11319
630150.63	4177000.44	0.15451	630500.63	4177000.44	0.21988
630850.63	4177000.44	0.30381	631200.63	4177000.44	0.37994
631550.63	4177000.44	0.44329	631900.63	4177000.44	0.42196
632250.63	4177000.44	0.38401	632600.63	4177000.44	0.35788
632950.63	4177000.44	0.29952	633300.63	4177000.44	0.25140
629800.63	4177350.44	0.11070	630150.63	4177350.44	0.14414
630500.63	4177350.44	0.18427	630850.63	4177350.44	0.22758
631200.63	4177350.44	0.26762	631550.63	4177350.44	0.29385
631900.63	4177350.44	0.28506	632250.63	4177350.44	0.27035
632600.63	4177350.44	0.24245	632950.63	4177350.44	0.22850
633300.63	4177350.44	0.19680	631670.70	4175493.59	2.50905
631669.80	4175641.41	14.88154	631665.32	4175796.39	5.35995
631417.17	4175826.85	1.92769	631417.17	4175673.66	1.87822
631422.55	4175484.63	1.39774	631268.42	4175983.74	1.20072
631275.69	4175523.99	0.88418	631345.65	4175419.50	0.86428
631384.72	4175441.30	1.01612	631491.93	4175442.21	1.75237

631491.93	4175414.95	1.47930	631385.63	4175413.14	0.92771
631358.37	4175395.87	0.84263	631409.25	4175336.81	0.82473
631567.35	4175235.96	0.85503	631756.33	4175028.80	0.52782
631807.22	4175003.36	0.53325	631867.18	4174987.91	0.58612
631849.92	4175988.28	2.97538	631268.74	4175963.75	1.19763
631269.05	4175943.76	1.19114	631269.37	4175923.77	1.18094
631269.68	4175903.78	1.16724	631270.00	4175883.79	1.15123
631270.32	4175863.81	1.13542	631270.63	4175843.82	1.12010

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.10689	631271.26	4175803.84	1.09485
631271.58	4175783.85	1.08159	631271.90	4175763.86	1.06669
631272.21	4175743.87	1.05321	631272.53	4175723.88	1.03504
631272.85	4175703.89	1.01834	631273.16	4175683.90	1.01084
631273.48	4175663.91	1.00632	631273.79	4175643.92	1.00113
631274.11	4175623.94	0.98486	631274.43	4175603.95	0.95983
631274.74	4175583.96	0.93080	631275.06	4175563.97	0.91179
631275.37	4175543.98	0.90066	631285.68	4175509.06	0.88696
631295.68	4175494.14	0.88079	631305.67	4175479.21	0.87883
631315.67	4175464.28	0.87475	631325.66	4175449.35	0.87209
631335.66	4175434.43	0.86953	631358.67	4175426.77	0.89490
631371.70	4175434.03	0.95046	631402.59	4175441.45	1.01919
631420.46	4175441.60	1.18079	631438.33	4175441.76	1.25049
631456.19	4175441.91	1.45326	631474.06	4175442.06	1.58989
631491.93	4175428.58	1.61697	631474.21	4175414.65	1.44042
631456.50	4175414.35	1.26733	631438.78	4175414.05	1.20172
631421.06	4175413.74	1.00420	631403.35	4175413.44	1.02768
631372.00	4175404.51	0.88302	631371.09	4175381.11	0.83575
631383.81	4175366.34	0.82596	631396.53	4175351.58	0.82518
631425.06	4175326.73	0.83897	631440.87	4175316.64	0.84795
631456.68	4175306.56	0.85601	631472.49	4175296.47	0.84680
631488.30	4175286.39	0.85056	631504.11	4175276.30	0.84675
631519.92	4175266.22	0.84653	631535.73	4175256.13	0.85078
631551.54	4175246.05	0.85133	631579.95	4175222.15	0.83448
631592.55	4175208.34	0.81284	631605.15	4175194.53	0.78804
631617.74	4175180.72	0.75886	631630.34	4175166.91	0.73252
631642.94	4175153.10	0.70823	631655.54	4175139.29	0.68116
631668.14	4175125.47	0.65744	631680.74	4175111.66	0.63228
631693.34	4175097.85	0.61082	631705.94	4175084.04	0.58791
631718.53	4175070.23	0.56930	631731.13	4175056.42	0.55314
631743.73	4175042.61	0.53877	631773.29	4175020.32	0.52653
631790.26	4175011.84	0.53019	631822.21	4174999.50	0.54463

631837.20	4174995.64	0.55718	631852.19	4174991.77	0.57149
631866.84	4175007.53	0.61751	631866.50	4175027.14	0.65254
631866.16	4175046.76	0.69121	631865.83	4175066.37	0.73371
631865.49	4175085.99	0.78043	631865.15	4175105.60	0.83039
631864.81	4175125.22	0.88767	631864.47	4175144.83	0.95182
631864.13	4175164.45	1.02199	631863.80	4175184.06	1.09821
631863.46	4175203.68	1.18692	631863.12	4175223.29	1.29096
631862.78	4175242.91	1.40507	631862.44	4175262.52	1.55581

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.79981	631861.77	4175301.75	2.23572
631861.43	4175321.37	2.12211	631861.09	4175340.98	1.46721
631860.75	4175360.60	1.42212	631860.41	4175380.21	1.47544
631860.07	4175399.83	1.65108	631859.73	4175419.44	1.75547
631859.40	4175439.06	1.98879	631859.06	4175458.67	2.32805
631858.72	4175478.29	2.67320	631858.38	4175497.90	3.05460
631858.04	4175517.52	3.36591	631857.70	4175537.13	3.74540
631857.37	4175556.75	4.30122	631857.03	4175576.36	5.18771
631856.69	4175595.98	6.70790	631856.35	4175615.59	9.78624
631856.01	4175635.21	17.28785	631855.67	4175654.82	34.28283
631855.33	4175674.44	66.81704	631855.00	4175694.05	121.59003
631854.66	4175713.67	117.29148	631854.32	4175733.28	58.29163
631853.98	4175752.90	30.81879	631853.64	4175772.51	17.54707
631853.30	4175792.13	12.92290	631852.97	4175811.74	10.11226
631852.63	4175831.36	7.96632	631852.29	4175850.97	6.45422
631851.95	4175870.59	5.48570	631851.61	4175890.20	4.51068
631851.27	4175909.82	4.57027	631850.94	4175929.43	4.38886
631850.60	4175949.05	3.61750	631850.26	4175968.66	3.24209
631830.54	4175988.13	3.15946	631811.15	4175987.98	3.33407
631791.77	4175987.83	3.49152	631772.39	4175987.67	3.60825
631753.00	4175987.52	3.56583	631733.62	4175987.37	3.18771
631714.24	4175987.22	2.67285	631694.85	4175987.07	2.99867
631675.47	4175986.92	2.58938	631656.09	4175986.77	2.24001
631636.70	4175986.62	2.85912	631617.32	4175986.46	3.19649
631597.94	4175986.31	3.46192	631578.55	4175986.16	3.50050
631559.17	4175986.01	3.16379	631539.79	4175985.86	2.92202
631520.40	4175985.71	2.76565	631501.02	4175985.56	2.61477
631481.64	4175985.40	2.45825	631462.25	4175985.25	2.30282
631442.87	4175985.10	2.15306	631423.49	4175984.95	2.01277
631404.10	4175984.80	1.88056	631384.72	4175984.65	1.75843
631365.34	4175984.50	1.64599	631345.95	4175984.35	1.54180
631326.57	4175984.19	1.44609	631307.19	4175984.04	1.35750

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.08938	632304.44	4174354.52	0.27763
632192.15	4174956.32	1.15856	632420.62	4175510.15	4.09268
632418.97	4175552.92	4.14020	631187.00	4175727.00	0.84973
631166.00	4175729.00	0.79591	631121.00	4175719.00	0.68781
631035.00	4174830.00	0.23756	631106.00	4174825.00	0.25594
631937.00	4174528.00	0.30223	631322.00	4174522.00	0.21458
629800.63	4173850.44	0.05108	630150.63	4173850.44	0.05927
630500.63	4173850.44	0.07051	630850.63	4173850.44	0.08480
631200.63	4173850.44	0.09820	631550.63	4173850.44	0.10063
631900.63	4173850.44	0.11197	632250.63	4173850.44	0.13354
632600.63	4173850.44	0.14336	632950.63	4173850.44	0.15114
633300.63	4173850.44	0.14636	629800.63	4174200.44	0.06003
630150.63	4174200.44	0.07091	630500.63	4174200.44	0.08648
630850.63	4174200.44	0.10956	631200.63	4174200.44	0.13758
631550.63	4174200.44	0.14868	631900.63	4174200.44	0.17133
632250.63	4174200.44	0.21158	632600.63	4174200.44	0.23012
632950.63	4174200.44	0.22496	633300.63	4174200.44	0.19445
629800.63	4174550.44	0.07106	630150.63	4174550.44	0.08700
630500.63	4174550.44	0.11032	630850.63	4174550.44	0.14735
631200.63	4174550.44	0.20276	631550.63	4174550.44	0.24406
631900.63	4174550.44	0.30125	632250.63	4174550.44	0.40023
632600.63	4174550.44	0.41812	632950.63	4174550.44	0.33677
633300.63	4174550.44	0.27854	629800.63	4174900.44	0.08192
630150.63	4174900.44	0.10571	630500.63	4174900.44	0.14462
630850.63	4174900.44	0.21015	631200.63	4174900.44	0.31544
631550.63	4174900.44	0.45669	631900.63	4174900.44	0.66111
632250.63	4174900.44	0.99182	632600.63	4174900.44	0.77645
632950.63	4174900.44	0.56370	633300.63	4174900.44	0.45435
629800.63	4175250.44	0.08988	630150.63	4175250.44	0.12026
630500.63	4175250.44	0.17527	630850.63	4175250.44	0.29787
631200.63	4175250.44	0.55563	631550.63	4175250.44	1.19838
631900.63	4175250.44	2.76944	632250.63	4175250.44	2.75730
632600.63	4175250.44	1.66535	632950.63	4175250.44	1.03642
633300.63	4175250.44	0.73281	629800.63	4175600.44	0.09487
630150.63	4175600.44	0.12942	630500.63	4175600.44	0.19123
630850.63	4175600.44	0.32816	631200.63	4175600.44	0.80111
631550.63	4175600.44	8.88700	631900.63	4175600.44	87.40733
632250.63	4175600.44	7.63642	632600.63	4175600.44	2.52486
632950.63	4175600.44	1.37872	633300.63	4175600.44	0.89743

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.20746	630850.63	4175950.44	0.40802
631200.63	4175950.44	1.02913	631550.63	4175950.44	3.98842
631900.63	4175950.44	2.07381	632250.63	4175950.44	1.84802
632600.63	4175950.44	1.44358	632950.63	4175950.44	0.96410
633300.63	4175950.44	0.69769	629800.63	4176300.44	0.10303
630150.63	4176300.44	0.14854	630500.63	4176300.44	0.24186
630850.63	4176300.44	0.44716	631200.63	4176300.44	0.82576
631550.63	4176300.44	1.02112	631900.63	4176300.44	0.98696
632250.63	4176300.44	0.88062	632600.63	4176300.44	0.72654
632950.63	4176300.44	0.55479	633300.63	4176300.44	0.44764
629800.63	4176650.44	0.11189	630150.63	4176650.44	0.15731
630500.63	4176650.44	0.23954	630850.63	4176650.44	0.38072
631200.63	4176650.44	0.51944	631550.63	4176650.44	0.62153
631900.63	4176650.44	0.58134	632250.63	4176650.44	0.51554
632600.63	4176650.44	0.46913	632950.63	4176650.44	0.37768
633300.63	4176650.44	0.30460	629800.63	4177000.44	0.11282
630150.63	4177000.44	0.15294	630500.63	4177000.44	0.21218
630850.63	4177000.44	0.28330	631200.63	4177000.44	0.34393
631550.63	4177000.44	0.39703	631900.63	4177000.44	0.37273
632250.63	4177000.44	0.34595	632600.63	4177000.44	0.31921
632950.63	4177000.44	0.27615	633300.63	4177000.44	0.23432
629800.63	4177350.44	0.10946	630150.63	4177350.44	0.13997
630500.63	4177350.44	0.17512	630850.63	4177350.44	0.21228
631200.63	4177350.44	0.24753	631550.63	4177350.44	0.26755
631900.63	4177350.44	0.25809	632250.63	4177350.44	0.24836
632600.63	4177350.44	0.22027	632950.63	4177350.44	0.21195
633300.63	4177350.44	0.18477	631670.70	4175493.59	5.09002
631669.80	4175641.41	40.42467	631665.32	4175796.39	4.81718
631417.17	4175826.85	2.13078	631417.17	4175673.66	1.96804
631422.55	4175484.63	1.51131	631268.42	4175983.74	1.23564
631275.69	4175523.99	0.99313	631345.65	4175419.50	1.06677
631384.72	4175441.30	1.23653	631491.93	4175442.21	2.34823
631491.93	4175414.95	2.05800	631385.63	4175413.14	1.16951
631358.37	4175395.87	1.05624	631409.25	4175336.81	1.06863
631567.35	4175235.96	1.19883	631756.33	4175028.80	0.71768
631807.22	4175003.36	0.72507	631867.18	4174987.91	0.79558
631849.92	4175988.28	2.02925	631268.74	4175963.75	1.24506
631269.05	4175943.76	1.25327	631269.37	4175923.77	1.25837
631269.68	4175903.78	1.26035	631270.00	4175883.79	1.25994

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.23522	631271.26	4175803.84	1.21871
631271.58	4175783.85	1.19906	631271.90	4175763.86	1.17880
631272.21	4175743.87	1.15956	631272.53	4175723.88	1.13519
631272.85	4175703.89	1.11344	631273.16	4175683.90	1.09296
631273.48	4175663.91	1.07045	631273.79	4175643.92	1.05812
631274.11	4175623.94	1.04033	631274.43	4175603.95	1.03200
631274.74	4175583.96	1.02153	631275.06	4175563.97	1.01138
631275.37	4175543.98	1.00097	631285.68	4175509.06	1.00690
631295.68	4175494.14	1.01901	631305.67	4175479.21	1.02885
631315.67	4175464.28	1.03748	631325.66	4175449.35	1.05339
631335.66	4175434.43	1.06647	631358.67	4175426.77	1.11866
631371.70	4175434.03	1.18145	631402.59	4175441.45	1.27409
631420.46	4175441.60	1.34195	631438.33	4175441.76	1.44641
631456.19	4175441.91	1.80245	631474.06	4175442.06	1.96759
631491.93	4175428.58	2.19870	631474.21	4175414.65	1.83702
631456.50	4175414.35	1.44050	631438.78	4175414.05	1.36407
631421.06	4175413.74	1.26083	631403.35	4175413.44	1.24302
631372.00	4175404.51	1.10634	631371.09	4175381.11	1.06263
631383.81	4175366.34	1.06413	631396.53	4175351.58	1.06414
631425.06	4175326.73	1.09129	631440.87	4175316.64	1.11244
631456.68	4175306.56	1.11719	631472.49	4175296.47	1.11738
631488.30	4175286.39	1.13719	631504.11	4175276.30	1.14027
631519.92	4175266.22	1.14527	631535.73	4175256.13	1.15903
631551.54	4175246.05	1.17891	631579.95	4175222.15	1.17155
631592.55	4175208.34	1.13500	631605.15	4175194.53	1.09294
631617.74	4175180.72	1.05406	631630.34	4175166.91	1.01291
631642.94	4175153.10	0.97859	631655.54	4175139.29	0.94723
631668.14	4175125.47	0.91031	631680.74	4175111.66	0.87523
631693.34	4175097.85	0.84206	631705.94	4175084.04	0.81395
631718.53	4175070.23	0.78360	631731.13	4175056.42	0.76037
631743.73	4175042.61	0.73441	631773.29	4175020.32	0.71652
631790.26	4175011.84	0.72136	631822.21	4174999.50	0.74117
631837.20	4174995.64	0.75649	631852.19	4174991.77	0.77616
631866.84	4175007.53	0.84723	631866.50	4175027.14	0.90476
631866.16	4175046.76	0.96883	631865.83	4175066.37	1.03838
631865.49	4175085.99	1.11843	631865.15	4175105.60	1.20839
631864.81	4175125.22	1.30784	631864.47	4175144.83	1.42373
631864.13	4175164.45	1.55588	631863.80	4175184.06	1.70101
631863.46	4175203.68	1.87424	631863.12	4175223.29	2.07382

631862.78 4175242.91 2.31282 631862.44 4175262.52 2.60889

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	3.10073	631861.77	4175301.75	4.02397
631861.43	4175321.37	4.53789	631861.09	4175340.98	3.43228
631860.75	4175360.60	4.16687	631860.41	4175380.21	4.78533
631860.07	4175399.83	5.86439	631859.73	4175419.44	7.18424
631859.40	4175439.06	9.03347	631859.06	4175458.67	11.53996
631858.72	4175478.29	14.49332	631858.38	4175497.90	18.91430
631858.04	4175517.52	25.70592	631857.70	4175537.13	36.48170
631857.37	4175556.75	56.38339	631857.03	4175576.36	97.12828
631856.69	4175595.98	159.37853	631856.35	4175615.59	106.59129
631856.01	4175635.21	46.68333	631855.67	4175654.82	24.44585
631855.33	4175674.44	14.43899	631855.00	4175694.05	9.36323
631854.66	4175713.67	6.47839	631854.32	4175733.28	4.87987
631853.98	4175752.90	3.75696	631853.64	4175772.51	3.08988
631853.30	4175792.13	2.60362	631852.97	4175811.74	2.33200
631852.63	4175831.36	2.06729	631852.29	4175850.97	1.90997
631851.95	4175870.59	1.79103	631851.61	4175890.20	1.74306
631851.27	4175909.82	2.15837	631850.94	4175929.43	2.69536
631850.60	4175949.05	2.36760	631850.26	4175968.66	2.17237
631830.54	4175988.13	2.08853	631811.15	4175987.98	2.14012
631791.77	4175987.83	2.20353	631772.39	4175987.67	2.30657
631753.00	4175987.52	2.36063	631733.62	4175987.37	2.33271
631714.24	4175987.22	2.44264	631694.85	4175987.07	2.52383
631675.47	4175986.92	2.46610	631656.09	4175986.77	2.53284
631636.70	4175986.62	2.75375	631617.32	4175986.46	2.85553
631597.94	4175986.31	2.94697	631578.55	4175986.16	2.61411
631559.17	4175986.01	2.30837	631539.79	4175985.86	2.21819
631520.40	4175985.71	2.16343	631501.02	4175985.56	2.11627
631481.64	4175985.40	2.06440	631462.25	4175985.25	2.00335
631442.87	4175985.10	1.93485	631423.49	4175984.95	1.85834
631404.10	4175984.80	1.77937	631384.72	4175984.65	1.69654
631365.34	4175984.50	1.61309	631345.95	4175984.35	1.53052
631326.57	4175984.19	1.45077	631307.19	4175984.04	1.37447
631287.80	4175983.89	1.30342			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.54707	632304.44	4174354.52	0.33014
632192.15	4174956.32	1.59206	632420.62	4175510.15	4.00777
632418.97	4175552.92	3.88639	631187.00	4175727.00	0.93572
631166.00	4175729.00	0.87614	631121.00	4175719.00	0.75364
631035.00	4174830.00	0.26517	631106.00	4174825.00	0.28700
631937.00	4174528.00	0.36742	631322.00	4174522.00	0.24182
629800.63	4173850.44	0.05339	630150.63	4173850.44	0.06216
630500.63	4173850.44	0.07438	630850.63	4173850.44	0.09040
631200.63	4173850.44	0.10664	631550.63	4173850.44	0.11078
631900.63	4173850.44	0.12418	632250.63	4173850.44	0.14888
632600.63	4173850.44	0.16083	632950.63	4173850.44	0.16836
633300.63	4173850.44	0.15841	629800.63	4174200.44	0.06302
630150.63	4174200.44	0.07492	630500.63	4174200.44	0.09184
630850.63	4174200.44	0.11763	631200.63	4174200.44	0.15096
631550.63	4174200.44	0.16795	631900.63	4174200.44	0.19663
632250.63	4174200.44	0.24500	632600.63	4174200.44	0.26697
632950.63	4174200.44	0.25041	633300.63	4174200.44	0.21225
629800.63	4174550.44	0.07434	630150.63	4174550.44	0.09218
630500.63	4174550.44	0.11830	630850.63	4174550.44	0.15973
631200.63	4174550.44	0.22507	631550.63	4174550.44	0.28659
631900.63	4174550.44	0.36730	632250.63	4174550.44	0.49542
632600.63	4174550.44	0.49100	632950.63	4174550.44	0.37962
633300.63	4174550.44	0.31620	629800.63	4174900.44	0.08441
630150.63	4174900.44	0.11046	630500.63	4174900.44	0.15374
630850.63	4174900.44	0.23157	631200.63	4174900.44	0.36052
631550.63	4174900.44	0.57010	631900.63	4174900.44	0.90788
632250.63	4174900.44	1.31633	632600.63	4174900.44	0.92872
632950.63	4174900.44	0.66895	633300.63	4174900.44	0.52690
629800.63	4175250.44	0.09191	630150.63	4175250.44	0.12377
630500.63	4175250.44	0.18096	630850.63	4175250.44	0.30874
631200.63	4175250.44	0.63769	631550.63	4175250.44	1.74437
631900.63	4175250.44	5.46820	632250.63	4175250.44	3.96624
632600.63	4175250.44	2.05714	632950.63	4175250.44	1.18630
633300.63	4175250.44	0.80839	629800.63	4175600.44	0.09538
630150.63	4175600.44	0.13051	630500.63	4175600.44	0.19432
630850.63	4175600.44	0.34507	631200.63	4175600.44	0.87184
631550.63	4175600.44	12.65993	631900.63	4175600.44	4.88868
632250.63	4175600.44	5.87241	632600.63	4175600.44	2.35936
632950.63	4175600.44	1.32237	633300.63	4175600.44	0.87257
629800.63	4175950.44	0.09801	630150.63	4175950.44	0.13698

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.21879	630850.63	4175950.44	0.44017
631200.63	4175950.44	1.03109	631550.63	4175950.44	3.32748
631900.63	4175950.44	1.57333	632250.63	4175950.44	1.31574
632600.63	4175950.44	1.11206	632950.63	4175950.44	0.81927
633300.63	4175950.44	0.61542	629800.63	4176300.44	0.10595
630150.63	4176300.44	0.15345	630500.63	4176300.44	0.24751
630850.63	4176300.44	0.44744	631200.63	4176300.44	0.74824
631550.63	4176300.44	0.88472	631900.63	4176300.44	0.82437
632250.63	4176300.44	0.73112	632600.63	4176300.44	0.62270
632950.63	4176300.44	0.48499	633300.63	4176300.44	0.39565
629800.63	4176650.44	0.11302	630150.63	4176650.44	0.15738
630500.63	4176650.44	0.23751	630850.63	4176650.44	0.36087
631200.63	4176650.44	0.46876	631550.63	4176650.44	0.55459
631900.63	4176650.44	0.50324	632250.63	4176650.44	0.45347
632600.63	4176650.44	0.42156	632950.63	4176650.44	0.34328
633300.63	4176650.44	0.28083	629800.63	4177000.44	0.11222
630150.63	4177000.44	0.15068	630500.63	4177000.44	0.20370
630850.63	4177000.44	0.26473	631200.63	4177000.44	0.31454
631550.63	4177000.44	0.35838	631900.63	4177000.44	0.33193
632250.63	4177000.44	0.31632	632600.63	4177000.44	0.28668
632950.63	4177000.44	0.25647	633300.63	4177000.44	0.21844
629800.63	4177350.44	0.10786	630150.63	4177350.44	0.13540
630500.63	4177350.44	0.16637	630850.63	4177350.44	0.19859
631200.63	4177350.44	0.23056	631550.63	4177350.44	0.24486
631900.63	4177350.44	0.23500	632250.63	4177350.44	0.22973
632600.63	4177350.44	0.20225	632950.63	4177350.44	0.19655
633300.63	4177350.44	0.17430	631670.70	4175493.59	42.56515
631669.80	4175641.41	15.78750	631665.32	4175796.39	3.64329
631417.17	4175826.85	2.63968	631417.17	4175673.66	3.16571
631422.55	4175484.63	1.71310	631268.42	4175983.74	1.20076
631275.69	4175523.99	1.05401	631345.65	4175419.50	1.24565
631384.72	4175441.30	1.43488	631491.93	4175442.21	2.24794
631491.93	4175414.95	2.24015	631385.63	4175413.14	1.38749
631358.37	4175395.87	1.25323	631409.25	4175336.81	1.34782
631567.35	4175235.96	1.75790	631756.33	4175028.80	1.02447
631807.22	4175003.36	1.03195	631867.18	4174987.91	1.14383
631849.92	4175988.28	1.49700	631268.74	4175963.75	1.21766
631269.05	4175943.76	1.23227	631269.37	4175923.77	1.24470
631269.68	4175903.78	1.25627	631270.00	4175883.79	1.26671
631270.32	4175863.81	1.27476	631270.63	4175843.82	1.28186

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.28553	631271.26	4175803.84	1.28565
631271.58	4175783.85	1.28320	631271.90	4175763.86	1.27725
631272.21	4175743.87	1.26395	631272.53	4175723.88	1.24823
631272.85	4175703.89	1.22484	631273.16	4175683.90	1.19549
631273.48	4175663.91	1.17418	631273.79	4175643.92	1.15755
631274.11	4175623.94	1.13868	631274.43	4175603.95	1.11787
631274.74	4175583.96	1.09592	631275.06	4175563.97	1.07595
631275.37	4175543.98	1.06266	631285.68	4175509.06	1.08305
631295.68	4175494.14	1.10859	631305.67	4175479.21	1.13314
631315.67	4175464.28	1.16157	631325.66	4175449.35	1.19332
631335.66	4175434.43	1.22257	631358.67	4175426.77	1.31508
631371.70	4175434.03	1.38130	631402.59	4175441.45	1.53932
631420.46	4175441.60	1.62045	631438.33	4175441.76	1.80916
631456.19	4175441.91	1.99150	631474.06	4175442.06	1.96969
631491.93	4175428.58	2.25736	631474.21	4175414.65	1.83823
631456.50	4175414.35	1.79142	631438.78	4175414.05	1.72341
631421.06	4175413.74	1.58109	631403.35	4175413.44	1.48972
631372.00	4175404.51	1.30756	631371.09	4175381.11	1.26353
631383.81	4175366.34	1.29736	631396.53	4175351.58	1.32297
631425.06	4175326.73	1.40593	631440.87	4175316.64	1.45679
631456.68	4175306.56	1.47112	631472.49	4175296.47	1.50924
631488.30	4175286.39	1.56191	631504.11	4175276.30	1.58480
631519.92	4175266.22	1.61422	631535.73	4175256.13	1.65384
631551.54	4175246.05	1.70724	631579.95	4175222.15	1.70459
631592.55	4175208.34	1.65416	631605.15	4175194.53	1.59571
631617.74	4175180.72	1.54502	631630.34	4175166.91	1.47987
631642.94	4175153.10	1.42922	631655.54	4175139.29	1.38264
631668.14	4175125.47	1.33362	631680.74	4175111.66	1.28451
631693.34	4175097.85	1.23392	631705.94	4175084.04	1.18592
631718.53	4175070.23	1.14126	631731.13	4175056.42	1.09888
631743.73	4175042.61	1.05943	631773.29	4175020.32	1.02451
631790.26	4175011.84	1.02670	631822.21	4174999.50	1.05723
631837.20	4174995.64	1.08422	631852.19	4174991.77	1.11363
631866.84	4175007.53	1.23456	631866.50	4175027.14	1.33469
631866.16	4175046.76	1.45091	631865.83	4175066.37	1.57946
631865.49	4175085.99	1.73129	631865.15	4175105.60	1.90297
631864.81	4175125.22	2.10679	631864.47	4175144.83	2.34068
631864.13	4175164.45	2.62327	631863.80	4175184.06	2.95399
631863.46	4175203.68	3.35256	631863.12	4175223.29	3.85421
631862.78	4175242.91	4.46048	631862.44	4175262.52	5.24585

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	6.49263	631861.77	4175301.75	9.45990
631861.43	4175321.37	13.48820	631861.09	4175340.98	16.36670
631860.75	4175360.60	22.42295	631860.41	4175380.21	25.88334
631860.07	4175399.83	32.91539	631859.73	4175419.44	38.10954
631859.40	4175439.06	54.34537	631859.06	4175458.67	79.83697
631858.72	4175478.29	109.56955	631858.38	4175497.90	140.43305
631858.04	4175517.52	91.16003	631857.70	4175537.13	39.12984
631857.37	4175556.75	16.20062	631857.03	4175576.36	6.91059
631856.69	4175595.98	4.02933	631856.35	4175615.59	2.98020
631856.01	4175635.21	2.55252	631855.67	4175654.82	2.41382
631855.33	4175674.44	2.08911	631855.00	4175694.05	1.95746
631854.66	4175713.67	1.78421	631854.32	4175733.28	1.64751
631853.98	4175752.90	1.47703	631853.64	4175772.51	1.32252
631853.30	4175792.13	1.20796	631852.97	4175811.74	1.18620
631852.63	4175831.36	1.07338	631852.29	4175850.97	1.05643
631851.95	4175870.59	1.03488	631851.61	4175890.20	1.05967
631851.27	4175909.82	1.24778	631850.94	4175929.43	1.88243
631850.60	4175949.05	1.71027	631850.26	4175968.66	1.58521
631830.54	4175988.13	1.49496	631811.15	4175987.98	1.50127
631791.77	4175987.83	1.53997	631772.39	4175987.67	1.62356
631753.00	4175987.52	1.74827	631733.62	4175987.37	1.89233
631714.24	4175987.22	2.01004	631694.85	4175987.07	2.07679
631675.47	4175986.92	2.10501	631656.09	4175986.77	2.21716
631636.70	4175986.62	2.37060	631617.32	4175986.46	2.34901
631597.94	4175986.31	2.12304	631578.55	4175986.16	1.84530
631559.17	4175986.01	1.76269	631539.79	4175985.86	1.71835
631520.40	4175985.71	1.68427	631501.02	4175985.56	1.66342
631481.64	4175985.40	1.64547	631462.25	4175985.25	1.62477
631442.87	4175985.10	1.60031	631423.49	4175984.95	1.57186
631404.10	4175984.80	1.53778	631384.72	4175984.65	1.49926
631365.34	4175984.50	1.45648	631345.95	4175984.35	1.40953
631326.57	4175984.19	1.35982	631307.19	4175984.04	1.30822
631287.80	4175983.89	1.25485			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	2.33207	632304.44	4174354.52	0.40398
632192.15	4174956.32	2.24278	632420.62	4175510.15	3.48870
632418.97	4175552.92	3.14437	631187.00	4175727.00	0.97382
631166.00	4175729.00	0.91693	631121.00	4175719.00	0.80152
631035.00	4174830.00	0.30032	631106.00	4174825.00	0.32770
631937.00	4174528.00	0.45936	631322.00	4174522.00	0.27607
629800.63	4173850.44	0.05589	630150.63	4173850.44	0.06534
630500.63	4173850.44	0.07860	630850.63	4173850.44	0.09667
631200.63	4173850.44	0.11638	631550.63	4173850.44	0.12283
631900.63	4173850.44	0.13889	632250.63	4173850.44	0.16812
632600.63	4173850.44	0.18250	632950.63	4173850.44	0.18804
633300.63	4173850.44	0.17140	629800.63	4174200.44	0.06616
630150.63	4174200.44	0.07934	630500.63	4174200.44	0.09798
630850.63	4174200.44	0.12690	631200.63	4174200.44	0.16681
631550.63	4174200.44	0.19185	631900.63	4174200.44	0.22884
632250.63	4174200.44	0.29025	632600.63	4174200.44	0.31381
632950.63	4174200.44	0.27884	633300.63	4174200.44	0.23399
629800.63	4174550.44	0.07754	630150.63	4174550.44	0.09751
630500.63	4174550.44	0.12739	630850.63	4174550.44	0.17490
631200.63	4174550.44	0.25349	631550.63	4174550.44	0.34287
631900.63	4174550.44	0.45988	632250.63	4174550.44	0.63915
632600.63	4174550.44	0.57869	632950.63	4174550.44	0.43522
633300.63	4174550.44	0.36311	629800.63	4174900.44	0.08665
630150.63	4174900.44	0.11465	630500.63	4174900.44	0.16278
630850.63	4174900.44	0.25411	631200.63	4174900.44	0.42093
631550.63	4174900.44	0.73663	631900.63	4174900.44	1.35207
632250.63	4174900.44	1.77816	632600.63	4174900.44	1.14302
632950.63	4174900.44	0.79823	633300.63	4174900.44	0.60778
629800.63	4175250.44	0.09353	630150.63	4175250.44	0.12680
630500.63	4175250.44	0.18658	630850.63	4175250.44	0.31949
631200.63	4175250.44	0.70860	631550.63	4175250.44	2.55893
631900.63	4175250.44	13.34034	632250.63	4175250.44	5.99258
632600.63	4175250.44	2.38009	632950.63	4175250.44	1.31207
633300.63	4175250.44	0.86681	629800.63	4175600.44	0.09595
630150.63	4175600.44	0.13171	630500.63	4175600.44	0.19856
630850.63	4175600.44	0.36484	631200.63	4175600.44	0.92331
631550.63	4175600.44	8.75743	631900.63	4175600.44	1.12623
632250.63	4175600.44	3.38510	632600.63	4175600.44	1.99104
632950.63	4175600.44	1.19731	633300.63	4175600.44	0.81596
629800.63	4175950.44	0.09951	630150.63	4175950.44	0.14127

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.23083	630850.63	4175950.44	0.45735
631200.63	4175950.44	0.98212	631550.63	4175950.44	2.49654
631900.63	4175950.44	1.27995	632250.63	4175950.44	1.06220
632600.63	4175950.44	0.89319	632950.63	4175950.44	0.69827
633300.63	4175950.44	0.54098	629800.63	4176300.44	0.10884
630150.63	4176300.44	0.15694	630500.63	4176300.44	0.24873
630850.63	4176300.44	0.43710	631200.63	4176300.44	0.66466
631550.63	4176300.44	0.78258	631900.63	4176300.44	0.69876
632250.63	4176300.44	0.62586	632600.63	4176300.44	0.55187
632950.63	4176300.44	0.43721	633300.63	4176300.44	0.35293
629800.63	4176650.44	0.11342	630150.63	4176650.44	0.15681
630500.63	4176650.44	0.23266	630850.63	4176650.44	0.33804
631200.63	4176650.44	0.42275	631550.63	4176650.44	0.49797
631900.63	4176650.44	0.43970	632250.63	4176650.44	0.40890
632600.63	4176650.44	0.38373	632950.63	4176650.44	0.31536
633300.63	4176650.44	0.26143	629800.63	4177000.44	0.11141
630150.63	4177000.44	0.14761	630500.63	4177000.44	0.19446
630850.63	4177000.44	0.24727	631200.63	4177000.44	0.29039
631550.63	4177000.44	0.32504	631900.63	4177000.44	0.29772
632250.63	4177000.44	0.29194	632600.63	4177000.44	0.25954
632950.63	4177000.44	0.23970	633300.63	4177000.44	0.20422
629800.63	4177350.44	0.10589	630150.63	4177350.44	0.13057
630500.63	4177350.44	0.15797	630850.63	4177350.44	0.18580
631200.63	4177350.44	0.21585	631550.63	4177350.44	0.22497
631900.63	4177350.44	0.21510	632250.63	4177350.44	0.21341
632600.63	4177350.44	0.18730	632950.63	4177350.44	0.18214
633300.63	4177350.44	0.16504	631670.70	4175493.59	23.21199
631669.80	4175641.41	9.81724	631665.32	4175796.39	2.79397
631417.17	4175826.85	3.18227	631417.17	4175673.66	2.94961
631422.55	4175484.63	1.50264	631268.42	4175983.74	1.08519
631275.69	4175523.99	1.10242	631345.65	4175419.50	1.33939
631384.72	4175441.30	1.38829	631491.93	4175442.21	1.56185
631491.93	4175414.95	1.76139	631385.63	4175413.14	1.43154
631358.37	4175395.87	1.34701	631409.25	4175336.81	1.60265
631567.35	4175235.96	2.60178	631756.33	4175028.80	1.57364
631807.22	4175003.36	1.59797	631867.18	4174987.91	1.81522
631849.92	4175988.28	1.14916	631268.74	4175963.75	1.11046
631269.05	4175943.76	1.13463	631269.37	4175923.77	1.15721
631269.68	4175903.78	1.17699	631270.00	4175883.79	1.19382
631270.32	4175863.81	1.20797	631270.63	4175843.82	1.21953

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.22923	631271.26	4175803.84	1.23739
631271.58	4175783.85	1.24548	631271.90	4175763.86	1.25068
631272.21	4175743.87	1.24852	631272.53	4175723.88	1.24868
631272.85	4175703.89	1.23761	631273.16	4175683.90	1.22170
631273.48	4175663.91	1.21610	631273.79	4175643.92	1.22031
631274.11	4175623.94	1.22137	631274.43	4175603.95	1.17182
631274.74	4175583.96	1.13384	631275.06	4175563.97	1.11556
631275.37	4175543.98	1.10619	631285.68	4175509.06	1.14666
631295.68	4175494.14	1.15596	631305.67	4175479.21	1.13965
631315.67	4175464.28	1.18291	631325.66	4175449.35	1.22462
631335.66	4175434.43	1.27736	631358.67	4175426.77	1.39782
631371.70	4175434.03	1.43029	631402.59	4175441.45	1.48898
631420.46	4175441.60	1.59256	631438.33	4175441.76	1.88593
631456.19	4175441.91	2.03828	631474.06	4175442.06	1.49336
631491.93	4175428.58	1.65542	631474.21	4175414.65	1.64105
631456.50	4175414.35	2.04412	631438.78	4175414.05	1.91229
631421.06	4175413.74	1.65600	631403.35	4175413.44	1.54050
631372.00	4175404.51	1.35761	631371.09	4175381.11	1.37600
631383.81	4175366.34	1.45571	631396.53	4175351.58	1.52644
631425.06	4175326.73	1.71367	631440.87	4175316.64	1.78973
631456.68	4175306.56	1.82156	631472.49	4175296.47	1.94647
631488.30	4175286.39	2.06731	631504.11	4175276.30	2.18354
631519.92	4175266.22	2.28890	631535.73	4175256.13	2.40028
631551.54	4175246.05	2.51762	631579.95	4175222.15	2.57162
631592.55	4175208.34	2.52591	631605.15	4175194.53	2.46328
631617.74	4175180.72	2.40232	631630.34	4175166.91	2.33531
631642.94	4175153.10	2.26968	631655.54	4175139.29	2.19356
631668.14	4175125.47	2.11137	631680.74	4175111.66	2.02943
631693.34	4175097.85	1.95082	631705.94	4175084.04	1.86486
631718.53	4175070.23	1.78153	631731.13	4175056.42	1.71030
631743.73	4175042.61	1.63561	631773.29	4175020.32	1.58037
631790.26	4175011.84	1.58312	631822.21	4174999.50	1.64520
631837.20	4174995.64	1.70202	631852.19	4174991.77	1.75952
631866.84	4175007.53	1.99878	631866.50	4175027.14	2.21697
631866.16	4175046.76	2.46840	631865.83	4175066.37	2.76576
631865.49	4175085.99	3.12443	631865.15	4175105.60	3.56565
631864.81	4175125.22	4.09663	631864.47	4175144.83	4.75291
631864.13	4175164.45	5.57996	631863.80	4175184.06	6.63108
631863.46	4175203.68	7.95344	631863.12	4175223.29	9.68685
631862.78	4175242.91	11.91364	631862.44	4175262.52	14.77874

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	18.70260	631861.77	4175301.75	26.34210
631861.43	4175321.37	38.37840	631861.09	4175340.98	46.82771
631860.75	4175360.60	61.01911	631860.41	4175380.21	82.03993
631860.07	4175399.83	96.52970	631859.73	4175419.44	43.58331
631859.40	4175439.06	13.61620	631859.06	4175458.67	6.04974
631858.72	4175478.29	3.24418	631858.38	4175497.90	2.29943
631858.04	4175517.52	2.00105	631857.70	4175537.13	1.73000
631857.37	4175556.75	1.60680	631857.03	4175576.36	1.78752
631856.69	4175595.98	1.94685	631856.35	4175615.59	2.06086
631856.01	4175635.21	1.99881	631855.67	4175654.82	1.81641
631855.33	4175674.44	1.70927	631855.00	4175694.05	1.52924
631854.66	4175713.67	1.39449	631854.32	4175733.28	1.37452
631853.98	4175752.90	1.19048	631853.64	4175772.51	1.02883
631853.30	4175792.13	1.00969	631852.97	4175811.74	0.98703
631852.63	4175831.36	0.87572	631852.29	4175850.97	0.86342
631851.95	4175870.59	0.76301	631851.61	4175890.20	0.83202
631851.27	4175909.82	0.88370	631850.94	4175929.43	1.40022
631850.60	4175949.05	1.29250	631850.26	4175968.66	1.20856
631830.54	4175988.13	1.11743	631811.15	4175987.98	1.11897
631791.77	4175987.83	1.13942	631772.39	4175987.67	1.23198
631753.00	4175987.52	1.35811	631733.62	4175987.37	1.52019
631714.24	4175987.22	1.64612	631694.85	4175987.07	1.69136
631675.47	4175986.92	1.69703	631656.09	4175986.77	1.78089
631636.70	4175986.62	1.93340	631617.32	4175986.46	1.82018
631597.94	4175986.31	1.50186	631578.55	4175986.16	1.44649
631559.17	4175986.01	1.41586	631539.79	4175985.86	1.37978
631520.40	4175985.71	1.34024	631501.02	4175985.56	1.31980
631481.64	4175985.40	1.30917	631462.25	4175985.25	1.29955
631442.87	4175985.10	1.28997	631423.49	4175984.95	1.27787
631404.10	4175984.80	1.26342	631384.72	4175984.65	1.24656
631365.34	4175984.50	1.22629	631345.95	4175984.35	1.20346
631326.57	4175984.19	1.17726	631307.19	4175984.04	1.14860
631287.80	4175983.89	1.11789			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.75897	632304.44	4174354.52	0.22360
632192.15	4174956.32	0.81927	632420.62	4175510.15	3.37888
632418.97	4175552.92	3.73981	631187.00	4175727.00	0.70029
631166.00	4175729.00	0.65668	631121.00	4175719.00	0.57100

631035.00	4174830.00	0.18991	631106.00	4174825.00	0.20292
631937.00	4174528.00	0.23400	631322.00	4174522.00	0.16973
629800.63	4173850.44	0.04582	630150.63	4173850.44	0.05233
630500.63	4173850.44	0.06130	630850.63	4173850.44	0.07292
631200.63	4173850.44	0.08280	631550.63	4173850.44	0.08330
631900.63	4173850.44	0.09342	632250.63	4173850.44	0.11335
632600.63	4173850.44	0.12300	632950.63	4173850.44	0.13261
633300.63	4173850.44	0.13361	629800.63	4174200.44	0.05384
630150.63	4174200.44	0.06235	630500.63	4174200.44	0.07450
630850.63	4174200.44	0.09232	631200.63	4174200.44	0.11321
631550.63	4174200.44	0.11914	631900.63	4174200.44	0.13835
632250.63	4174200.44	0.17343	632600.63	4174200.44	0.19180
632950.63	4174200.44	0.19723	633300.63	4174200.44	0.17784
629800.63	4174550.44	0.06397	630150.63	4174550.44	0.07638
630500.63	4174550.44	0.09415	630850.63	4174550.44	0.12208
631200.63	4174550.44	0.16253	631550.63	4174550.44	0.18794
631900.63	4174550.44	0.23254	632250.63	4174550.44	0.31182
632600.63	4174550.44	0.34170	632950.63	4174550.44	0.29538
633300.63	4174550.44	0.24743	629800.63	4174900.44	0.07437
630150.63	4174900.44	0.09373	630500.63	4174900.44	0.12359
630850.63	4174900.44	0.17046	631200.63	4174900.44	0.24516
631550.63	4174900.44	0.33408	631900.63	4174900.44	0.47008
632250.63	4174900.44	0.72080	632600.63	4174900.44	0.63503
632950.63	4174900.44	0.47344	633300.63	4174900.44	0.39224
629800.63	4175250.44	0.08253	630150.63	4175250.44	0.10841
630500.63	4175250.44	0.15415	630850.63	4175250.44	0.24436
631200.63	4175250.44	0.41147	631550.63	4175250.44	0.77226
631900.63	4175250.44	1.54007	632250.63	4175250.44	1.97150
632600.63	4175250.44	1.28676	632950.63	4175250.44	0.87536
633300.63	4175250.44	0.65099	629800.63	4175600.44	0.08907
630150.63	4175600.44	0.11970	630500.63	4175600.44	0.17408
630850.63	4175600.44	0.29581	631200.63	4175600.44	0.67656
631550.63	4175600.44	5.17469	631900.63	4175600.44	9.02907
632250.63	4175600.44	6.92427	632600.63	4175600.44	2.48735
632950.63	4175600.44	1.34875	633300.63	4175600.44	0.88703
629800.63	4175950.44	0.09176	630150.63	4175950.44	0.12521

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.18796	630850.63	4175950.44	0.34595
631200.63	4175950.44	0.87921	631550.63	4175950.44	3.81176
631900.63	4175950.44	2.83563	632250.63	4175950.44	2.71418
632600.63	4175950.44	1.75985	632950.63	4175950.44	1.11496

633300.63	4175950.44	0.78298	629800.63	4176300.44	0.09717
630150.63	4176300.44	0.13843	630500.63	4176300.44	0.22301
630850.63	4176300.44	0.41689	631200.63	4176300.44	0.83953
631550.63	4176300.44	1.13493	631900.63	4176300.44	1.08576
632250.63	4176300.44	1.00530	632600.63	4176300.44	0.80704
632950.63	4176300.44	0.63785	633300.63	4176300.44	0.51165
629800.63	4176650.44	0.10834	630150.63	4176650.44	0.15410
630500.63	4176650.44	0.23473	630850.63	4176650.44	0.38282
631200.63	4176650.44	0.55163	631550.63	4176650.44	0.65407
631900.63	4176650.44	0.62897	632250.63	4176650.44	0.56606
632600.63	4176650.44	0.50381	632950.63	4176650.44	0.40733
633300.63	4176650.44	0.33605	629800.63	4177000.44	0.11305
630150.63	4177000.44	0.15338	630500.63	4177000.44	0.21599
630850.63	4177000.44	0.29542	631200.63	4177000.44	0.36466
631550.63	4177000.44	0.42014	631900.63	4177000.44	0.40250
632250.63	4177000.44	0.36613	632600.63	4177000.44	0.34611
632950.63	4177000.44	0.29663	633300.63	4177000.44	0.25304
629800.63	4177350.44	0.11068	630150.63	4177350.44	0.14319
630500.63	4177350.44	0.18232	630850.63	4177350.44	0.22303
631200.63	4177350.44	0.26088	631550.63	4177350.44	0.28605
631900.63	4177350.44	0.27828	632250.63	4177350.44	0.26322
632600.63	4177350.44	0.23901	632950.63	4177350.44	0.22815
633300.63	4177350.44	0.19950	631670.70	4175493.59	2.26881
631669.80	4175641.41	12.98264	631665.32	4175796.39	5.09502
631417.17	4175826.85	1.78875	631417.17	4175673.66	1.72848
631422.55	4175484.63	1.23042	631268.42	4175983.74	1.10553
631275.69	4175523.99	0.77419	631345.65	4175419.50	0.75955
631384.72	4175441.30	0.90521	631491.93	4175442.21	1.57149
631491.93	4175414.95	1.32231	631385.63	4175413.14	0.82291
631358.37	4175395.87	0.74190	631409.25	4175336.81	0.73023
631567.35	4175235.96	0.76739	631756.33	4175028.80	0.49406
631807.22	4175003.36	0.50094	631867.18	4174987.91	0.54907
631849.92	4175988.28	2.56350	631268.74	4175963.75	1.10078
631269.05	4175943.76	1.09308	631269.37	4175923.77	1.08261
631269.68	4175903.78	1.06927	631270.00	4175883.79	1.05435
631270.32	4175863.81	1.03892	631270.63	4175843.82	1.02350

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.00975	631271.26	4175803.84	0.99713
631271.58	4175783.85	0.98350	631271.90	4175763.86	0.96875
631272.21	4175743.87	0.95590	631272.53	4175723.88	0.93790
631272.85	4175703.89	0.91964	631273.16	4175683.90	0.90938

631273.48	4175663.91	0.90229	631273.79	4175643.92	0.89326
631274.11	4175623.94	0.87717	631274.43	4175603.95	0.85285
631274.74	4175583.96	0.82547	631275.06	4175563.97	0.80608
631275.37	4175543.98	0.79268	631285.68	4175509.06	0.77496
631295.68	4175494.14	0.77048	631305.67	4175479.21	0.77145
631315.67	4175464.28	0.76799	631325.66	4175449.35	0.76672
631335.66	4175434.43	0.76318	631358.67	4175426.77	0.78939
631371.70	4175434.03	0.84202	631402.59	4175441.45	0.90631
631420.46	4175441.60	1.03568	631438.33	4175441.76	1.09948
631456.19	4175441.91	1.27924	631474.06	4175442.06	1.41130
631491.93	4175428.58	1.44920	631474.21	4175414.65	1.28512
631456.50	4175414.35	1.11325	631438.78	4175414.05	1.04817
631421.06	4175413.74	0.89110	631403.35	4175413.44	0.91530
631372.00	4175404.51	0.77924	631371.09	4175381.11	0.73731
631383.81	4175366.34	0.72977	631396.53	4175351.58	0.72943
631425.06	4175326.73	0.74359	631440.87	4175316.64	0.75285
631456.68	4175306.56	0.76063	631472.49	4175296.47	0.75192
631488.30	4175286.39	0.75515	631504.11	4175276.30	0.75074
631519.92	4175266.22	0.75090	631535.73	4175256.13	0.75671
631551.54	4175246.05	0.76061	631579.95	4175222.15	0.75038
631592.55	4175208.34	0.73027	631605.15	4175194.53	0.70784
631617.74	4175180.72	0.68149	631630.34	4175166.91	0.65828
631642.94	4175153.10	0.63827	631655.54	4175139.29	0.61624
631668.14	4175125.47	0.59738	631680.74	4175111.66	0.57690
631693.34	4175097.85	0.56013	631705.94	4175084.04	0.54174
631718.53	4175070.23	0.52721	631731.13	4175056.42	0.51418
631743.73	4175042.61	0.50297	631773.29	4175020.32	0.49394
631790.26	4175011.84	0.49808	631822.21	4174999.50	0.51140
631837.20	4174995.64	0.52277	631852.19	4174991.77	0.53573
631866.84	4175007.53	0.57878	631866.50	4175027.14	0.61198
631866.16	4175046.76	0.64854	631865.83	4175066.37	0.68863
631865.49	4175085.99	0.73275	631865.15	4175105.60	0.78011
631864.81	4175125.22	0.83379	631864.47	4175144.83	0.89339
631864.13	4175164.45	0.96050	631863.80	4175184.06	1.03056
631863.46	4175203.68	1.11383	631863.12	4175223.29	1.20878
631862.78	4175242.91	1.31469	631862.44	4175262.52	1.45387

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.68695	631861.77	4175301.75	2.07590
631861.43	4175321.37	2.00437	631861.09	4175340.98	1.37813
631860.75	4175360.60	1.32943	631860.41	4175380.21	1.38110
631860.07	4175399.83	1.54953	631859.73	4175419.44	1.64856

631859.40	4175439.06	1.86651	631859.06	4175458.67	2.18338
631858.72	4175478.29	2.50515	631858.38	4175497.90	2.86333
631858.04	4175517.52	3.16384	631857.70	4175537.13	3.52520
631857.37	4175556.75	4.05894	631857.03	4175576.36	4.89644
631856.69	4175595.98	6.30363	631856.35	4175615.59	9.11205
631856.01	4175635.21	15.71327	631855.67	4175654.82	29.82631
631855.33	4175674.44	53.21937	631855.00	4175694.05	85.73752
631854.66	4175713.67	87.55917	631854.32	4175733.28	48.35829
631853.98	4175752.90	26.50261	631853.64	4175772.51	14.99369
631853.30	4175792.13	10.77699	631852.97	4175811.74	8.41248
631852.63	4175831.36	6.69945	631852.29	4175850.97	5.47589
631851.95	4175870.59	4.64129	631851.61	4175890.20	3.81989
631851.27	4175909.82	3.90131	631850.94	4175929.43	3.77760
631850.60	4175949.05	3.11068	631850.26	4175968.66	2.78938
631830.54	4175988.13	2.69866	631811.15	4175987.98	2.83330
631791.77	4175987.83	2.96662	631772.39	4175987.67	3.08402
631753.00	4175987.52	3.07366	631733.62	4175987.37	2.76822
631714.24	4175987.22	2.34398	631694.85	4175987.07	2.67775
631675.47	4175986.92	2.34134	631656.09	4175986.77	2.05085
631636.70	4175986.62	2.64183	631617.32	4175986.46	2.97309
631597.94	4175986.31	3.24246	631578.55	4175986.16	3.28385
631559.17	4175986.01	2.95379	631539.79	4175985.86	2.71554
631520.40	4175985.71	2.56946	631501.02	4175985.56	2.42934
631481.64	4175985.40	2.28412	631462.25	4175985.25	2.13961
631442.87	4175985.10	2.00026	631423.49	4175984.95	1.86861
631404.10	4175984.80	1.74441	631384.72	4175984.65	1.62921
631365.34	4175984.50	1.52306	631345.95	4175984.35	1.42496
631326.57	4175984.19	1.33530	631307.19	4175984.04	1.25227
631287.80	4175983.89	1.17600			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.73172	632304.44	4174354.52	0.22435
632192.15	4174956.32	0.74304	632420.62	4175510.15	1.96309
632418.97	4175552.92	2.13536	631187.00	4175727.00	1.57009
631166.00	4175729.00	1.44009	631121.00	4175719.00	1.18822
631035.00	4174830.00	0.23639	631106.00	4174825.00	0.24961
631937.00	4174528.00	0.26694	631322.00	4174522.00	0.17764
629800.63	4173850.44	0.05144	630150.63	4173850.44	0.06004
630500.63	4173850.44	0.07061	630850.63	4173850.44	0.08119
631200.63	4173850.44	0.08478	631550.63	4173850.44	0.08834
631900.63	4173850.44	0.10626	632250.63	4173850.44	0.11626
632600.63	4173850.44	0.12206	632950.63	4173850.44	0.12592

633300.63	4173850.44	0.11989	629800.63	4174200.44	0.06029
630150.63	4174200.44	0.07170	630500.63	4174200.44	0.08783
630850.63	4174200.44	0.10797	631200.63	4174200.44	0.11983
631550.63	4174200.44	0.12625	631900.63	4174200.44	0.16029
632250.63	4174200.44	0.17602	632600.63	4174200.44	0.18548
632950.63	4174200.44	0.17548	633300.63	4174200.44	0.15254
629800.63	4174550.44	0.07235	630150.63	4174550.44	0.08803
630500.63	4174550.44	0.11239	630850.63	4174550.44	0.14892
631200.63	4174550.44	0.18243	631550.63	4174550.44	0.19668
631900.63	4174550.44	0.27193	632250.63	4174550.44	0.31236
632600.63	4174550.44	0.30422	632950.63	4174550.44	0.24451
633300.63	4174550.44	0.20697	629800.63	4174900.44	0.08752
630150.63	4174900.44	0.11158	630500.63	4174900.44	0.14967
630850.63	4174900.44	0.21259	631200.63	4174900.44	0.29706
631550.63	4174900.44	0.33975	631900.63	4174900.44	0.54480
632250.63	4174900.44	0.64894	632600.63	4174900.44	0.49402
632950.63	4174900.44	0.37388	633300.63	4174900.44	0.31313
629800.63	4175250.44	0.10179	630150.63	4175250.44	0.13873
630500.63	4175250.44	0.20522	630850.63	4175250.44	0.32674
631200.63	4175250.44	0.54050	631550.63	4175250.44	0.78795
631900.63	4175250.44	1.65267	632250.63	4175250.44	1.30393
632600.63	4175250.44	0.89971	632950.63	4175250.44	0.63267
633300.63	4175250.44	0.49167	629800.63	4175600.44	0.11224
630150.63	4175600.44	0.15893	630500.63	4175600.44	0.25164
630850.63	4175600.44	0.48963	631200.63	4175600.44	1.27764
631550.63	4175600.44	2.34349	631900.63	4175600.44	6.75707
632250.63	4175600.44	3.35482	632600.63	4175600.44	1.57965
632950.63	4175600.44	0.95641	633300.63	4175600.44	0.67649
629800.63	4175950.44	0.11684	630150.63	4175950.44	0.16888

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.27710	630850.63	4175950.44	0.59400
631200.63	4175950.44	2.21781	631550.63	4175950.44	8.96219
631900.63	4175950.44	4.33585	632250.63	4175950.44	2.92151
632600.63	4175950.44	1.50496	632950.63	4175950.44	0.96017
633300.63	4175950.44	0.68020	629800.63	4176300.44	0.12226
630150.63	4176300.44	0.18438	630500.63	4176300.44	0.32849
630850.63	4176300.44	0.72879	631200.63	4176300.44	1.61429
631550.63	4176300.44	1.59913	631900.63	4176300.44	1.22612
632250.63	4176300.44	1.04060	632600.63	4176300.44	0.83959
632950.63	4176300.44	0.63119	633300.63	4176300.44	0.49361
629800.63	4176650.44	0.13494	630150.63	4176650.44	0.20249

630500.63	4176650.44	0.33685	630850.63	4176650.44	0.58664
631200.63	4176650.44	0.80741	631550.63	4176650.44	0.82486
631900.63	4176650.44	0.69686	632250.63	4176650.44	0.62443
632600.63	4176650.44	0.49829	632950.63	4176650.44	0.39743
633300.63	4176650.44	0.33456	629800.63	4177000.44	0.13850
630150.63	4177000.44	0.19718	630500.63	4177000.44	0.28802
630850.63	4177000.44	0.39731	631200.63	4177000.44	0.48991
631550.63	4177000.44	0.49506	631900.63	4177000.44	0.45361
632250.63	4177000.44	0.40873	632600.63	4177000.44	0.34817
632950.63	4177000.44	0.28870	633300.63	4177000.44	0.24075
629800.63	4177350.44	0.13395	630150.63	4177350.44	0.17654
630500.63	4177350.44	0.22623	630850.63	4177350.44	0.27598
631200.63	4177350.44	0.32451	631550.63	4177350.44	0.32280
631900.63	4177350.44	0.30956	632250.63	4177350.44	0.27127
632600.63	4177350.44	0.25812	632950.63	4177350.44	0.22110
633300.63	4177350.44	0.19223	631670.70	4175493.59	3.62550
631669.80	4175641.41	10.56123	631665.32	4175796.39	11.16098
631417.17	4175826.85	9.11031	631417.17	4175673.66	2.75995
631422.55	4175484.63	1.20973	631268.42	4175983.74	3.23802
631275.69	4175523.99	1.45943	631345.65	4175419.50	1.22595
631384.72	4175441.30	1.14120	631491.93	4175442.21	1.06853
631491.93	4175414.95	0.94468	631385.63	4175413.14	1.05716
631358.37	4175395.87	1.09442	631409.25	4175336.81	1.13018
631567.35	4175235.96	0.76494	631756.33	4175028.80	0.63873
631807.22	4175003.36	0.63992	631867.18	4174987.91	0.65862
631849.92	4175988.28	3.08072	631268.74	4175963.75	3.23542
631269.05	4175943.76	3.21015	631269.37	4175923.77	3.15759
631269.68	4175903.78	3.08577	631270.00	4175883.79	3.00372
631270.32	4175863.81	2.91850	631270.63	4175843.82	2.84239

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.77867	631271.26	4175803.84	2.71956
631271.58	4175783.85	2.65932	631271.90	4175763.86	2.58724
631272.21	4175743.87	2.48978	631272.53	4175723.88	2.38040
631272.85	4175703.89	2.21972	631273.16	4175683.90	2.07104
631273.48	4175663.91	1.87800	631273.79	4175643.92	2.03189
631274.11	4175623.94	1.85684	631274.43	4175603.95	1.69227
631274.74	4175583.96	1.53609	631275.06	4175563.97	1.40788
631275.37	4175543.98	1.50328	631285.68	4175509.06	1.39943
631295.68	4175494.14	1.28966	631305.67	4175479.21	1.22753
631315.67	4175464.28	1.16326	631325.66	4175449.35	1.13406
631335.66	4175434.43	1.32015	631358.67	4175426.77	1.07025

631371.70	4175434.03	1.14811	631402.59	4175441.45	1.12695
631420.46	4175441.60	1.15304	631438.33	4175441.76	1.21018
631456.19	4175441.91	1.08574	631474.06	4175442.06	1.04573
631491.93	4175428.58	0.95696	631474.21	4175414.65	0.99630
631456.50	4175414.35	0.99005	631438.78	4175414.05	1.08048
631421.06	4175413.74	1.15106	631403.35	4175413.44	1.04801
631372.00	4175404.51	1.14343	631371.09	4175381.11	1.01351
631383.81	4175366.34	1.23968	631396.53	4175351.58	1.18901
631425.06	4175326.73	1.00499	631440.87	4175316.64	1.01503
631456.68	4175306.56	0.96060	631472.49	4175296.47	0.89633
631488.30	4175286.39	0.84547	631504.11	4175276.30	0.83962
631519.92	4175266.22	0.78862	631535.73	4175256.13	0.79863
631551.54	4175246.05	0.76376	631579.95	4175222.15	0.74190
631592.55	4175208.34	0.74944	631605.15	4175194.53	0.73552
631617.74	4175180.72	0.74037	631630.34	4175166.91	0.74001
631642.94	4175153.10	0.73347	631655.54	4175139.29	0.72623
631668.14	4175125.47	0.71808	631680.74	4175111.66	0.70790
631693.34	4175097.85	0.69666	631705.94	4175084.04	0.68505
631718.53	4175070.23	0.67463	631731.13	4175056.42	0.66247
631743.73	4175042.61	0.64993	631773.29	4175020.32	0.64003
631790.26	4175011.84	0.64039	631822.21	4174999.50	0.64492
631837.20	4174995.64	0.64957	631852.19	4174991.77	0.65427
631866.84	4175007.53	0.69509	631866.50	4175027.14	0.73417
631866.16	4175046.76	0.77779	631865.83	4175066.37	0.82491
631865.49	4175085.99	0.87751	631865.15	4175105.60	0.93455
631864.81	4175125.22	0.99855	631864.47	4175144.83	1.06841
631864.13	4175164.45	1.14591	631863.80	4175184.06	1.23206
631863.46	4175203.68	1.32685	631863.12	4175223.29	1.43104
631862.78	4175242.91	1.54860	631862.44	4175262.52	1.67845

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.83996	631861.77	4175301.75	2.35430
631861.43	4175321.37	3.54505	631861.09	4175340.98	4.10643
631860.75	4175360.60	4.56330	631860.41	4175380.21	4.57122
631860.07	4175399.83	4.91477	631859.73	4175419.44	5.12448
631859.40	4175439.06	5.40522	631859.06	4175458.67	5.65466
631858.72	4175478.29	5.82070	631858.38	4175497.90	5.98192
631858.04	4175517.52	6.09822	631857.70	4175537.13	6.18204
631857.37	4175556.75	6.24319	631857.03	4175576.36	6.31949
631856.69	4175595.98	6.44463	631856.35	4175615.59	6.61471
631856.01	4175635.21	6.96752	631855.67	4175654.82	7.55158
631855.33	4175674.44	8.60268	631855.00	4175694.05	10.88062

631854.66	4175713.67	14.58934	631854.32	4175733.28	18.01802
631853.98	4175752.90	14.11964	631853.64	4175772.51	15.54189
631853.30	4175792.13	16.20738	631852.97	4175811.74	15.90091
631852.63	4175831.36	14.60697	631852.29	4175850.97	12.60748
631851.95	4175870.59	10.35401	631851.61	4175890.20	8.25548
631851.27	4175909.82	6.51854	631850.94	4175929.43	5.19520
631850.60	4175949.05	4.23723	631850.26	4175968.66	3.55846
631830.54	4175988.13	3.07352	631811.15	4175987.98	3.08914
631791.77	4175987.83	3.12906	631772.39	4175987.67	3.20175
631753.00	4175987.52	3.30803	631733.62	4175987.37	3.38014
631714.24	4175987.22	3.27213	631694.85	4175987.07	3.09983
631675.47	4175986.92	2.44018	631656.09	4175986.77	2.58740
631636.70	4175986.62	2.21446	631617.32	4175986.46	2.99616
631597.94	4175986.31	3.52022	631578.55	4175986.16	4.39721
631559.17	4175986.01	5.61090	631539.79	4175985.86	6.08615
631520.40	4175985.71	6.40700	631501.02	4175985.56	6.67391
631481.64	4175985.40	6.79977	631462.25	4175985.25	6.84944
631442.87	4175985.10	6.78144	631423.49	4175984.95	6.57808
631404.10	4175984.80	6.25772	631384.72	4175984.65	5.84945
631365.34	4175984.50	5.38394	631345.95	4175984.35	4.89744
631326.57	4175984.19	4.42662	631307.19	4175984.04	3.99070
631287.80	4175983.89	3.59525			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.92928	632304.44	4174354.52	0.25971
632192.15	4174956.32	0.91347	632420.62	4175510.15	2.31503
632418.97	4175552.92	2.42435	631187.00	4175727.00	1.82953
631166.00	4175729.00	1.65650	631121.00	4175719.00	1.33169
631035.00	4174830.00	0.26589	631106.00	4174825.00	0.28414
631937.00	4174528.00	0.31186	631322.00	4174522.00	0.20213
629800.63	4173850.44	0.05369	630150.63	4173850.44	0.06298
630500.63	4173850.44	0.07473	630850.63	4173850.44	0.08716
631200.63	4173850.44	0.09213	631550.63	4173850.44	0.09631
631900.63	4173850.44	0.11649	632250.63	4173850.44	0.12769
632600.63	4173850.44	0.13514	632950.63	4173850.44	0.13781
633300.63	4173850.44	0.12810	629800.63	4174200.44	0.06336
630150.63	4174200.44	0.07562	630500.63	4174200.44	0.09347
630850.63	4174200.44	0.11674	631200.63	4174200.44	0.13238
631550.63	4174200.44	0.14060	631900.63	4174200.44	0.17986
632250.63	4174200.44	0.19953	632600.63	4174200.44	0.20935
632950.63	4174200.44	0.19106	633300.63	4174200.44	0.16435
629800.63	4174550.44	0.07644	630150.63	4174550.44	0.09380

630500.63	4174550.44	0.12053	630850.63	4174550.44	0.16226
631200.63	4174550.44	0.20595	631550.63	4174550.44	0.22693
631900.63	4174550.44	0.31854	632250.63	4174550.44	0.37112
632600.63	4174550.44	0.34213	632950.63	4174550.44	0.26965
633300.63	4174550.44	0.22990	629800.63	4174900.44	0.09197
630150.63	4174900.44	0.11933	630500.63	4174900.44	0.16304
630850.63	4174900.44	0.23655	631200.63	4174900.44	0.34711
631550.63	4174900.44	0.42049	631900.63	4174900.44	0.70487
632250.63	4174900.44	0.78264	632600.63	4174900.44	0.56608
632950.63	4174900.44	0.42955	633300.63	4174900.44	0.35618
629800.63	4175250.44	0.10499	630150.63	4175250.44	0.14523
630500.63	4175250.44	0.22087	630850.63	4175250.44	0.37505
631200.63	4175250.44	0.67704	631550.63	4175250.44	1.20144
631900.63	4175250.44	2.40327	632250.63	4175250.44	1.63210
632600.63	4175250.44	1.07892	632950.63	4175250.44	0.72962
633300.63	4175250.44	0.54972	629800.63	4175600.44	0.11432
630150.63	4175600.44	0.16322	630500.63	4175600.44	0.26111
630850.63	4175600.44	0.52430	631200.63	4175600.44	1.63907
631550.63	4175600.44	9.93730	631900.63	4175600.44	16.12067
632250.63	4175600.44	3.98549	632600.63	4175600.44	1.66920
632950.63	4175600.44	1.01010	633300.63	4175600.44	0.70495
629800.63	4175950.44	0.11782	630150.63	4175950.44	0.17129

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.28723	630850.63	4175950.44	0.65698
631200.63	4175950.44	2.28029	631550.63	4175950.44	3.83295
631900.63	4175950.44	2.30200	632250.63	4175950.44	2.19774
632600.63	4175950.44	1.32887	632950.63	4175950.44	0.87507
633300.63	4175950.44	0.63567	629800.63	4176300.44	0.12559
630150.63	4176300.44	0.19182	630500.63	4176300.44	0.34095
630850.63	4176300.44	0.70969	631200.63	4176300.44	1.24684
631550.63	4176300.44	1.22673	631900.63	4176300.44	0.99339
632250.63	4176300.44	0.88015	632600.63	4176300.44	0.70758
632950.63	4176300.44	0.55276	633300.63	4176300.44	0.44068
629800.63	4176650.44	0.13735	630150.63	4176650.44	0.20311
630500.63	4176650.44	0.32921	630850.63	4176650.44	0.52711
631200.63	4176650.44	0.67284	631550.63	4176650.44	0.69240
631900.63	4176650.44	0.59975	632250.63	4176650.44	0.55595
632600.63	4176650.44	0.45166	632950.63	4176650.44	0.35802
633300.63	4176650.44	0.30133	629800.63	4177000.44	0.13779
630150.63	4177000.44	0.19312	630500.63	4177000.44	0.27103
630850.63	4177000.44	0.35667	631200.63	4177000.44	0.43130

631550.63	4177000.44	0.43406	631900.63	4177000.44	0.40608
632250.63	4177000.44	0.36201	632600.63	4177000.44	0.32036
632950.63	4177000.44	0.26779	633300.63	4177000.44	0.22450
629800.63	4177350.44	0.13157	630150.63	4177350.44	0.16924
630500.63	4177350.44	0.21142	630850.63	4177350.44	0.25197
631200.63	4177350.44	0.29373	631550.63	4177350.44	0.29099
631900.63	4177350.44	0.28187	632250.63	4177350.44	0.24662
632600.63	4177350.44	0.23747	632950.63	4177350.44	0.20696
633300.63	4177350.44	0.18097	631670.70	4175493.59	7.93423
631669.80	4175641.41	32.02370	631665.32	4175796.39	5.57454
631417.17	4175826.85	10.06604	631417.17	4175673.66	8.78953
631422.55	4175484.63	1.94898	631268.42	4175983.74	2.81853
631275.69	4175523.99	1.91489	631345.65	4175419.50	1.73088
631384.72	4175441.30	1.78737	631491.93	4175442.21	1.67211
631491.93	4175414.95	1.51115	631385.63	4175413.14	1.48264
631358.37	4175395.87	1.55792	631409.25	4175336.81	1.55064
631567.35	4175235.96	1.11830	631756.33	4175028.80	0.85904
631807.22	4175003.36	0.85679	631867.18	4174987.91	0.88263
631849.92	4175988.28	2.03012	631268.74	4175963.75	2.92518
631269.05	4175943.76	3.02180	631269.37	4175923.77	3.10618
631269.68	4175903.78	3.17425	631270.00	4175883.79	3.22422
631270.32	4175863.81	3.25341	631270.63	4175843.82	3.26745

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	3.25653	631271.26	4175803.84	3.22919
631271.58	4175783.85	3.20237	631271.90	4175763.86	3.15693
631272.21	4175743.87	3.07404	631272.53	4175723.88	2.96609
631272.85	4175703.89	2.82393	631273.16	4175683.90	2.69635
631273.48	4175663.91	2.61315	631273.79	4175643.92	2.60475
631274.11	4175623.94	2.52289	631274.43	4175603.95	2.32406
631274.74	4175583.96	2.10917	631275.06	4175563.97	1.97642
631275.37	4175543.98	1.97407	631285.68	4175509.06	1.86760
631295.68	4175494.14	1.77988	631305.67	4175479.21	1.66827
631315.67	4175464.28	1.58238	631325.66	4175449.35	1.62242
631335.66	4175434.43	1.76037	631358.67	4175426.77	1.65041
631371.70	4175434.03	1.73375	631402.59	4175441.45	1.71734
631420.46	4175441.60	1.72093	631438.33	4175441.76	1.89086
631456.19	4175441.91	1.78013	631474.06	4175442.06	1.68420
631491.93	4175428.58	1.58035	631474.21	4175414.65	1.47337
631456.50	4175414.35	1.51805	631438.78	4175414.05	1.69155
631421.06	4175413.74	1.67495	631403.35	4175413.44	1.60213
631372.00	4175404.51	1.65033	631371.09	4175381.11	1.43386

631383.81	4175366.34	1.50951	631396.53	4175351.58	1.60191
631425.06	4175326.73	1.41344	631440.87	4175316.64	1.42675
631456.68	4175306.56	1.38918	631472.49	4175296.47	1.33130
631488.30	4175286.39	1.28586	631504.11	4175276.30	1.21873
631519.92	4175266.22	1.19796	631535.73	4175256.13	1.17652
631551.54	4175246.05	1.14843	631579.95	4175222.15	1.09980
631592.55	4175208.34	1.10068	631605.15	4175194.53	1.05210
631617.74	4175180.72	1.05834	631630.34	4175166.91	1.05107
631642.94	4175153.10	1.03882	631655.54	4175139.29	1.02371
631668.14	4175125.47	1.00306	631680.74	4175111.66	0.98264
631693.34	4175097.85	0.96177	631705.94	4175084.04	0.94028
631718.53	4175070.23	0.92106	631731.13	4175056.42	0.90023
631743.73	4175042.61	0.87960	631773.29	4175020.32	0.85966
631790.26	4175011.84	0.85864	631822.21	4174999.50	0.86444
631837.20	4174995.64	0.87086	631852.19	4174991.77	0.87658
631866.84	4175007.53	0.93995	631866.50	4175027.14	1.00291
631866.16	4175046.76	1.07309	631865.83	4175066.37	1.15034
631865.49	4175085.99	1.23576	631865.15	4175105.60	1.33053
631864.81	4175125.22	1.43475	631864.47	4175144.83	1.55037
631864.13	4175164.45	1.67800	631863.80	4175184.06	1.81874
631863.46	4175203.68	1.97422	631863.12	4175223.29	2.14470
631862.78	4175242.91	2.33187	631862.44	4175262.52	2.53780

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.77403	631861.77	4175301.75	3.22293
631861.43	4175321.37	5.11040	631861.09	4175340.98	6.36341
631860.75	4175360.60	8.29633	631860.41	4175380.21	8.26020
631860.07	4175399.83	9.17398	631859.73	4175419.44	9.14195
631859.40	4175439.06	9.62143	631859.06	4175458.67	10.31596
631858.72	4175478.29	10.62567	631858.38	4175497.90	11.51727
631858.04	4175517.52	12.71705	631857.70	4175537.13	14.16130
631857.37	4175556.75	15.75419	631857.03	4175576.36	17.75795
631856.69	4175595.98	23.38247	631856.35	4175615.59	28.52582
631856.01	4175635.21	32.04081	631855.67	4175654.82	32.72942
631855.33	4175674.44	30.36142	631855.00	4175694.05	26.67967
631854.66	4175713.67	22.23635	631854.32	4175733.28	18.83234
631853.98	4175752.90	15.09360	631853.64	4175772.51	11.48282
631853.30	4175792.13	9.14955	631852.97	4175811.74	7.26571
631852.63	4175831.36	5.56803	631852.29	4175850.97	4.50936
631851.95	4175870.59	3.74218	631851.61	4175890.20	3.21628
631851.27	4175909.82	2.85479	631850.94	4175929.43	2.57424
631850.60	4175949.05	2.35419	631850.26	4175968.66	2.17604

631830.54	4175988.13	2.06369	631811.15	4175987.98	2.10316
631791.77	4175987.83	2.14525	631772.39	4175987.67	2.19007
631753.00	4175987.52	2.24147	631733.62	4175987.37	2.31662
631714.24	4175987.22	2.54564	631694.85	4175987.07	2.60412
631675.47	4175986.92	2.54019	631656.09	4175986.77	2.41122
631636.70	4175986.62	2.23969	631617.32	4175986.46	2.50755
631597.94	4175986.31	2.63330	631578.55	4175986.16	2.73206
631559.17	4175986.01	3.05905	631539.79	4175985.86	3.22680
631520.40	4175985.71	3.31159	631501.02	4175985.56	3.37106
631481.64	4175985.40	3.43927	631462.25	4175985.25	3.48232
631442.87	4175985.10	3.50866	631423.49	4175984.95	3.52837
631404.10	4175984.80	3.52822	631384.72	4175984.65	3.51316
631365.34	4175984.50	3.46786	631345.95	4175984.35	3.38855
631326.57	4175984.19	3.27922	631307.19	4175984.04	3.14225
631287.80	4175983.89	2.98488			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.15348	632304.44	4174354.52	0.30346
632192.15	4174956.32	1.09613	632420.62	4175510.15	2.44050
632418.97	4175552.92	2.43785	631187.00	4175727.00	2.05332
631166.00	4175729.00	1.86215	631121.00	4175719.00	1.50774
631035.00	4174830.00	0.30461	631106.00	4174825.00	0.32876
631937.00	4174528.00	0.37227	631322.00	4174522.00	0.23271
629800.63	4173850.44	0.05614	630150.63	4173850.44	0.06616
630500.63	4173850.44	0.07926	630850.63	4173850.44	0.09383
631200.63	4173850.44	0.10060	631550.63	4173850.44	0.10557
631900.63	4173850.44	0.12847	632250.63	4173850.44	0.14135
632600.63	4173850.44	0.15045	632950.63	4173850.44	0.15068
633300.63	4173850.44	0.13686	629800.63	4174200.44	0.06671
630150.63	4174200.44	0.08000	630500.63	4174200.44	0.09982
630850.63	4174200.44	0.12681	631200.63	4174200.44	0.14726
631550.63	4174200.44	0.15791	631900.63	4174200.44	0.20390
632250.63	4174200.44	0.22903	632600.63	4174200.44	0.23649
632950.63	4174200.44	0.20778	633300.63	4174200.44	0.17841
629800.63	4174550.44	0.08076	630150.63	4174550.44	0.10020
630500.63	4174550.44	0.13012	630850.63	4174550.44	0.17849
631200.63	4174550.44	0.23506	631550.63	4174550.44	0.26585
631900.63	4174550.44	0.38137	632250.63	4174550.44	0.44439
632600.63	4174550.44	0.38262	632950.63	4174550.44	0.30028
633300.63	4174550.44	0.25798	629800.63	4174900.44	0.09620
630150.63	4174900.44	0.12722	630500.63	4174900.44	0.17888
630850.63	4174900.44	0.26787	631200.63	4174900.44	0.41410

631550.63	4174900.44	0.53737	631900.63	4174900.44	0.94503
632250.63	4174900.44	0.92523	632600.63	4174900.44	0.65626
632950.63	4174900.44	0.49644	633300.63	4174900.44	0.40598
629800.63	4175250.44	0.10803	630150.63	4175250.44	0.15101
630500.63	4175250.44	0.23525	630850.63	4175250.44	0.43060
631200.63	4175250.44	0.88800	631550.63	4175250.44	1.85762
631900.63	4175250.44	3.30208	632250.63	4175250.44	2.11047
632600.63	4175250.44	1.27812	632950.63	4175250.44	0.82477
633300.63	4175250.44	0.60584	629800.63	4175600.44	0.11558
630150.63	4175600.44	0.16604	630500.63	4175600.44	0.26768
630850.63	4175600.44	0.54160	631200.63	4175600.44	1.89970
631550.63	4175600.44	0.00000	631900.63	4175600.44	16.46639
632250.63	4175600.44	3.92045	632600.63	4175600.44	1.65587
632950.63	4175600.44	1.02275	633300.63	4175600.44	0.71205
629800.63	4175950.44	0.11908	630150.63	4175950.44	0.17508

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.30425	630850.63	4175950.44	0.70688
631200.63	4175950.44	1.99197	631550.63	4175950.44	2.29468
631900.63	4175950.44	1.76517	632250.63	4175950.44	1.64146
632600.63	4175950.44	1.13376	632950.63	4175950.44	0.77639
633300.63	4175950.44	0.58047	629800.63	4176300.44	0.12954
630150.63	4176300.44	0.19850	630500.63	4176300.44	0.34548
630850.63	4176300.44	0.67100	631200.63	4176300.44	0.99358
631550.63	4176300.44	0.98970	631900.63	4176300.44	0.83170
632250.63	4176300.44	0.78173	632600.63	4176300.44	0.61340
632950.63	4176300.44	0.48675	633300.63	4176300.44	0.39445
629800.63	4176650.44	0.13859	630150.63	4176650.44	0.20229
630500.63	4176650.44	0.31796	630850.63	4176650.44	0.47204
631200.63	4176650.44	0.58333	631550.63	4176650.44	0.59508
631900.63	4176650.44	0.53312	632250.63	4176650.44	0.50294
632600.63	4176650.44	0.41272	632950.63	4176650.44	0.32924
633300.63	4176650.44	0.27348	629800.63	4177000.44	0.13669
630150.63	4177000.44	0.18788	630500.63	4177000.44	0.25430
630850.63	4177000.44	0.32313	631200.63	4177000.44	0.38760
631550.63	4177000.44	0.38579	631900.63	4177000.44	0.36822
632250.63	4177000.44	0.32418	632600.63	4177000.44	0.29828
632950.63	4177000.44	0.24890	633300.63	4177000.44	0.21102
629800.63	4177350.44	0.12863	630150.63	4177350.44	0.16180
630500.63	4177350.44	0.19800	630850.63	4177350.44	0.23222
631200.63	4177350.44	0.26838	631550.63	4177350.44	0.26444
631900.63	4177350.44	0.25852	632250.63	4177350.44	0.22674

632600.63	4177350.44	0.21861	632950.63	4177350.44	0.19493
633300.63	4177350.44	0.17037	631670.70	4175493.59	14.85981
631669.80	4175641.41	34.40100	631665.32	4175796.39	3.03780
631417.17	4175826.85	3.99841	631417.17	4175673.66	11.06409
631422.55	4175484.63	5.41828	631268.42	4175983.74	2.12343
631275.69	4175523.99	2.62313	631345.65	4175419.50	2.66199
631384.72	4175441.30	3.50264	631491.93	4175442.21	4.24929
631491.93	4175414.95	3.39373	631385.63	4175413.14	2.75487
631358.37	4175395.87	2.45717	631409.25	4175336.81	2.38751
631567.35	4175235.96	1.74489	631756.33	4175028.80	1.22208
631807.22	4175003.36	1.20532	631867.18	4174987.91	1.23029
631849.92	4175988.28	1.62235	631268.74	4175963.75	2.23936
631269.05	4175943.76	2.35937	631269.37	4175923.77	2.48072
631269.68	4175903.78	2.59818	631270.00	4175883.79	2.71324
631270.32	4175863.81	2.81976	631270.63	4175843.82	2.91657

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	3.00370	631271.26	4175803.84	3.07962
631271.58	4175783.85	3.14755	631271.90	4175763.86	3.18564
631272.21	4175743.87	3.21941	631272.53	4175723.88	3.25085
631272.85	4175703.89	3.19971	631273.16	4175683.90	3.11947
631273.48	4175663.91	3.09743	631273.79	4175643.92	3.07375
631274.11	4175623.94	3.04392	631274.43	4175603.95	2.92187
631274.74	4175583.96	2.80204	631275.06	4175563.97	2.74317
631275.37	4175543.98	2.70497	631285.68	4175509.06	2.67091
631295.68	4175494.14	2.64581	631305.67	4175479.21	2.58348
631315.67	4175464.28	2.52216	631325.66	4175449.35	2.56510
631335.66	4175434.43	2.63146	631358.67	4175426.77	2.75354
631371.70	4175434.03	3.20471	631402.59	4175441.45	3.54880
631420.46	4175441.60	3.89324	631438.33	4175441.76	4.16560
631456.19	4175441.91	4.35660	631474.06	4175442.06	4.10286
631491.93	4175428.58	3.79333	631474.21	4175414.65	3.31687
631456.50	4175414.35	3.45325	631438.78	4175414.05	3.52976
631421.06	4175413.74	3.19442	631403.35	4175413.44	3.25611
631372.00	4175404.51	2.69138	631371.09	4175381.11	2.25008
631383.81	4175366.34	2.26955	631396.53	4175351.58	2.41037
631425.06	4175326.73	2.41648	631440.87	4175316.64	2.38542
631456.68	4175306.56	2.25798	631472.49	4175296.47	2.15228
631488.30	4175286.39	2.06451	631504.11	4175276.30	1.95865
631519.92	4175266.22	1.88707	631535.73	4175256.13	1.79537
631551.54	4175246.05	1.78254	631579.95	4175222.15	1.74818
631592.55	4175208.34	1.71032	631605.15	4175194.53	1.65361

631617.74	4175180.72	1.66192	631630.34	4175166.91	1.59721
631642.94	4175153.10	1.57505	631655.54	4175139.29	1.54145
631668.14	4175125.47	1.50063	631680.74	4175111.66	1.45801
631693.34	4175097.85	1.41771	631705.94	4175084.04	1.37739
631718.53	4175070.23	1.33776	631731.13	4175056.42	1.29857
631743.73	4175042.61	1.25949	631773.29	4175020.32	1.21943
631790.26	4175011.84	1.21327	631822.21	4174999.50	1.21346
631837.20	4174995.64	1.22059	631852.19	4174991.77	1.22646
631866.84	4175007.53	1.32245	631866.50	4175027.14	1.42368
631866.16	4175046.76	1.53502	631865.83	4175066.37	1.65792
631865.49	4175085.99	1.79314	631865.15	4175105.60	1.94141
631864.81	4175125.22	2.10408	631864.47	4175144.83	2.28117
631864.13	4175164.45	2.47327	631863.80	4175184.06	2.67936
631863.46	4175203.68	2.90213	631863.12	4175223.29	3.13885
631862.78	4175242.91	3.38974	631862.44	4175262.52	3.66003

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	3.95540	631861.77	4175301.75	4.30216
631861.43	4175321.37	4.51705	631861.09	4175340.98	5.63401
631860.75	4175360.60	7.40643	631860.41	4175380.21	8.95772
631860.07	4175399.83	10.25360	631859.73	4175419.44	10.00483
631859.40	4175439.06	14.01117	631859.06	4175458.67	16.47279
631858.72	4175478.29	16.69720	631858.38	4175497.90	17.88264
631858.04	4175517.52	18.84490	631857.70	4175537.13	19.70016
631857.37	4175556.75	25.79135	631857.03	4175576.36	27.52499
631856.69	4175595.98	26.58801	631856.35	4175615.59	22.91834
631856.01	4175635.21	18.69294	631855.67	4175654.82	16.04747
631855.33	4175674.44	14.06154	631855.00	4175694.05	12.45297
631854.66	4175713.67	11.04218	631854.32	4175733.28	9.64826
631853.98	4175752.90	8.51648	631853.64	4175772.51	6.08146
631853.30	4175792.13	5.77722	631852.97	4175811.74	5.18160
631852.63	4175831.36	4.07018	631852.29	4175850.97	3.33363
631851.95	4175870.59	2.76453	631851.61	4175890.20	2.25864
631851.27	4175909.82	2.12912	631850.94	4175929.43	1.96878
631850.60	4175949.05	1.83676	631850.26	4175968.66	1.72224
631830.54	4175988.13	1.63654	631811.15	4175987.98	1.64848
631791.77	4175987.83	1.65880	631772.39	4175987.67	1.66931
631753.00	4175987.52	1.68253	631733.62	4175987.37	1.70986
631714.24	4175987.22	1.89078	631694.85	4175987.07	2.10938
631675.47	4175986.92	2.20859	631656.09	4175986.77	2.10312
631636.70	4175986.62	2.05481	631617.32	4175986.46	2.10811
631597.94	4175986.31	2.13488	631578.55	4175986.16	2.06623

631559.17	4175986.01	2.11346	631539.79	4175985.86	2.14498
631520.40	4175985.71	2.16484	631501.02	4175985.56	2.18412
631481.64	4175985.40	2.20456	631462.25	4175985.25	2.21865
631442.87	4175985.10	2.22820	631423.49	4175984.95	2.22855
631404.10	4175984.80	2.22754	631384.72	4175984.65	2.23200
631365.34	4175984.50	2.23621	631345.95	4175984.35	2.23478
631326.57	4175984.19	2.22302	631307.19	4175984.04	2.20126
631287.80	4175983.89	2.16781			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.41370	632304.44	4174354.52	0.35809
632192.15	4174956.32	1.31786	632420.62	4175510.15	2.38111
632418.97	4175552.92	2.34831	631187.00	4175727.00	1.99891
631166.00	4175729.00	1.83943	631121.00	4175719.00	1.54660
631035.00	4174830.00	0.35621	631106.00	4174825.00	0.38900
631937.00	4174528.00	0.45505	631322.00	4174522.00	0.27291
629800.63	4173850.44	0.05882	630150.63	4173850.44	0.06962
630500.63	4173850.44	0.08429	630850.63	4173850.44	0.10138
631200.63	4173850.44	0.11052	631550.63	4173850.44	0.11647
631900.63	4173850.44	0.14271	632250.63	4173850.44	0.15790
632600.63	4173850.44	0.16849	632950.63	4173850.44	0.16455
633300.63	4173850.44	0.14649	629800.63	4174200.44	0.07036
630150.63	4174200.44	0.08494	630500.63	4174200.44	0.10697
630850.63	4174200.44	0.13868	631200.63	4174200.44	0.16545
631550.63	4174200.44	0.17929	631900.63	4174200.44	0.23400
632250.63	4174200.44	0.26638	632600.63	4174200.44	0.26695
632950.63	4174200.44	0.22672	633300.63	4174200.44	0.19544
629800.63	4174550.44	0.08521	630150.63	4174550.44	0.10729
630500.63	4174550.44	0.14146	630850.63	4174550.44	0.19833
631200.63	4174550.44	0.27291	631550.63	4174550.44	0.31790
631900.63	4174550.44	0.46738	632250.63	4174550.44	0.53506
632600.63	4174550.44	0.42989	632950.63	4174550.44	0.33891
633300.63	4174550.44	0.29182	629800.63	4174900.44	0.10003
630150.63	4174900.44	0.13484	630500.63	4174900.44	0.19548
630850.63	4174900.44	0.30674	631200.63	4174900.44	0.50872
631550.63	4174900.44	0.71556	631900.63	4174900.44	1.30458
632250.63	4174900.44	1.09798	632600.63	4174900.44	0.77298
632950.63	4174900.44	0.57645	633300.63	4174900.44	0.46156
629800.63	4175250.44	0.11094	630150.63	4175250.44	0.15645
630500.63	4175250.44	0.24654	630850.63	4175250.44	0.48079
631200.63	4175250.44	1.18922	631550.63	4175250.44	3.37420
631900.63	4175250.44	4.39592	632250.63	4175250.44	2.77036

632600.63	4175250.44	1.46076	632950.63	4175250.44	0.91508
633300.63	4175250.44	0.65585	629800.63	4175600.44	0.11643
630150.63	4175600.44	0.16799	630500.63	4175600.44	0.27415
630850.63	4175600.44	0.57846	631200.63	4175600.44	2.04635
631550.63	4175600.44	9.64737	631900.63	4175600.44	11.82543
632250.63	4175600.44	3.50935	632600.63	4175600.44	1.59148
632950.63	4175600.44	0.99135	633300.63	4175600.44	0.69606
629800.63	4175950.44	0.12096	630150.63	4175950.44	0.18101

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.32238	630850.63	4175950.44	0.71436
631200.63	4175950.44	1.62103	631550.63	4175950.44	1.71455
631900.63	4175950.44	1.42940	632250.63	4175950.44	1.21989
632600.63	4175950.44	0.96412	632950.63	4175950.44	0.68056
633300.63	4175950.44	0.52223	629800.63	4176300.44	0.13341
630150.63	4176300.44	0.20271	630500.63	4176300.44	0.34387
630850.63	4176300.44	0.61939	631200.63	4176300.44	0.82543
631550.63	4176300.44	0.82872	631900.63	4176300.44	0.71193
632250.63	4176300.44	0.69130	632600.63	4176300.44	0.54880
632950.63	4176300.44	0.42892	633300.63	4176300.44	0.35440
629800.63	4176650.44	0.13887	630150.63	4176650.44	0.20046
630500.63	4176650.44	0.30365	630850.63	4176650.44	0.42613
631200.63	4176650.44	0.51836	631550.63	4176650.44	0.52218
631900.63	4176650.44	0.48433	632250.63	4176650.44	0.45504
632600.63	4176650.44	0.37732	632950.63	4176650.44	0.30628
633300.63	4176650.44	0.25108	629800.63	4177000.44	0.13518
630150.63	4177000.44	0.18162	630500.63	4177000.44	0.23849
630850.63	4177000.44	0.29489	631200.63	4177000.44	0.35240
631550.63	4177000.44	0.34724	631900.63	4177000.44	0.33645
632250.63	4177000.44	0.29277	632600.63	4177000.44	0.27780
632950.63	4177000.44	0.23188	633300.63	4177000.44	0.19894
629800.63	4177350.44	0.12521	630150.63	4177350.44	0.15440
630500.63	4177350.44	0.18581	630850.63	4177350.44	0.21534
631200.63	4177350.44	0.24655	631550.63	4177350.44	0.24214
631900.63	4177350.44	0.23847	632250.63	4177350.44	0.21057
632600.63	4177350.44	0.20143	632950.63	4177350.44	0.18419
633300.63	4177350.44	0.16062	631670.70	4175493.59	44.35984
631669.80	4175641.41	6.94811	631665.32	4175796.39	2.33846
631417.17	4175826.85	1.41612	631417.17	4175673.66	2.62069
631422.55	4175484.63	10.29866	631268.42	4175983.74	1.58932
631275.69	4175523.99	2.92518	631345.65	4175419.50	4.06122
631384.72	4175441.30	5.94834	631491.93	4175442.21	16.93631

631491.93	4175414.95	11.63540	631385.63	4175413.14	5.05691
631358.37	4175395.87	3.92926	631409.25	4175336.81	4.05110
631567.35	4175235.96	3.08027	631756.33	4175028.80	1.83262
631807.22	4175003.36	1.77184	631867.18	4174987.91	1.76364
631849.92	4175988.28	1.30829	631268.74	4175963.75	1.67288
631269.05	4175943.76	1.76293	631269.37	4175923.77	1.85933
631269.68	4175903.78	1.96198	631270.00	4175883.79	2.07100
631270.32	4175863.81	2.18334	631270.63	4175843.82	2.29796

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.41341	631271.26	4175803.84	2.53379
631271.58	4175783.85	2.65682	631271.90	4175763.86	2.74219
631272.21	4175743.87	2.82980	631272.53	4175723.88	2.98596
631272.85	4175703.89	2.95146	631273.16	4175683.90	2.74017
631273.48	4175663.91	2.86523	631273.79	4175643.92	3.03936
631274.11	4175623.94	3.09180	631274.43	4175603.95	2.98856
631274.74	4175583.96	2.85362	631275.06	4175563.97	2.89386
631275.37	4175543.98	2.92344	631285.68	4175509.06	3.11225
631295.68	4175494.14	3.25330	631305.67	4175479.21	3.37836
631315.67	4175464.28	3.57909	631325.66	4175449.35	3.74157
631335.66	4175434.43	3.88505	631358.67	4175426.77	4.47543
631371.70	4175434.03	5.13717	631402.59	4175441.45	6.83002
631420.46	4175441.60	8.58031	631438.33	4175441.76	9.98101
631456.19	4175441.91	13.41390	631474.06	4175442.06	14.50938
631491.93	4175428.58	13.92372	631474.21	4175414.65	11.25492
631456.50	4175414.35	9.73199	631438.78	4175414.05	8.87823
631421.06	4175413.74	6.88990	631403.35	4175413.44	6.36079
631372.00	4175404.51	4.47168	631371.09	4175381.11	3.87720
631383.81	4175366.34	3.90908	631396.53	4175351.58	4.03447
631425.06	4175326.73	4.23513	631440.87	4175316.64	4.30254
631456.68	4175306.56	4.17396	631472.49	4175296.47	3.94777
631488.30	4175286.39	3.88990	631504.11	4175276.30	3.63630
631519.92	4175266.22	3.42300	631535.73	4175256.13	3.34938
631551.54	4175246.05	3.24506	631579.95	4175222.15	3.01768
631592.55	4175208.34	2.87557	631605.15	4175194.53	2.77277
631617.74	4175180.72	2.76713	631630.34	4175166.91	2.63195
631642.94	4175153.10	2.59033	631655.54	4175139.29	2.50482
631668.14	4175125.47	2.41702	631680.74	4175111.66	2.32678
631693.34	4175097.85	2.23767	631705.94	4175084.04	2.15229
631718.53	4175070.23	2.06853	631731.13	4175056.42	1.98590
631743.73	4175042.61	1.90887	631773.29	4175020.32	1.81627
631790.26	4175011.84	1.79555	631822.21	4174999.50	1.77477

631837.20	4174995.64	1.77474	631852.19	4174991.77	1.77060
631866.84	4175007.53	1.90435	631866.50	4175027.14	2.05848
631866.16	4175046.76	2.22537	631865.83	4175066.37	2.40587
631865.49	4175085.99	2.59940	631865.15	4175105.60	2.80709
631864.81	4175125.22	3.02757	631864.47	4175144.83	3.25955
631864.13	4175164.45	3.50446	631863.80	4175184.06	3.76011
631863.46	4175203.68	4.02998	631863.12	4175223.29	4.31568
631862.78	4175242.91	4.62429	631862.44	4175262.52	4.96936

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	5.38192	631861.77	4175301.75	5.87714
631861.43	4175321.37	6.23070	631861.09	4175340.98	6.98902
631860.75	4175360.60	7.99946	631860.41	4175380.21	9.61223
631860.07	4175399.83	11.24912	631859.73	4175419.44	13.31765
631859.40	4175439.06	16.51266	631859.06	4175458.67	18.45750
631858.72	4175478.29	20.84353	631858.38	4175497.90	24.24605
631858.04	4175517.52	27.58204	631857.70	4175537.13	29.35119
631857.37	4175556.75	27.90446	631857.03	4175576.36	21.21219
631856.69	4175595.98	14.18064	631856.35	4175615.59	10.69873
631856.01	4175635.21	9.26997	631855.67	4175654.82	8.06671
631855.33	4175674.44	6.97976	631855.00	4175694.05	6.09801
631854.66	4175713.67	5.43820	631854.32	4175733.28	4.92378
631853.98	4175752.90	4.61862	631853.64	4175772.51	4.31105
631853.30	4175792.13	4.03954	631852.97	4175811.74	3.78703
631852.63	4175831.36	3.58459	631852.29	4175850.97	3.11138
631851.95	4175870.59	3.00965	631851.61	4175890.20	2.08758
631851.27	4175909.82	1.83600	631850.94	4175929.43	1.59676
631850.60	4175949.05	1.48054	631850.26	4175968.66	1.38795
631830.54	4175988.13	1.30662	631811.15	4175987.98	1.30290
631791.77	4175987.83	1.30391	631772.39	4175987.67	1.31121
631753.00	4175987.52	1.32363	631733.62	4175987.37	1.34982
631714.24	4175987.22	1.40973	631694.85	4175987.07	1.59383
631675.47	4175986.92	1.78193	631656.09	4175986.77	1.73327
631636.70	4175986.62	1.71565	631617.32	4175986.46	1.74771
631597.94	4175986.31	1.74392	631578.55	4175986.16	1.67095
631559.17	4175986.01	1.62405	631539.79	4175985.86	1.60406
631520.40	4175985.71	1.58327	631501.02	4175985.56	1.59566
631481.64	4175985.40	1.61437	631462.25	4175985.25	1.62596
631442.87	4175985.10	1.63351	631423.49	4175984.95	1.63417
631404.10	4175984.80	1.62717	631384.72	4175984.65	1.61856
631365.34	4175984.50	1.61267	631345.95	4175984.35	1.60959
631326.57	4175984.19	1.60815	631307.19	4175984.04	1.60468

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.77006	632304.44	4174354.52	0.42420
632192.15	4174956.32	1.65025	632420.62	4175510.15	2.22913
632418.97	4175552.92	2.12567	631187.00	4175727.00	1.89680
631166.00	4175729.00	1.77624	631121.00	4175719.00	1.54522
631035.00	4174830.00	0.42488	631106.00	4174825.00	0.47217
631937.00	4174528.00	0.57042	631322.00	4174522.00	0.33015
629800.63	4173850.44	0.06176	630150.63	4173850.44	0.07342
630500.63	4173850.44	0.08984	630850.63	4173850.44	0.11022
631200.63	4173850.44	0.12250	631550.63	4173850.44	0.12958
631900.63	4173850.44	0.16008	632250.63	4173850.44	0.17814
632600.63	4173850.44	0.18956	632950.63	4173850.44	0.17949
633300.63	4173850.44	0.15745	629800.63	4174200.44	0.07431
630150.63	4174200.44	0.09048	630500.63	4174200.44	0.11512
630850.63	4174200.44	0.15309	631200.63	4174200.44	0.18941
631550.63	4174200.44	0.20661	631900.63	4174200.44	0.27320
632250.63	4174200.44	0.31301	632600.63	4174200.44	0.30091
632950.63	4174200.44	0.24929	633300.63	4174200.44	0.21637
629800.63	4174550.44	0.08971	630150.63	4174550.44	0.11493
630500.63	4174550.44	0.15441	630850.63	4174550.44	0.22344
631200.63	4174550.44	0.32719	631550.63	4174550.44	0.39104
631900.63	4174550.44	0.58895	632250.63	4174550.44	0.64314
632600.63	4174550.44	0.49042	632950.63	4174550.44	0.38863
633300.63	4174550.44	0.33213	629800.63	4174900.44	0.10342
630150.63	4174900.44	0.14188	630500.63	4174900.44	0.21175
630850.63	4174900.44	0.35169	631200.63	4174900.44	0.64635
631550.63	4174900.44	1.01164	631900.63	4174900.44	1.82716
632250.63	4174900.44	1.34934	632600.63	4174900.44	0.92933
632950.63	4174900.44	0.67011	633300.63	4174900.44	0.51998
629800.63	4175250.44	0.11340	630150.63	4175250.44	0.16138
630500.63	4175250.44	0.25724	630850.63	4175250.44	0.50943
631200.63	4175250.44	1.49233	631550.63	4175250.44	7.80378
631900.63	4175250.44	7.12049	632250.63	4175250.44	3.47087
632600.63	4175250.44	1.60076	632950.63	4175250.44	0.98661
633300.63	4175250.44	0.69322	629800.63	4175600.44	0.11732
630150.63	4175600.44	0.17008	630500.63	4175600.44	0.28237
630850.63	4175600.44	0.61858	631200.63	4175600.44	2.08985
631550.63	4175600.44	3.54181	631900.63	4175600.44	3.47345
632250.63	4175600.44	2.63965	632600.63	4175600.44	1.43987
632950.63	4175600.44	0.92052	633300.63	4175600.44	0.65961

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.33998	630850.63	4175950.44	0.71695
631200.63	4175950.44	1.31927	631550.63	4175950.44	1.34199
631900.63	4175950.44	1.15852	632250.63	4175950.44	0.97316
632600.63	4175950.44	0.79804	632950.63	4175950.44	0.59541
633300.63	4175950.44	0.46648	629800.63	4176300.44	0.13650
630150.63	4176300.44	0.20498	630500.63	4176300.44	0.34236
630850.63	4176300.44	0.57032	631200.63	4176300.44	0.71027
631550.63	4176300.44	0.71078	631900.63	4176300.44	0.62145
632250.63	4176300.44	0.61686	632600.63	4176300.44	0.49783
632950.63	4176300.44	0.38161	633300.63	4176300.44	0.31873
629800.63	4176650.44	0.13852	630150.63	4176650.44	0.19789
630500.63	4176650.44	0.28877	630850.63	4176650.44	0.38816
631200.63	4176650.44	0.46954	631550.63	4176650.44	0.46466
631900.63	4176650.44	0.44370	632250.63	4176650.44	0.40791
632600.63	4176650.44	0.34702	632950.63	4176650.44	0.28448
633300.63	4176650.44	0.23340	629800.63	4177000.44	0.13319
630150.63	4177000.44	0.17482	630500.63	4177000.44	0.22404
630850.63	4177000.44	0.27091	631200.63	4177000.44	0.32306
631550.63	4177000.44	0.31531	631900.63	4177000.44	0.30893
632250.63	4177000.44	0.26633	632600.63	4177000.44	0.25743
632950.63	4177000.44	0.21671	633300.63	4177000.44	0.18744
629800.63	4177350.44	0.12146	630150.63	4177350.44	0.14722
630500.63	4177350.44	0.17464	630850.63	4177350.44	0.20074
631200.63	4177350.44	0.22752	631550.63	4177350.44	0.22299
631900.63	4177350.44	0.22111	632250.63	4177350.44	0.19703
632600.63	4177350.44	0.18539	632950.63	4177350.44	0.17394
633300.63	4177350.44	0.15180	631670.70	4175493.59	8.77615
631669.80	4175641.41	4.92304	631665.32	4175796.39	2.00727
631417.17	4175826.85	1.06416	631417.17	4175673.66	1.55472
631422.55	4175484.63	3.31879	631268.42	4175983.74	1.25328
631275.69	4175523.99	2.99943	631345.65	4175419.50	4.47816
631384.72	4175441.30	4.24377	631491.93	4175442.21	8.46726
631491.93	4175414.95	14.86206	631385.63	4175413.14	5.16974
631358.37	4175395.87	4.66776	631409.25	4175336.81	6.76323
631567.35	4175235.96	7.26393	631756.33	4175028.80	2.91613
631807.22	4175003.36	2.69779	631867.18	4174987.91	2.54492
631849.92	4175988.28	1.03903	631268.74	4175963.75	1.31109
631269.05	4175943.76	1.37339	631269.37	4175923.77	1.44104
631269.68	4175903.78	1.51282	631270.00	4175883.79	1.58850

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.85467	631271.26	4175803.84	1.97476
631271.58	4175783.85	2.09880	631271.90	4175763.86	2.05225
631272.21	4175743.87	2.34279	631272.53	4175723.88	2.50271
631272.85	4175703.89	2.64633	631273.16	4175683.90	1.93093
631273.48	4175663.91	2.14662	631273.79	4175643.92	2.45253
631274.11	4175623.94	2.73766	631274.43	4175603.95	2.94200
631274.74	4175583.96	2.23468	631275.06	4175563.97	2.53608
631275.37	4175543.98	2.78348	631285.68	4175509.06	3.17210
631295.68	4175494.14	3.28579	631305.67	4175479.21	2.91259
631315.67	4175464.28	3.27139	631325.66	4175449.35	3.64108
631335.66	4175434.43	4.05604	631358.67	4175426.77	4.77886
631371.70	4175434.03	4.58931	631402.59	4175441.45	4.76920
631420.46	4175441.60	5.31340	631438.33	4175441.76	6.35191
631456.19	4175441.91	7.22867	631474.06	4175442.06	6.53331
631491.93	4175428.58	11.16415	631474.21	4175414.65	11.16250
631456.50	4175414.35	10.89674	631438.78	4175414.05	8.63514
631421.06	4175413.74	7.15458	631403.35	4175413.44	5.98843
631372.00	4175404.51	4.89804	631371.09	4175381.11	5.04933
631383.81	4175366.34	5.67221	631396.53	4175351.58	6.26642
631425.06	4175326.73	7.58185	631440.87	4175316.64	8.43385
631456.68	4175306.56	8.99553	631472.49	4175296.47	9.21818
631488.30	4175286.39	9.39498	631504.11	4175276.30	8.95040
631519.92	4175266.22	8.28116	631535.73	4175256.13	7.88169
631551.54	4175246.05	7.46544	631579.95	4175222.15	6.67832
631592.55	4175208.34	6.21543	631605.15	4175194.53	5.77172
631617.74	4175180.72	5.40804	631630.34	4175166.91	5.09112
631642.94	4175153.10	4.84802	631655.54	4175139.29	4.60944
631668.14	4175125.47	4.35989	631680.74	4175111.66	4.11533
631693.34	4175097.85	3.88122	631705.94	4175084.04	3.66207
631718.53	4175070.23	3.45655	631731.13	4175056.42	3.26389
631743.73	4175042.61	3.08310	631773.29	4175020.32	2.84879
631790.26	4175011.84	2.77589	631822.21	4174999.50	2.66873
631837.20	4174995.64	2.63320	631852.19	4174991.77	2.59115
631866.84	4175007.53	2.74682	631866.50	4175027.14	2.96038
631866.16	4175046.76	3.18786	631865.83	4175066.37	3.42753
631865.49	4175085.99	3.67863	631865.15	4175105.60	3.94499
631864.81	4175125.22	4.22718	631864.47	4175144.83	4.53140
631864.13	4175164.45	4.86611	631863.80	4175184.06	5.25473
631863.46	4175203.68	5.72663	631863.12	4175223.29	6.32169

631862.78 4175242.91 7.09525 631862.44 4175262.52 8.11407

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	9.42010	631861.77	4175301.75	10.98196
631861.43	4175321.37	12.67787	631861.09	4175340.98	14.36354
631860.75	4175360.60	15.80337	631860.41	4175380.21	16.81296
631860.07	4175399.83	17.32053	631859.73	4175419.44	17.54030
631859.40	4175439.06	16.38301	631859.06	4175458.67	13.91292
631858.72	4175478.29	10.50345	631858.38	4175497.90	7.44981
631858.04	4175517.52	5.21955	631857.70	4175537.13	4.08005
631857.37	4175556.75	3.49524	631857.03	4175576.36	3.24885
631856.69	4175595.98	3.15868	631856.35	4175615.59	3.16032
631856.01	4175635.21	3.20501	631855.67	4175654.82	3.24310
631855.33	4175674.44	3.23964	631855.00	4175694.05	3.19879
631854.66	4175713.67	3.13150	631854.32	4175733.28	3.05565
631853.98	4175752.90	2.96277	631853.64	4175772.51	2.86389
631853.30	4175792.13	2.75839	631852.97	4175811.74	2.65331
631852.63	4175831.36	2.53138	631852.29	4175850.97	2.44444
631851.95	4175870.59	2.32953	631851.61	4175890.20	2.11757
631851.27	4175909.82	1.75291	631850.94	4175929.43	1.29911
631850.60	4175949.05	1.17633	631850.26	4175968.66	1.10136
631830.54	4175988.13	1.03540	631811.15	4175987.98	1.03933
631791.77	4175987.83	1.04965	631772.39	4175987.67	1.06988
631753.00	4175987.52	1.09340	631733.62	4175987.37	1.12418
631714.24	4175987.22	1.15155	631694.85	4175987.07	1.23389
631675.47	4175986.92	1.37319	631656.09	4175986.77	1.36441
631636.70	4175986.62	1.39220	631617.32	4175986.46	1.43470
631597.94	4175986.31	1.41645	631578.55	4175986.16	1.35186
631559.17	4175986.01	1.28773	631539.79	4175985.86	1.25744
631520.40	4175985.71	1.24479	631501.02	4175985.56	1.24307
631481.64	4175985.40	1.26476	631462.25	4175985.25	1.28255
631442.87	4175985.10	1.29686	631423.49	4175984.95	1.30435
631404.10	4175984.80	1.30378	631384.72	4175984.65	1.29308
631365.34	4175984.50	1.28112	631345.95	4175984.35	1.27092
631326.57	4175984.19	1.26170	631307.19	4175984.04	1.25727
631287.80	4175983.89	1.25571			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.75711	632304.44	4174354.52	0.23806
632192.15	4174956.32	0.71641	632420.62	4175510.15	1.73510
632418.97	4175552.92	1.83851	631187.00	4175727.00	2.95922
631166.00	4175729.00	2.64166	631121.00	4175719.00	2.00884
631035.00	4174830.00	0.28229	631106.00	4174825.00	0.30000
631937.00	4174528.00	0.28903	631322.00	4174522.00	0.19715
629800.63	4173850.44	0.05530	630150.63	4173850.44	0.06491
630500.63	4173850.44	0.07648	630850.63	4173850.44	0.08751
631200.63	4173850.44	0.09045	631550.63	4173850.44	0.09737
631900.63	4173850.44	0.11526	632250.63	4173850.44	0.12515
632600.63	4173850.44	0.13375	632950.63	4173850.44	0.13539
633300.63	4173850.44	0.12495	629800.63	4174200.44	0.06540
630150.63	4174200.44	0.07822	630500.63	4174200.44	0.09601
630850.63	4174200.44	0.11729	631200.63	4174200.44	0.12811
631550.63	4174200.44	0.14074	631900.63	4174200.44	0.17140
632250.63	4174200.44	0.18878	632600.63	4174200.44	0.19722
632950.63	4174200.44	0.18107	633300.63	4174200.44	0.15944
629800.63	4174550.44	0.07930	630150.63	4174550.44	0.09721
630500.63	4174550.44	0.12429	630850.63	4174550.44	0.16577
631200.63	4174550.44	0.20246	631550.63	4174550.44	0.23246
631900.63	4174550.44	0.29737	632250.63	4174550.44	0.32461
632600.63	4174550.44	0.29432	632950.63	4174550.44	0.24992
633300.63	4174550.44	0.22318	629800.63	4174900.44	0.09640
630150.63	4174900.44	0.12489	630500.63	4174900.44	0.16891
630850.63	4174900.44	0.25019	631200.63	4174900.44	0.37174
631550.63	4174900.44	0.48126	631900.63	4174900.44	0.68227
632250.63	4174900.44	0.60987	632600.63	4174900.44	0.46549
632950.63	4174900.44	0.39599	633300.63	4174900.44	0.34393
629800.63	4175250.44	0.11135	630150.63	4175250.44	0.15542
630500.63	4175250.44	0.23666	630850.63	4175250.44	0.41696
631200.63	4175250.44	0.81240	631550.63	4175250.44	1.47504
631900.63	4175250.44	2.15547	632250.63	4175250.44	1.26496
632600.63	4175250.44	0.88849	632950.63	4175250.44	0.67304
633300.63	4175250.44	0.52295	629800.63	4175600.44	0.12197
630150.63	4175600.44	0.17733	630500.63	4175600.44	0.29104
630850.63	4175600.44	0.61526	631200.63	4175600.44	2.49782
631550.63	4175600.44	29.16184	631900.63	4175600.44	7.93795
632250.63	4175600.44	2.64650	632600.63	4175600.44	1.44984
632950.63	4175600.44	0.93518	633300.63	4175600.44	0.66221
629800.63	4175950.44	0.12607	630150.63	4175950.44	0.18691

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.32028	630850.63	4175950.44	0.80031
631200.63	4175950.44	3.21609	631550.63	4175950.44	3.74960
631900.63	4175950.44	3.13576	632250.63	4175950.44	1.87734
632600.63	4175950.44	1.18421	632950.63	4175950.44	0.81768
633300.63	4175950.44	0.60065	629800.63	4176300.44	0.13533
630150.63	4176300.44	0.20963	630500.63	4176300.44	0.37292
630850.63	4176300.44	0.81565	631200.63	4176300.44	1.34759
631550.63	4176300.44	1.35792	631900.63	4176300.44	1.19542
632250.63	4176300.44	0.87547	632600.63	4176300.44	0.65476
632950.63	4176300.44	0.52234	633300.63	4176300.44	0.42294
629800.63	4176650.44	0.14724	630150.63	4176650.44	0.21801
630500.63	4176650.44	0.34823	630850.63	4176650.44	0.54540
631200.63	4176650.44	0.71943	631550.63	4176650.44	0.72558
631900.63	4176650.44	0.61912	632250.63	4176650.44	0.53449
632600.63	4176650.44	0.42062	632950.63	4176650.44	0.34142
633300.63	4176650.44	0.29207	629800.63	4177000.44	0.14648
630150.63	4177000.44	0.20380	630500.63	4177000.44	0.27785
630850.63	4177000.44	0.35938	631200.63	4177000.44	0.43588
631550.63	4177000.44	0.43086	631900.63	4177000.44	0.38732
632250.63	4177000.44	0.35245	632600.63	4177000.44	0.30241
632950.63	4177000.44	0.25615	633300.63	4177000.44	0.21696
629800.63	4177350.44	0.13829	630150.63	4177350.44	0.17575
630500.63	4177350.44	0.21572	630850.63	4177350.44	0.25413
631200.63	4177350.44	0.28800	631550.63	4177350.44	0.28591
631900.63	4177350.44	0.26902	632250.63	4177350.44	0.23919
632600.63	4177350.44	0.22964	632950.63	4177350.44	0.19993
633300.63	4177350.44	0.17600	631670.70	4175493.59	8.51785
631669.80	4175641.41	29.34453	631665.32	4175796.39	11.31110
631417.17	4175826.85	13.01970	631417.17	4175673.66	53.70963
631422.55	4175484.63	2.61763	631268.42	4175983.74	3.61018
631275.69	4175523.99	2.62460	631345.65	4175419.50	2.10933
631384.72	4175441.30	3.94139	631491.93	4175442.21	4.70893
631491.93	4175414.95	2.89783	631385.63	4175413.14	2.35063
631358.37	4175395.87	1.93565	631409.25	4175336.81	1.58812
631567.35	4175235.96	1.45373	631756.33	4175028.80	0.93003
631807.22	4175003.36	0.89275	631867.18	4174987.91	0.88053
631849.92	4175988.28	2.75216	631268.74	4175963.75	3.89037
631269.05	4175943.76	4.18723	631269.37	4175923.77	4.51023
631269.68	4175903.78	5.09873	631270.00	4175883.79	5.83388
631270.32	4175863.81	7.25740	631270.63	4175843.82	7.04375

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	8.72395	631271.26	4175803.84	7.97797
631271.58	4175783.85	7.43178	631271.90	4175763.86	7.91683
631272.21	4175743.87	7.34674	631272.53	4175723.88	6.54336
631272.85	4175703.89	6.05152	631273.16	4175683.90	5.64406
631273.48	4175663.91	5.34433	631273.79	4175643.92	4.69617
631274.11	4175623.94	4.57752	631274.43	4175603.95	4.25665
631274.74	4175583.96	3.66129	631275.06	4175563.97	3.34817
631275.37	4175543.98	2.98910	631285.68	4175509.06	2.57229
631295.68	4175494.14	2.55569	631305.67	4175479.21	2.56503
631315.67	4175464.28	2.64857	631325.66	4175449.35	2.37992
631335.66	4175434.43	2.20064	631358.67	4175426.77	2.32270
631371.70	4175434.03	2.69601	631402.59	4175441.45	4.37953
631420.46	4175441.60	4.36178	631438.33	4175441.76	4.19788
631456.19	4175441.91	4.11368	631474.06	4175442.06	4.42445
631491.93	4175428.58	3.28776	631474.21	4175414.65	2.85734
631456.50	4175414.35	2.87129	631438.78	4175414.05	2.83781
631421.06	4175413.74	2.67529	631403.35	4175413.44	2.51721
631372.00	4175404.51	2.09984	631371.09	4175381.11	1.85168
631383.81	4175366.34	1.76818	631396.53	4175351.58	1.67407
631425.06	4175326.73	1.54430	631440.87	4175316.64	1.50394
631456.68	4175306.56	1.47441	631472.49	4175296.47	1.45843
631488.30	4175286.39	1.43945	631504.11	4175276.30	1.43405
631519.92	4175266.22	1.43591	631535.73	4175256.13	1.44297
631551.54	4175246.05	1.45114	631579.95	4175222.15	1.41735
631592.55	4175208.34	1.38094	631605.15	4175194.53	1.34491
631617.74	4175180.72	1.30874	631630.34	4175166.91	1.27379
631642.94	4175153.10	1.23836	631655.54	4175139.29	1.20235
631668.14	4175125.47	1.16660	631680.74	4175111.66	1.13172
631693.34	4175097.85	1.09711	631705.94	4175084.04	1.06291
631718.53	4175070.23	1.02911	631731.13	4175056.42	0.99571
631743.73	4175042.61	0.96299	631773.29	4175020.32	0.91825
631790.26	4175011.84	0.90607	631822.21	4174999.50	0.89100
631837.20	4174995.64	0.88857	631852.19	4174991.77	0.88507
631866.84	4175007.53	0.93961	631866.50	4175027.14	1.00349
631866.16	4175046.76	1.07371	631865.83	4175066.37	1.14939
631865.49	4175085.99	1.23265	631865.15	4175105.60	1.32327
631864.81	4175125.22	1.42160	631864.47	4175144.83	1.52793
631864.13	4175164.45	1.64284	631863.80	4175184.06	1.76511
631863.46	4175203.68	1.89637	631863.12	4175223.29	2.03890
631862.78	4175242.91	2.18996	631862.44	4175262.52	2.35032

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.52196	631861.77	4175301.75	2.70463
631861.43	4175321.37	2.89906	631861.09	4175340.98	3.10795
631860.75	4175360.60	3.33395	631860.41	4175380.21	3.57914
631860.07	4175399.83	3.85156	631859.73	4175419.44	4.15461
631859.40	4175439.06	4.49500	631859.06	4175458.67	4.88328
631858.72	4175478.29	5.32922	631858.38	4175497.90	5.84236
631858.04	4175517.52	6.43069	631857.70	4175537.13	7.09170
631857.37	4175556.75	7.82258	631857.03	4175576.36	8.60873
631856.69	4175595.98	9.41226	631856.35	4175615.59	10.16273
631856.01	4175635.21	10.76873	631855.67	4175654.82	11.15063
631855.33	4175674.44	11.28040	631855.00	4175694.05	11.17797
631854.66	4175713.67	10.88176	631854.32	4175733.28	10.41304
631853.98	4175752.90	9.77910	631853.64	4175772.51	8.99867
631853.30	4175792.13	8.12189	631852.97	4175811.74	7.23388
631852.63	4175831.36	6.41030	631852.29	4175850.97	5.68045
631851.95	4175870.59	5.03780	631851.61	4175890.20	4.47615
631851.27	4175909.82	3.99404	631850.94	4175929.43	3.58960
631850.60	4175949.05	3.25477	631850.26	4175968.66	2.97970
631830.54	4175988.13	2.78384	631811.15	4175987.98	2.81167
631791.77	4175987.83	2.83832	631772.39	4175987.67	2.86141
631753.00	4175987.52	2.88143	631733.62	4175987.37	2.89706
631714.24	4175987.22	2.91016	631694.85	4175987.07	2.91877
631675.47	4175986.92	2.92648	631656.09	4175986.77	2.92776
631636.70	4175986.62	2.92200	631617.32	4175986.46	2.92187
631597.94	4175986.31	2.95588	631578.55	4175986.16	3.01308
631559.17	4175986.01	3.07657	631539.79	4175985.86	3.15975
631520.40	4175985.71	3.24819	631501.02	4175985.56	3.35251
631481.64	4175985.40	3.56373	631462.25	4175985.25	3.91514
631442.87	4175985.10	4.18566	631423.49	4175984.95	4.23192
631404.10	4175984.80	4.25557	631384.72	4175984.65	4.03816
631365.34	4175984.50	3.94090	631345.95	4175984.35	3.87616
631326.57	4175984.19	3.82880	631307.19	4175984.04	3.78555
631287.80	4175983.89	3.71460			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.91966	632304.44	4174354.52	0.27656
632192.15	4174956.32	0.85546	632420.62	4175510.15	1.93432
632418.97	4175552.92	1.98203	631187.00	4175727.00	3.40009
631166.00	4175729.00	2.98190	631121.00	4175719.00	2.20353
631035.00	4174830.00	0.32359	631106.00	4174825.00	0.34898
631937.00	4174528.00	0.34649	631322.00	4174522.00	0.22850
629800.63	4173850.44	0.05786	630150.63	4173850.44	0.06832
630500.63	4173850.44	0.08135	630850.63	4173850.44	0.09463
631200.63	4173850.44	0.09895	631550.63	4173850.44	0.10699
631900.63	4173850.44	0.12751	632250.63	4173850.44	0.13906
632600.63	4173850.44	0.14876	632950.63	4173850.44	0.14730
633300.63	4173850.44	0.13329	629800.63	4174200.44	0.06894
630150.63	4174200.44	0.08289	630500.63	4174200.44	0.10286
630850.63	4174200.44	0.12813	631200.63	4174200.44	0.14333
631550.63	4174200.44	0.15877	631900.63	4174200.44	0.19553
632250.63	4174200.44	0.21675	632600.63	4174200.44	0.22117
632950.63	4174200.44	0.19688	633300.63	4174200.44	0.17346
629800.63	4174550.44	0.08399	630150.63	4174550.44	0.10417
630500.63	4174550.44	0.13445	630850.63	4174550.44	0.18313
631200.63	4174550.44	0.23345	631550.63	4174550.44	0.27409
631900.63	4174550.44	0.35774	632250.63	4174550.44	0.38375
632600.63	4174550.44	0.32996	632950.63	4174550.44	0.28046
633300.63	4174550.44	0.25075	629800.63	4174900.44	0.10123
630150.63	4174900.44	0.13399	630500.63	4174900.44	0.18576
630850.63	4174900.44	0.28121	631200.63	4174900.44	0.44651
631550.63	4174900.44	0.62250	631900.63	4174900.44	0.89966
632250.63	4174900.44	0.71943	632600.63	4174900.44	0.55033
632950.63	4174900.44	0.46183	633300.63	4174900.44	0.39122
629800.63	4175250.44	0.11479	630150.63	4175250.44	0.16252
630500.63	4175250.44	0.25479	630850.63	4175250.44	0.47793
631200.63	4175250.44	1.06245	631550.63	4175250.44	2.46506
631900.63	4175250.44	2.89786	632250.63	4175250.44	1.61188
632600.63	4175250.44	1.06695	632950.63	4175250.44	0.76453
633300.63	4175250.44	0.57399	629800.63	4175600.44	0.12346
630150.63	4175600.44	0.18078	630500.63	4175600.44	0.30012
630850.63	4175600.44	0.64526	631200.63	4175600.44	3.15964
631550.63	4175600.44	179.67875	631900.63	4175600.44	8.60852
632250.63	4175600.44	2.75834	632600.63	4175600.44	1.48579
632950.63	4175600.44	0.94883	633300.63	4175600.44	0.66842
629800.63	4175950.44	0.12758	630150.63	4175950.44	0.19135

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.33908	630850.63	4175950.44	0.87524
631200.63	4175950.44	2.63914	631550.63	4175950.44	2.45197
631900.63	4175950.44	2.03517	632250.63	4175950.44	1.47373
632600.63	4175950.44	1.00387	632950.63	4175950.44	0.72792
633300.63	4175950.44	0.55124	629800.63	4176300.44	0.13968
630150.63	4176300.44	0.21552	630500.63	4176300.44	0.37621
630850.63	4176300.44	0.76662	631200.63	4176300.44	1.11309
631550.63	4176300.44	1.10401	631900.63	4176300.44	0.96539
632250.63	4176300.44	0.74945	632600.63	4176300.44	0.56234
632950.63	4176300.44	0.45811	633300.63	4176300.44	0.37942
629800.63	4176650.44	0.14807	630150.63	4176650.44	0.21610
630500.63	4176650.44	0.33292	630850.63	4176650.44	0.49351
631200.63	4176650.44	0.63581	631550.63	4176650.44	0.62628
631900.63	4176650.44	0.53592	632250.63	4176650.44	0.47733
632600.63	4176650.44	0.38117	632950.63	4176650.44	0.31101
633300.63	4176650.44	0.26502	629800.63	4177000.44	0.14490
630150.63	4177000.44	0.19675	630500.63	4177000.44	0.25966
630850.63	4177000.44	0.32647	631200.63	4177000.44	0.39133
631550.63	4177000.44	0.38407	631900.63	4177000.44	0.34972
632250.63	4177000.44	0.31417	632600.63	4177000.44	0.27913
632950.63	4177000.44	0.23812	633300.63	4177000.44	0.20356
629800.63	4177350.44	0.13458	630150.63	4177350.44	0.16725
630500.63	4177350.44	0.20153	630850.63	4177350.44	0.23468
631200.63	4177350.44	0.26220	631550.63	4177350.44	0.26007
631900.63	4177350.44	0.24675	632250.63	4177350.44	0.21848
632600.63	4177350.44	0.21213	632950.63	4177350.44	0.18783
633300.63	4177350.44	0.16600	631670.70	4175493.59	16.56340
631669.80	4175641.41	27.38328	631665.32	4175796.39	4.49687
631417.17	4175826.85	6.10672	631417.17	4175673.66	35.80115
631422.55	4175484.63	4.31309	631268.42	4175983.74	2.55610
631275.69	4175523.99	4.15675	631345.65	4175419.50	3.57190
631384.72	4175441.30	6.63865	631491.93	4175442.21	13.25759
631491.93	4175414.95	6.12758	631385.63	4175413.14	4.24679
631358.37	4175395.87	3.26775	631409.25	4175336.81	2.66867
631567.35	4175235.96	2.41039	631756.33	4175028.80	1.32009
631807.22	4175003.36	1.24236	631867.18	4174987.91	1.20091
631849.92	4175988.28	1.86539	631268.74	4175963.75	2.75307
631269.05	4175943.76	2.99937	631269.37	4175923.77	3.43016
631269.68	4175903.78	5.17515	631270.00	4175883.79	6.61512
631270.32	4175863.81	6.51706	631270.63	4175843.82	7.07152

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	7.63672	631271.26	4175803.84	8.20797
631271.58	4175783.85	8.72107	631271.90	4175763.86	8.93242
631272.21	4175743.87	9.31496	631272.53	4175723.88	9.45916
631272.85	4175703.89	9.14590	631273.16	4175683.90	8.22584
631273.48	4175663.91	7.74278	631273.79	4175643.92	6.78217
631274.11	4175623.94	6.39786	631274.43	4175603.95	6.33223
631274.74	4175583.96	5.78853	631275.06	4175563.97	5.07394
631275.37	4175543.98	4.52566	631285.68	4175509.06	4.09786
631295.68	4175494.14	3.99327	631305.67	4175479.21	4.16777
631315.67	4175464.28	4.18239	631325.66	4175449.35	3.94721
631335.66	4175434.43	3.72753	631358.67	4175426.77	4.05033
631371.70	4175434.03	4.90573	631402.59	4175441.45	7.46456
631420.46	4175441.60	7.62103	631438.33	4175441.76	7.75444
631456.19	4175441.91	8.05035	631474.06	4175442.06	10.33325
631491.93	4175428.58	7.21830	631474.21	4175414.65	5.79446
631456.50	4175414.35	5.67888	631438.78	4175414.05	5.44460
631421.06	4175413.74	5.07278	631403.35	4175413.44	4.61543
631372.00	4175404.51	3.66213	631371.09	4175381.11	3.13889
631383.81	4175366.34	2.98372	631396.53	4175351.58	2.82086
631425.06	4175326.73	2.58572	631440.87	4175316.64	2.51329
631456.68	4175306.56	2.45691	631472.49	4175296.47	2.41892
631488.30	4175286.39	2.39360	631504.11	4175276.30	2.37979
631519.92	4175266.22	2.39435	631535.73	4175256.13	2.40676
631551.54	4175246.05	2.41281	631579.95	4175222.15	2.32856
631592.55	4175208.34	2.24471	631605.15	4175194.53	2.16323
631617.74	4175180.72	2.08057	631630.34	4175166.91	2.00271
631642.94	4175153.10	1.92557	631655.54	4175139.29	1.84871
631668.14	4175125.47	1.77434	631680.74	4175111.66	1.70194
631693.34	4175097.85	1.63302	631705.94	4175084.04	1.56566
631718.53	4175070.23	1.50055	631731.13	4175056.42	1.43808
631743.73	4175042.61	1.37781	631773.29	4175020.32	1.29586
631790.26	4175011.84	1.27045	631822.21	4174999.50	1.23455
631837.20	4174995.64	1.22574	631852.19	4174991.77	1.21441
631866.84	4175007.53	1.28856	631866.50	4175027.14	1.38267
631866.16	4175046.76	1.48395	631865.83	4175066.37	1.59417
631865.49	4175085.99	1.71334	631865.15	4175105.60	1.84052
631864.81	4175125.22	1.97735	631864.47	4175144.83	2.12310
631864.13	4175164.45	2.27875	631863.80	4175184.06	2.44507
631863.46	4175203.68	2.62237	631863.12	4175223.29	2.81223
631862.78	4175242.91	3.01732	631862.44	4175262.52	3.24000

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	3.48402	631861.77	4175301.75	3.75378
631861.43	4175321.37	4.05557	631861.09	4175340.98	4.39560
631860.75	4175360.60	4.78378	631860.41	4175380.21	5.22996
631860.07	4175399.83	5.74298	631859.73	4175419.44	6.32832
631859.40	4175439.06	6.98546	631859.06	4175458.67	7.70729
631858.72	4175478.29	8.48012	631858.38	4175497.90	9.26892
631858.04	4175517.52	10.00633	631857.70	4175537.13	10.59968
631857.37	4175556.75	10.97202	631857.03	4175576.36	11.10341
631856.69	4175595.98	11.02379	631856.35	4175615.59	10.76129
631856.01	4175635.21	10.31563	631855.67	4175654.82	9.68366
631855.33	4175674.44	8.88511	631855.00	4175694.05	7.98100
631854.66	4175713.67	7.05918	631854.32	4175733.28	6.20200
631853.98	4175752.90	5.44440	631853.64	4175772.51	4.78944
631853.30	4175792.13	4.22748	631852.97	4175811.74	3.75123
631852.63	4175831.36	3.35487	631852.29	4175850.97	3.03076
631851.95	4175870.59	2.76778	631851.61	4175890.20	2.55185
631851.27	4175909.82	2.37436	631850.94	4175929.43	2.22185
631850.60	4175949.05	2.08875	631850.26	4175968.66	1.96960
631830.54	4175988.13	1.87950	631811.15	4175987.98	1.89300
631791.77	4175987.83	1.90804	631772.39	4175987.67	1.92093
631753.00	4175987.52	1.92853	631733.62	4175987.37	1.92921
631714.24	4175987.22	1.92724	631694.85	4175987.07	1.92387
631675.47	4175986.92	1.92188	631656.09	4175986.77	1.93242
631636.70	4175986.62	1.95023	631617.32	4175986.46	1.98765
631597.94	4175986.31	2.03309	631578.55	4175986.16	2.08266
631559.17	4175986.01	2.13449	631539.79	4175985.86	2.17238
631520.40	4175985.71	2.21854	631501.02	4175985.56	2.29304
631481.64	4175985.40	2.41789	631462.25	4175985.25	2.57887
631442.87	4175985.10	2.69566	631423.49	4175984.95	2.71789
631404.10	4175984.80	2.72332	631384.72	4175984.65	2.73032
631365.34	4175984.50	2.69510	631345.95	4175984.35	2.64341
631326.57	4175984.19	2.59948	631307.19	4175984.04	2.58381
631287.80	4175983.89	2.57193			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.69698	632304.44	4174354.52	0.24126
632192.15	4174956.32	0.65105	632420.62	4175510.15	1.45546
632418.97	4175552.92	1.52714	631187.00	4175727.00	7.20754
631166.00	4175729.00	5.92590	631121.00	4175719.00	3.86267

631035.00	4174830.00	0.31188	631106.00	4174825.00	0.32286
631937.00	4174528.00	0.30282	631322.00	4174522.00	0.20396
629800.63	4173850.44	0.05834	630150.63	4173850.44	0.06869
630500.63	4173850.44	0.08064	630850.63	4173850.44	0.08942
631200.63	4173850.44	0.09113	631550.63	4173850.44	0.10362
631900.63	4173850.44	0.11946	632250.63	4173850.44	0.12813
632600.63	4173850.44	0.13574	632950.63	4173850.44	0.13283
633300.63	4173850.44	0.12033	629800.63	4174200.44	0.06930
630150.63	4174200.44	0.08374	630500.63	4174200.44	0.10303
630850.63	4174200.44	0.12314	631200.63	4174200.44	0.12926
631550.63	4174200.44	0.15243	631900.63	4174200.44	0.17841
632250.63	4174200.44	0.19410	632600.63	4174200.44	0.19421
632950.63	4174200.44	0.17304	633300.63	4174200.44	0.15378
629800.63	4174550.44	0.08477	630150.63	4174550.44	0.10504
630500.63	4174550.44	0.13640	630850.63	4174550.44	0.18079
631200.63	4174550.44	0.20522	631550.63	4174550.44	0.25979
631900.63	4174550.44	0.31251	632250.63	4174550.44	0.32356
632600.63	4174550.44	0.27752	632950.63	4174550.44	0.23927
633300.63	4174550.44	0.21612	629800.63	4174900.44	0.10497
630150.63	4174900.44	0.13747	630500.63	4174900.44	0.18960
630850.63	4174900.44	0.28687	631200.63	4174900.44	0.38962
631550.63	4174900.44	0.57403	631900.63	4174900.44	0.71534
632250.63	4174900.44	0.55836	632600.63	4174900.44	0.43864
632950.63	4174900.44	0.37722	633300.63	4174900.44	0.32778
629800.63	4175250.44	0.12390	630150.63	4175250.44	0.17722
630500.63	4175250.44	0.27892	630850.63	4175250.44	0.50977
631200.63	4175250.44	0.98666	631550.63	4175250.44	2.04487
631900.63	4175250.44	1.85590	632250.63	4175250.44	1.12658
632600.63	4175250.44	0.80610	632950.63	4175250.44	0.61548
633300.63	4175250.44	0.48249	629800.63	4175600.44	0.13726
630150.63	4175600.44	0.20669	630500.63	4175600.44	0.36106
630850.63	4175600.44	0.87232	631200.63	4175600.44	5.34712
631550.63	4175600.44	29.16895	631900.63	4175600.44	5.45667
632250.63	4175600.44	2.09509	632600.63	4175600.44	1.23025
632950.63	4175600.44	0.82377	633300.63	4175600.44	0.59732
629800.63	4175950.44	0.14265	630150.63	4175950.44	0.22031

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.41010	630850.63	4175950.44	1.20843
631200.63	4175950.44	4.44305	631550.63	4175950.44	3.34686
631900.63	4175950.44	2.78256	632250.63	4175950.44	1.58701
632600.63	4175950.44	1.03399	632950.63	4175950.44	0.73109

633300.63	4175950.44	0.54656	629800.63	4176300.44	0.15534
630150.63	4176300.44	0.25028	630500.63	4176300.44	0.46944
630850.63	4176300.44	1.02390	631200.63	4176300.44	1.44450
631550.63	4176300.44	1.23724	631900.63	4176300.44	1.08642
632250.63	4176300.44	0.78707	632600.63	4176300.44	0.60562
632950.63	4176300.44	0.48495	633300.63	4176300.44	0.39507
629800.63	4176650.44	0.16722	630150.63	4176650.44	0.25345
630500.63	4176650.44	0.40584	630850.63	4176650.44	0.60506
631200.63	4176650.44	0.74820	631550.63	4176650.44	0.70627
631900.63	4176650.44	0.60897	632250.63	4176650.44	0.49219
632600.63	4176650.44	0.38988	632950.63	4176650.44	0.32227
633300.63	4176650.44	0.27823	629800.63	4177000.44	0.16378
630150.63	4177000.44	0.22741	630500.63	4177000.44	0.30445
630850.63	4177000.44	0.38255	631200.63	4177000.44	0.43518
631550.63	4177000.44	0.42678	631900.63	4177000.44	0.36641
632250.63	4177000.44	0.34132	632600.63	4177000.44	0.28532
632950.63	4177000.44	0.24175	633300.63	4177000.44	0.20627
629800.63	4177350.44	0.15068	630150.63	4177350.44	0.18915
630500.63	4177350.44	0.22899	630850.63	4177350.44	0.26941
631200.63	4177350.44	0.28555	631550.63	4177350.44	0.28436
631900.63	4177350.44	0.25720	632250.63	4177350.44	0.23770
632600.63	4177350.44	0.22007	632950.63	4177350.44	0.19122
633300.63	4177350.44	0.16801	631670.70	4175493.59	6.41588
631669.80	4175641.41	17.57994	631665.32	4175796.39	9.87300
631417.17	4175826.85	7.19681	631417.17	4175673.66	83.98880
631422.55	4175484.63	5.06333	631268.42	4175983.74	3.80591
631275.69	4175523.99	4.83354	631345.65	4175419.50	2.59701
631384.72	4175441.30	4.26432	631491.93	4175442.21	11.68175
631491.93	4175414.95	4.80576	631385.63	4175413.14	3.18891
631358.37	4175395.87	2.39523	631409.25	4175336.81	2.11472
631567.35	4175235.96	1.96470	631756.33	4175028.80	1.03624
631807.22	4175003.36	0.96743	631867.18	4174987.91	0.92257
631849.92	4175988.28	2.48968	631268.74	4175963.75	4.21347
631269.05	4175943.76	4.73702	631269.37	4175923.77	6.07951
631269.68	4175903.78	8.01857	631270.00	4175883.79	7.90854
631270.32	4175863.81	8.38789	631270.63	4175843.82	10.03400

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	12.35618	631271.26	4175803.84	15.13205
631271.58	4175783.85	18.34279	631271.90	4175763.86	22.19423
631272.21	4175743.87	26.57681	631272.53	4175723.88	28.19009
631272.85	4175703.89	27.87743	631273.16	4175683.90	24.94755

631273.48	4175663.91	19.51150	631273.79	4175643.92	14.37557
631274.11	4175623.94	11.94346	631274.43	4175603.95	9.62098
631274.74	4175583.96	7.76374	631275.06	4175563.97	6.49953
631275.37	4175543.98	5.63275	631285.68	4175509.06	4.18202
631295.68	4175494.14	4.02573	631305.67	4175479.21	4.15835
631315.67	4175464.28	3.83400	631325.66	4175449.35	3.37944
631335.66	4175434.43	2.79088	631358.67	4175426.77	2.92099
631371.70	4175434.03	3.56065	631402.59	4175441.45	4.69277
631420.46	4175441.60	5.66921	631438.33	4175441.76	7.02198
631456.19	4175441.91	9.09244	631474.06	4175442.06	10.54480
631491.93	4175428.58	5.63061	631474.21	4175414.65	4.70474
631456.50	4175414.35	5.14750	631438.78	4175414.05	5.22057
631421.06	4175413.74	4.73264	631403.35	4175413.44	3.93664
631372.00	4175404.51	2.71707	631371.09	4175381.11	2.34124
631383.81	4175366.34	2.26245	631396.53	4175351.58	2.18398
631425.06	4175326.73	2.13150	631440.87	4175316.64	2.13661
631456.68	4175306.56	2.13583	631472.49	4175296.47	2.12435
631488.30	4175286.39	2.11184	631504.11	4175276.30	2.09392
631519.92	4175266.22	2.06816	631535.73	4175256.13	2.04080
631551.54	4175246.05	2.00309	631579.95	4175222.15	1.87931
631592.55	4175208.34	1.79856	631605.15	4175194.53	1.72221
631617.74	4175180.72	1.64912	631630.34	4175166.91	1.58127
631642.94	4175153.10	1.51487	631655.54	4175139.29	1.45144
631668.14	4175125.47	1.39060	631680.74	4175111.66	1.33295
631693.34	4175097.85	1.27767	631705.94	4175084.04	1.22488
631718.53	4175070.23	1.17448	631731.13	4175056.42	1.12632
631743.73	4175042.61	1.08027	631773.29	4175020.32	1.01396
631790.26	4175011.84	0.99036	631822.21	4174999.50	0.95719
631837.20	4174995.64	0.94642	631852.19	4174991.77	0.93449
631866.84	4175007.53	0.97757	631866.50	4175027.14	1.03622
631866.16	4175046.76	1.09804	631865.83	4175066.37	1.16322
631865.49	4175085.99	1.23193	631865.15	4175105.60	1.30453
631864.81	4175125.22	1.38143	631864.47	4175144.83	1.46100
631864.13	4175164.45	1.54452	631863.80	4175184.06	1.63212
631863.46	4175203.68	1.72423	631863.12	4175223.29	1.82193
631862.78	4175242.91	1.92574	631862.44	4175262.52	2.03647

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.15577	631861.77	4175301.75	2.28497
631861.43	4175321.37	2.42641	631861.09	4175340.98	2.58155
631860.75	4175360.60	2.75268	631860.41	4175380.21	2.94190
631860.07	4175399.83	3.15234	631859.73	4175419.44	3.38599

631859.40	4175439.06	3.64566	631859.06	4175458.67	3.93301
631858.72	4175478.29	4.24848	631858.38	4175497.90	4.58963
631858.04	4175517.52	4.95291	631857.70	4175537.13	5.33133
631857.37	4175556.75	5.71495	631857.03	4175576.36	6.08929
631856.69	4175595.98	6.43672	631856.35	4175615.59	6.73791
631856.01	4175635.21	6.97620	631855.67	4175654.82	7.13668
631855.33	4175674.44	7.20697	631855.00	4175694.05	7.17661
631854.66	4175713.67	7.04253	631854.32	4175733.28	6.81206
631853.98	4175752.90	6.50448	631853.64	4175772.51	6.14455
631853.30	4175792.13	5.75141	631852.97	4175811.74	5.33953
631852.63	4175831.36	4.92452	631852.29	4175850.97	4.52444
631851.95	4175870.59	4.15229	631851.61	4175890.20	3.81207
631851.27	4175909.82	3.49968	631850.94	4175929.43	3.21090
631850.60	4175949.05	2.94463	631850.26	4175968.66	2.70339
631830.54	4175988.13	2.51458	631811.15	4175987.98	2.53548
631791.77	4175987.83	2.55389	631772.39	4175987.67	2.57115
631753.00	4175987.52	2.58842	631733.62	4175987.37	2.60661
631714.24	4175987.22	2.62625	631694.85	4175987.07	2.64632
631675.47	4175986.92	2.66661	631656.09	4175986.77	2.68662
631636.70	4175986.62	2.70755	631617.32	4175986.46	2.73043
631597.94	4175986.31	2.75453	631578.55	4175986.16	2.78131
631559.17	4175986.01	2.80727	631539.79	4175985.86	2.82794
631520.40	4175985.71	2.85053	631501.02	4175985.56	2.88857
631481.64	4175985.40	2.95563	631462.25	4175985.25	3.06481
631442.87	4175985.10	3.29766	631423.49	4175984.95	3.50956
631404.10	4175984.80	3.69865	631384.72	4175984.65	3.69240
631365.34	4175984.50	3.61922	631345.95	4175984.35	3.61786
631326.57	4175984.19	3.68139	631307.19	4175984.04	3.74043
631287.80	4175983.89	3.79335			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.82386	632304.44	4174354.52	0.27653
632192.15	4174956.32	0.76938	632420.62	4175510.15	1.59140
632418.97	4175552.92	1.62324	631187.00	4175727.00	6.24249
631166.00	4175729.00	5.72443	631121.00	4175719.00	4.07630
631035.00	4174830.00	0.37226	631106.00	4174825.00	0.39104
631937.00	4174528.00	0.36301	631322.00	4174522.00	0.23745
629800.63	4173850.44	0.06112	630150.63	4173850.44	0.07253
630500.63	4173850.44	0.08618	630850.63	4173850.44	0.09733
631200.63	4173850.44	0.09976	631550.63	4173850.44	0.11425
631900.63	4173850.44	0.13221	632250.63	4173850.44	0.14269
632600.63	4173850.44	0.15016	632950.63	4173850.44	0.14324

633300.63	4173850.44	0.12815	629800.63	4174200.44	0.07319
630150.63	4174200.44	0.08899	630500.63	4174200.44	0.11110
630850.63	4174200.44	0.13605	631200.63	4174200.44	0.14493
631550.63	4174200.44	0.17272	631900.63	4174200.44	0.20368
632250.63	4174200.44	0.22207	632600.63	4174200.44	0.21480
632950.63	4174200.44	0.18770	633300.63	4174200.44	0.16770
629800.63	4174550.44	0.09017	630150.63	4174550.44	0.11298
630500.63	4174550.44	0.14867	630850.63	4174550.44	0.20346
631200.63	4174550.44	0.23906	631550.63	4174550.44	0.30803
631900.63	4174550.44	0.37613	632250.63	4174550.44	0.37345
632600.63	4174550.44	0.31004	632950.63	4174550.44	0.26902
633300.63	4174550.44	0.24224	629800.63	4174900.44	0.11096
630150.63	4174900.44	0.14885	630500.63	4174900.44	0.21057
630850.63	4174900.44	0.33125	631200.63	4174900.44	0.48792
631550.63	4174900.44	0.74938	631900.63	4174900.44	0.90424
632250.63	4174900.44	0.65345	632600.63	4174900.44	0.51737
632950.63	4174900.44	0.43623	633300.63	4174900.44	0.36974
629800.63	4175250.44	0.12820	630150.63	4175250.44	0.18685
630500.63	4175250.44	0.30605	630850.63	4175250.44	0.61353
631200.63	4175250.44	1.45582	631550.63	4175250.44	3.38057
631900.63	4175250.44	2.39117	632250.63	4175250.44	1.39497
632600.63	4175250.44	0.94634	632950.63	4175250.44	0.68961
633300.63	4175250.44	0.52510	629800.63	4175600.44	0.13922
630150.63	4175600.44	0.21146	630500.63	4175600.44	0.37526
630850.63	4175600.44	0.93233	631200.63	4175600.44	7.15002
631550.63	4175600.44	57.58289	631900.63	4175600.44	5.73451
632250.63	4175600.44	2.16105	632600.63	4175600.44	1.25530
632950.63	4175600.44	0.83402	633300.63	4175600.44	0.60220
629800.63	4175950.44	0.14477	630150.63	4175950.44	0.22716

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.43839	630850.63	4175950.44	1.22653
631200.63	4175950.44	2.78582	631550.63	4175950.44	2.37167
631900.63	4175950.44	1.94584	632250.63	4175950.44	1.30267
632600.63	4175950.44	0.89401	632950.63	4175950.44	0.65871
633300.63	4175950.44	0.50546	629800.63	4176300.44	0.16041
630150.63	4176300.44	0.25542	630500.63	4176300.44	0.46512
630850.63	4176300.44	0.89237	631200.63	4176300.44	1.18234
631550.63	4176300.44	1.05299	631900.63	4176300.44	0.94671
632250.63	4176300.44	0.69047	632600.63	4176300.44	0.52299
632950.63	4176300.44	0.42915	633300.63	4176300.44	0.35645
629800.63	4176650.44	0.16734	630150.63	4176650.44	0.24890

630500.63	4176650.44	0.37845	630850.63	4176650.44	0.53199
631200.63	4176650.44	0.64576	631550.63	4176650.44	0.62115
631900.63	4176650.44	0.53091	632250.63	4176650.44	0.44526
632600.63	4176650.44	0.35619	632950.63	4176650.44	0.29277
633300.63	4176650.44	0.25308	629800.63	4177000.44	0.16105
630150.63	4177000.44	0.21689	630500.63	4177000.44	0.28126
630850.63	4177000.44	0.34558	631200.63	4177000.44	0.38631
631550.63	4177000.44	0.38297	631900.63	4177000.44	0.33121
632250.63	4177000.44	0.31055	632600.63	4177000.44	0.26360
632950.63	4177000.44	0.22600	633300.63	4177000.44	0.19318
629800.63	4177350.44	0.14552	630150.63	4177350.44	0.17871
630500.63	4177350.44	0.21234	630850.63	4177350.44	0.24813
631200.63	4177350.44	0.25927	631550.63	4177350.44	0.25928
631900.63	4177350.44	0.23736	632250.63	4177350.44	0.21630
632600.63	4177350.44	0.20563	632950.63	4177350.44	0.17950
633300.63	4177350.44	0.15923	631670.70	4175493.59	11.57099
631669.80	4175641.41	17.30775	631665.32	4175796.39	4.30199
631417.17	4175826.85	4.11603	631417.17	4175673.66	18.64767
631422.55	4175484.63	5.78041	631268.42	4175983.74	2.51386
631275.69	4175523.99	12.00794	631345.65	4175419.50	5.53196
631384.72	4175441.30	9.04721	631491.93	4175442.21	15.83328
631491.93	4175414.95	9.78841	631385.63	4175413.14	6.31758
631358.37	4175395.87	4.70632	631409.25	4175336.81	3.82956
631567.35	4175235.96	3.18935	631756.33	4175028.80	1.41035
631807.22	4175003.36	1.27959	631867.18	4174987.91	1.18071
631849.92	4175988.28	1.81905	631268.74	4175963.75	2.69924
631269.05	4175943.76	2.91692	631269.37	4175923.77	3.41489
631269.68	4175903.78	3.80100	631270.00	4175883.79	2.97021
631270.32	4175863.81	2.64907	631270.63	4175843.82	2.68152

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.94338	631271.26	4175803.84	3.19175
631271.58	4175783.85	3.53527	631271.90	4175763.86	4.09634
631272.21	4175743.87	4.84377	631272.53	4175723.88	5.65615
631272.85	4175703.89	6.41041	631273.16	4175683.90	7.64845
631273.48	4175663.91	9.77610	631273.79	4175643.92	12.70020
631274.11	4175623.94	16.83669	631274.43	4175603.95	21.45340
631274.74	4175583.96	21.45314	631275.06	4175563.97	18.20460
631275.37	4175543.98	15.14943	631285.68	4175509.06	11.46777
631295.68	4175494.14	10.71885	631305.67	4175479.21	9.92374
631315.67	4175464.28	9.45075	631325.66	4175449.35	7.70434
631335.66	4175434.43	6.17789	631358.67	4175426.77	6.32809

631371.70	4175434.03	7.65870	631402.59	4175441.45	8.54650
631420.46	4175441.60	8.69370	631438.33	4175441.76	7.26274
631456.19	4175441.91	12.54554	631474.06	4175442.06	15.73379
631491.93	4175428.58	11.62075	631474.21	4175414.65	10.14107
631456.50	4175414.35	10.53666	631438.78	4175414.05	9.87888
631421.06	4175413.74	8.77112	631403.35	4175413.44	7.46233
631372.00	4175404.51	5.32388	631371.09	4175381.11	4.43301
631383.81	4175366.34	4.19958	631396.53	4175351.58	4.00794
631425.06	4175326.73	3.82452	631440.87	4175316.64	3.81840
631456.68	4175306.56	3.79034	631472.49	4175296.47	3.74632
631488.30	4175286.39	3.68044	631504.11	4175276.30	3.60363
631519.92	4175266.22	3.51225	631535.73	4175256.13	3.41059
631551.54	4175246.05	3.30181	631579.95	4175222.15	3.00390
631592.55	4175208.34	2.83235	631605.15	4175194.53	2.67256
631617.74	4175180.72	2.52428	631630.34	4175166.91	2.38721
631642.94	4175153.10	2.25805	631655.54	4175139.29	2.13761
631668.14	4175125.47	2.02491	631680.74	4175111.66	1.91944
631693.34	4175097.85	1.82069	631705.94	4175084.04	1.72804
631718.53	4175070.23	1.64099	631731.13	4175056.42	1.55929
631743.73	4175042.61	1.48252	631773.29	4175020.32	1.36671
631790.26	4175011.84	1.32264	631822.21	4174999.50	1.25610
631837.20	4174995.64	1.23160	631852.19	4174991.77	1.20649
631866.84	4175007.53	1.24954	631866.50	4175027.14	1.32210
631866.16	4175046.76	1.39833	631865.83	4175066.37	1.47829
631865.49	4175085.99	1.56247	631865.15	4175105.60	1.65186
631864.81	4175125.22	1.74737	631864.47	4175144.83	1.84755
631864.13	4175164.45	1.95477	631863.80	4175184.06	2.07044
631863.46	4175203.68	2.19482	631863.12	4175223.29	2.33130
631862.78	4175242.91	2.48048	631862.44	4175262.52	2.64419

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.82490	631861.77	4175301.75	3.02486
631861.43	4175321.37	3.24625	631861.09	4175340.98	3.49279
631860.75	4175360.60	3.76417	631860.41	4175380.21	4.06140
631860.07	4175399.83	4.38447	631859.73	4175419.44	4.73195
631859.40	4175439.06	5.09618	631859.06	4175458.67	5.47074
631858.72	4175478.29	5.84136	631858.38	4175497.90	6.19218
631858.04	4175517.52	6.50687	631857.70	4175537.13	6.77048
631857.37	4175556.75	6.96710	631857.03	4175576.36	7.07890
631856.69	4175595.98	7.09084	631856.35	4175615.59	6.99545
631856.01	4175635.21	6.79952	631855.67	4175654.82	6.52126
631855.33	4175674.44	6.18252	631855.00	4175694.05	5.80082

631854.66	4175713.67	5.39114	631854.32	4175733.28	4.97269
631853.98	4175752.90	4.56744	631853.64	4175772.51	4.19204
631853.30	4175792.13	3.84965	631852.97	4175811.74	3.53507
631852.63	4175831.36	3.24176	631852.29	4175850.97	2.96883
631851.95	4175870.59	2.71966	631851.61	4175890.20	2.49893
631851.27	4175909.82	2.30911	631850.94	4175929.43	2.15017
631850.60	4175949.05	2.01886	631850.26	4175968.66	1.91035
631830.54	4175988.13	1.84873	631811.15	4175987.98	1.87609
631791.77	4175987.83	1.89977	631772.39	4175987.67	1.91975
631753.00	4175987.52	1.93573	631733.62	4175987.37	1.95018
631714.24	4175987.22	1.96505	631694.85	4175987.07	1.98121
631675.47	4175986.92	1.99813	631656.09	4175986.77	2.01430
631636.70	4175986.62	2.02686	631617.32	4175986.46	2.03359
631597.94	4175986.31	2.03331	631578.55	4175986.16	2.02895
631559.17	4175986.01	2.02376	631539.79	4175985.86	2.02618
631520.40	4175985.71	2.04494	631501.02	4175985.56	2.08218
631481.64	4175985.40	2.14205	631462.25	4175985.25	2.22103
631442.87	4175985.10	2.30143	631423.49	4175984.95	2.39980
631404.10	4175984.80	2.48815	631384.72	4175984.65	2.48959
631365.34	4175984.50	2.44551	631345.95	4175984.35	2.42885
631326.57	4175984.19	2.44527	631307.19	4175984.04	2.47440
631287.80	4175983.89	2.49821			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.03053	632304.44	4174354.52	0.26130
632192.15	4174956.32	1.09723	632420.62	4175510.15	3.99939
632418.97	4175552.92	4.04845	631187.00	4175727.00	0.77624
631166.00	4175729.00	0.72700	631121.00	4175719.00	0.62755
631035.00	4174830.00	0.20948	631106.00	4174825.00	0.22496
631937.00	4174528.00	0.27787	631322.00	4174522.00	0.18885
629800.63	4173850.44	0.04789	630150.63	4173850.44	0.05479
630500.63	4173850.44	0.06441	630850.63	4173850.44	0.07726
631200.63	4173850.44	0.08933	631550.63	4173850.44	0.09090
631900.63	4173850.44	0.10265	632250.63	4173850.44	0.12522
632600.63	4173850.44	0.13689	632950.63	4173850.44	0.14750
633300.63	4173850.44	0.14493	629800.63	4174200.44	0.05653
630150.63	4174200.44	0.06586	630500.63	4174200.44	0.07884
630850.63	4174200.44	0.09835	631200.63	4174200.44	0.12305
631550.63	4174200.44	0.13279	631900.63	4174200.44	0.15652
632250.63	4174200.44	0.19798	632600.63	4174200.44	0.22063
632950.63	4174200.44	0.22014	633300.63	4174200.44	0.19321
629800.63	4174550.44	0.06703	630150.63	4174550.44	0.08110

630500.63	4174550.44	0.10082	630850.63	4174550.44	0.13140
631200.63	4174550.44	0.17832	631550.63	4174550.44	0.21638
631900.63	4174550.44	0.27682	632250.63	4174550.44	0.37715
632600.63	4174550.44	0.40164	632950.63	4174550.44	0.33055
633300.63	4174550.44	0.27786	629800.63	4174900.44	0.07693
630150.63	4174900.44	0.09835	630500.63	4174900.44	0.13219
630850.63	4174900.44	0.18721	631200.63	4174900.44	0.27671
631550.63	4174900.44	0.40533	631900.63	4174900.44	0.61521
632250.63	4174900.44	0.94014	632600.63	4174900.44	0.75127
632950.63	4174900.44	0.55711	633300.63	4174900.44	0.45471
629800.63	4175250.44	0.08476	630150.63	4175250.44	0.11198
630500.63	4175250.44	0.16017	630850.63	4175250.44	0.26361
631200.63	4175250.44	0.48525	631550.63	4175250.44	1.07498
631900.63	4175250.44	2.57030	632250.63	4175250.44	2.65221
632600.63	4175250.44	1.63486	632950.63	4175250.44	1.03052
633300.63	4175250.44	0.73354	629800.63	4175600.44	0.08984
630150.63	4175600.44	0.12134	630500.63	4175600.44	0.17738
630850.63	4175600.44	0.30168	631200.63	4175600.44	0.72465
631550.63	4175600.44	7.93156	631900.63	4175600.44	69.19602
632250.63	4175600.44	7.28670	632600.63	4175600.44	2.49412
632950.63	4175600.44	1.37340	633300.63	4175600.44	0.89933
629800.63	4175950.44	0.09285	630150.63	4175950.44	0.12755

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.19615	630850.63	4175950.44	0.38113
631200.63	4175950.44	0.95421	631550.63	4175950.44	3.75148
631900.63	4175950.44	1.83515	632250.63	4175950.44	1.69554
632600.63	4175950.44	1.38587	632950.63	4175950.44	0.95705
633300.63	4175950.44	0.70191	629800.63	4176300.44	0.10010
630150.63	4176300.44	0.14434	630500.63	4176300.44	0.23345
630850.63	4176300.44	0.42636	631200.63	4176300.44	0.78285
631550.63	4176300.44	0.95010	631900.63	4176300.44	0.88842
632250.63	4176300.44	0.80572	632600.63	4176300.44	0.68485
632950.63	4176300.44	0.54418	633300.63	4176300.44	0.45090
629800.63	4176650.44	0.11082	630150.63	4176650.44	0.15559
630500.63	4176650.44	0.23441	630850.63	4176650.44	0.36760
631200.63	4176650.44	0.49534	631550.63	4176650.44	0.57694
631900.63	4176650.44	0.54249	632250.63	4176650.44	0.48244
632600.63	4176650.44	0.44745	632950.63	4176650.44	0.37050
633300.63	4176650.44	0.30560	629800.63	4177000.44	0.11282
630150.63	4177000.44	0.15177	630500.63	4177000.44	0.20880
630850.63	4177000.44	0.27609	631200.63	4177000.44	0.33201

631550.63	4177000.44	0.37741	631900.63	4177000.44	0.35848
632250.63	4177000.44	0.33076	632600.63	4177000.44	0.30972
632950.63	4177000.44	0.27392	633300.63	4177000.44	0.23629
629800.63	4177350.44	0.10939	630150.63	4177350.44	0.13916
630500.63	4177350.44	0.17348	630850.63	4177350.44	0.20841
631200.63	4177350.44	0.24215	631550.63	4177350.44	0.26124
631900.63	4177350.44	0.25345	632250.63	4177350.44	0.24241
632600.63	4177350.44	0.21779	632950.63	4177350.44	0.21196
633300.63	4177350.44	0.18750	631670.70	4175493.59	4.62314
631669.80	4175641.41	35.07432	631665.32	4175796.39	4.52579
631417.17	4175826.85	2.00103	631417.17	4175673.66	1.87106
631422.55	4175484.63	1.37755	631268.42	4175983.74	1.15470
631275.69	4175523.99	0.88674	631345.65	4175419.50	0.94386
631384.72	4175441.30	1.11335	631491.93	4175442.21	2.10505
631491.93	4175414.95	1.85323	631385.63	4175413.14	1.04760
631358.37	4175395.87	0.93457	631409.25	4175336.81	0.94742
631567.35	4175235.96	1.07992	631756.33	4175028.80	0.66492
631807.22	4175003.36	0.67526	631867.18	4174987.91	0.74142
631849.92	4175988.28	1.76755	631268.74	4175963.75	1.16077
631269.05	4175943.76	1.16530	631269.37	4175923.77	1.16754
631269.68	4175903.78	1.16733	631270.00	4175883.79	1.16485
631270.32	4175863.81	1.15961	631270.63	4175843.82	1.15055

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.13804	631271.26	4175803.84	1.12238
631271.58	4175783.85	1.10431	631271.90	4175763.86	1.08452
631272.21	4175743.87	1.06539	631272.53	4175723.88	1.04225
631272.85	4175703.89	1.02028	631273.16	4175683.90	1.00024
631273.48	4175663.91	0.97869	631273.79	4175643.92	0.96653
631274.11	4175623.94	0.94942	631274.43	4175603.95	0.93889
631274.74	4175583.96	0.92587	631275.06	4175563.97	0.91204
631275.37	4175543.98	0.89817	631285.68	4175509.06	0.89921
631295.68	4175494.14	0.90871	631305.67	4175479.21	0.91784
631315.67	4175464.28	0.92307	631325.66	4175449.35	0.93413
631335.66	4175434.43	0.94322	631358.67	4175426.77	0.99615
631371.70	4175434.03	1.05740	631402.59	4175441.45	1.14861
631420.46	4175441.60	1.20876	631438.33	4175441.76	1.30726
631456.19	4175441.91	1.61791	631474.06	4175442.06	1.76586
631491.93	4175428.58	1.98158	631474.21	4175414.65	1.64365
631456.50	4175414.35	1.29964	631438.78	4175414.05	1.22853
631421.06	4175413.74	1.12888	631403.35	4175413.44	1.11779
631372.00	4175404.51	0.98502	631371.09	4175381.11	0.94187

631383.81	4175366.34	0.94426	631396.53	4175351.58	0.94289
631425.06	4175326.73	0.96953	631440.87	4175316.64	0.98987
631456.68	4175306.56	0.99539	631472.49	4175296.47	0.99479
631488.30	4175286.39	1.01158	631504.11	4175276.30	1.01266
631519.92	4175266.22	1.01797	631535.73	4175256.13	1.03347
631551.54	4175246.05	1.05613	631579.95	4175222.15	1.05480
631592.55	4175208.34	1.02015	631605.15	4175194.53	0.98015
631617.74	4175180.72	0.94326	631630.34	4175166.91	0.90540
631642.94	4175153.10	0.87633	631655.54	4175139.29	0.85061
631668.14	4175125.47	0.82044	631680.74	4175111.66	0.79197
631693.34	4175097.85	0.76500	631705.94	4175084.04	0.74282
631718.53	4175070.23	0.71814	631731.13	4175056.42	0.69973
631743.73	4175042.61	0.67855	631773.29	4175020.32	0.66545
631790.26	4175011.84	0.67125	631822.21	4174999.50	0.69041
631837.20	4174995.64	0.70486	631852.19	4174991.77	0.72329
631866.84	4175007.53	0.78970	631866.50	4175027.14	0.84336
631866.16	4175046.76	0.90302	631865.83	4175066.37	0.96771
631865.49	4175085.99	1.04178	631865.15	4175105.60	1.12451
631864.81	4175125.22	1.21604	631864.47	4175144.83	1.32227
631864.13	4175164.45	1.44267	631863.80	4175184.06	1.57573
631863.46	4175203.68	1.73272	631863.12	4175223.29	1.91379
631862.78	4175242.91	2.12980	631862.44	4175262.52	2.39628

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.84538	631861.77	4175301.75	3.68829
631861.43	4175321.37	4.18130	631861.09	4175340.98	3.17574
631860.75	4175360.60	3.88259	631860.41	4175380.21	4.44474
631860.07	4175399.83	5.44152	631859.73	4175419.44	6.62902
631859.40	4175439.06	8.29293	631859.06	4175458.67	10.53574
631858.72	4175478.29	13.13406	631858.38	4175497.90	17.03623
631858.04	4175517.52	22.97847	631857.70	4175537.13	32.34582
631857.37	4175556.75	49.28817	631857.03	4175576.36	78.55349
631856.69	4175595.98	118.38626	631856.35	4175615.59	81.64816
631856.01	4175635.21	39.63827	631855.67	4175654.82	21.33316
631855.33	4175674.44	12.70706	631855.00	4175694.05	8.31376
631854.66	4175713.67	5.76929	631854.32	4175733.28	4.34243
631853.98	4175752.90	3.32507	631853.64	4175772.51	2.70687
631853.30	4175792.13	2.26374	631852.97	4175811.74	2.01037
631852.63	4175831.36	1.77148	631852.29	4175850.97	1.63233
631851.95	4175870.59	1.52787	631851.61	4175890.20	1.49220
631851.27	4175909.82	1.86086	631850.94	4175929.43	2.34325
631850.60	4175949.05	2.05449	631850.26	4175968.66	1.88698

631830.54	4175988.13	1.81988	631811.15	4175987.98	1.87003
631791.77	4175987.83	1.93331	631772.39	4175987.67	2.03668
631753.00	4175987.52	2.09186	631733.62	4175987.37	2.06965
631714.24	4175987.22	2.18644	631694.85	4175987.07	2.28335
631675.47	4175986.92	2.24611	631656.09	4175986.77	2.33126
631636.70	4175986.62	2.56466	631617.32	4175986.46	2.68016
631597.94	4175986.31	2.77416	631578.55	4175986.16	2.47254
631559.17	4175986.01	2.17265	631539.79	4175985.86	2.08491
631520.40	4175985.71	2.03494	631501.02	4175985.56	1.99292
631481.64	4175985.40	1.94470	631462.25	4175985.25	1.88768
631442.87	4175985.10	1.82285	631423.49	4175984.95	1.75070
631404.10	4175984.80	1.67499	631384.72	4175984.65	1.59602
631365.34	4175984.50	1.51640	631345.95	4175984.35	1.43780
631326.57	4175984.19	1.36158	631307.19	4175984.04	1.28859
631287.80	4175983.89	1.21979			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.46734	632304.44	4174354.52	0.31126
632192.15	4174956.32	1.51469	632420.62	4175510.15	3.91597
632418.97	4175552.92	3.78508	631187.00	4175727.00	0.86153
631166.00	4175729.00	0.80661	631121.00	4175719.00	0.69340
631035.00	4174830.00	0.23350	631106.00	4174825.00	0.25200
631937.00	4174528.00	0.33661	631322.00	4174522.00	0.21208
629800.63	4173850.44	0.05013	630150.63	4173850.44	0.05752
630500.63	4173850.44	0.06784	630850.63	4173850.44	0.08203
631200.63	4173850.44	0.09672	631550.63	4173850.44	0.09978
631900.63	4173850.44	0.11354	632250.63	4173850.44	0.13948
632600.63	4173850.44	0.15380	632950.63	4173850.44	0.16463
633300.63	4173850.44	0.15704	629800.63	4174200.44	0.05940
630150.63	4174200.44	0.06968	630500.63	4174200.44	0.08381
630850.63	4174200.44	0.10531	631200.63	4174200.44	0.13447
631550.63	4174200.44	0.14942	631900.63	4174200.44	0.17897
632250.63	4174200.44	0.22929	632600.63	4174200.44	0.25670
632950.63	4174200.44	0.24549	633300.63	4174200.44	0.21119
629800.63	4174550.44	0.07005	630150.63	4174550.44	0.08596
630500.63	4174550.44	0.10825	630850.63	4174550.44	0.14250
631200.63	4174550.44	0.19748	631550.63	4174550.44	0.25286
631900.63	4174550.44	0.33576	632250.63	4174550.44	0.46796
632600.63	4174550.44	0.47367	632950.63	4174550.44	0.37357
633300.63	4174550.44	0.31584	629800.63	4174900.44	0.07923
630150.63	4174900.44	0.10262	630500.63	4174900.44	0.14051
630850.63	4174900.44	0.20588	631200.63	4174900.44	0.31579

631550.63	4174900.44	0.50385	631900.63	4174900.44	0.84005
632250.63	4174900.44	1.25423	632600.63	4174900.44	0.90312
632950.63	4174900.44	0.66264	633300.63	4174900.44	0.52742
629800.63	4175250.44	0.08687	630150.63	4175250.44	0.11555
630500.63	4175250.44	0.16610	630850.63	4175250.44	0.27546
631200.63	4175250.44	0.55434	631550.63	4175250.44	1.55827
631900.63	4175250.44	5.05584	632250.63	4175250.44	3.83812
632600.63	4175250.44	2.02350	632950.63	4175250.44	1.18012
633300.63	4175250.44	0.80928	629800.63	4175600.44	0.09046
630150.63	4175600.44	0.12267	630500.63	4175600.44	0.18092
630850.63	4175600.44	0.31772	631200.63	4175600.44	0.79277
631550.63	4175600.44	11.36831	631900.63	4175600.44	4.47617
632250.63	4175600.44	5.57966	632600.63	4175600.44	2.31824
632950.63	4175600.44	1.31674	633300.63	4175600.44	0.87502
629800.63	4175950.44	0.09415	630150.63	4175950.44	0.13102

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.20799	630850.63	4175950.44	0.41274
631200.63	4175950.44	0.96794	631550.63	4175950.44	3.10085
631900.63	4175950.44	1.39169	632250.63	4175950.44	1.20153
632600.63	4175950.44	1.05729	632950.63	4175950.44	0.81062
633300.63	4175950.44	0.61990	629800.63	4176300.44	0.10351
630150.63	4176300.44	0.14994	630500.63	4176300.44	0.23962
630850.63	4176300.44	0.42798	631200.63	4176300.44	0.71085
631550.63	4176300.44	0.82409	631900.63	4176300.44	0.74975
632250.63	4176300.44	0.67041	632600.63	4176300.44	0.58695
632950.63	4176300.44	0.47430	633300.63	4176300.44	0.39799
629800.63	4176650.44	0.11240	630150.63	4176650.44	0.15591
630500.63	4176650.44	0.23236	630850.63	4176650.44	0.34910
631200.63	4176650.44	0.44877	631550.63	4176650.44	0.51639
631900.63	4176650.44	0.47426	632250.63	4176650.44	0.42592
632600.63	4176650.44	0.40194	632950.63	4176650.44	0.33736
633300.63	4176650.44	0.28172	629800.63	4177000.44	0.11224
630150.63	4177000.44	0.14949	630500.63	4177000.44	0.20077
630850.63	4177000.44	0.25834	631200.63	4177000.44	0.30513
631550.63	4177000.44	0.34210	631900.63	4177000.44	0.32173
632250.63	4177000.44	0.30294	632600.63	4177000.44	0.27904
632950.63	4177000.44	0.25456	633300.63	4177000.44	0.22066
629800.63	4177350.44	0.10777	630150.63	4177350.44	0.13478
630500.63	4177350.44	0.16492	630850.63	4177350.44	0.19525
631200.63	4177350.44	0.22620	631550.63	4177350.44	0.23991
631900.63	4177350.44	0.23198	632250.63	4177350.44	0.22478

632600.63	4177350.44	0.20041	632950.63	4177350.44	0.19684
633300.63	4177350.44	0.17701	631670.70	4175493.59	32.04930
631669.80	4175641.41	14.16833	631665.32	4175796.39	3.36707
631417.17	4175826.85	2.47588	631417.17	4175673.66	2.93906
631422.55	4175484.63	1.58290	631268.42	4175983.74	1.13418
631275.69	4175523.99	0.95666	631345.65	4175419.50	1.11246
631384.72	4175441.30	1.30369	631491.93	4175442.21	2.08755
631491.93	4175414.95	2.05755	631385.63	4175413.14	1.25011
631358.37	4175395.87	1.11510	631409.25	4175336.81	1.18797
631567.35	4175235.96	1.57508	631756.33	4175028.80	0.93234
631807.22	4175003.36	0.94660	631867.18	4174987.91	1.05644
631849.92	4175988.28	1.32402	631268.74	4175963.75	1.14907
631269.05	4175943.76	1.16142	631269.37	4175923.77	1.17143
631269.68	4175903.78	1.17982	631270.00	4175883.79	1.18635
631270.32	4175863.81	1.19078	631270.63	4175843.82	1.19376

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.19458	631271.26	4175803.84	1.19261
631271.58	4175783.85	1.18873	631271.90	4175763.86	1.18181
631272.21	4175743.87	1.16861	631272.53	4175723.88	1.15351
631272.85	4175703.89	1.13141	631273.16	4175683.90	1.10499
631273.48	4175663.91	1.08355	631273.79	4175643.92	1.06611
631274.11	4175623.94	1.04663	631274.43	4175603.95	1.02494
631274.74	4175583.96	1.00309	631275.06	4175563.97	0.98281
631275.37	4175543.98	0.96800	631285.68	4175509.06	0.98157
631295.68	4175494.14	1.00251	631305.67	4175479.21	1.02210
631315.67	4175464.28	1.04446	631325.66	4175449.35	1.06964
631335.66	4175434.43	1.09329	631358.67	4175426.77	1.18283
631371.70	4175434.03	1.24907	631402.59	4175441.45	1.40527
631420.46	4175441.60	1.47565	631438.33	4175441.76	1.66514
631456.19	4175441.91	1.85136	631474.06	4175442.06	1.82986
631491.93	4175428.58	2.08406	631474.21	4175414.65	1.69755
631456.50	4175414.35	1.64499	631438.78	4175414.05	1.57198
631421.06	4175413.74	1.43039	631403.35	4175413.44	1.34687
631372.00	4175404.51	1.17126	631371.09	4175381.11	1.12192
631383.81	4175366.34	1.14885	631396.53	4175351.58	1.16844
631425.06	4175326.73	1.24097	631440.87	4175316.64	1.28740
631456.68	4175306.56	1.30205	631472.49	4175296.47	1.33499
631488.30	4175286.39	1.38081	631504.11	4175276.30	1.40082
631519.92	4175266.22	1.42897	631535.73	4175256.13	1.46793
631551.54	4175246.05	1.52363	631579.95	4175222.15	1.52241
631592.55	4175208.34	1.47502	631605.15	4175194.53	1.41743

631617.74	4175180.72	1.37097	631630.34	4175166.91	1.30993
631642.94	4175153.10	1.26608	631655.54	4175139.29	1.22701
631668.14	4175125.47	1.18598	631680.74	4175111.66	1.14520
631693.34	4175097.85	1.10380	631705.94	4175084.04	1.06433
631718.53	4175070.23	1.02769	631731.13	4175056.42	0.99299
631743.73	4175042.61	0.96056	631773.29	4175020.32	0.93504
631790.26	4175011.84	0.93974	631822.21	4174999.50	0.97141
631837.20	4174995.64	0.99809	631852.19	4174991.77	1.02671
631866.84	4175007.53	1.14034	631866.50	4175027.14	1.23274
631866.16	4175046.76	1.33978	631865.83	4175066.37	1.45830
631865.49	4175085.99	1.59751	631865.15	4175105.60	1.75498
631864.81	4175125.22	1.94106	631864.47	4175144.83	2.15452
631864.13	4175164.45	2.41142	631863.80	4175184.06	2.71125
631863.46	4175203.68	3.07228	631863.12	4175223.29	3.52866
631862.78	4175242.91	4.07858	631862.44	4175262.52	4.78585

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	5.90982	631861.77	4175301.75	8.55365
631861.43	4175321.37	12.04011	631861.09	4175340.98	14.49184
631860.75	4175360.60	19.93009	631860.41	4175380.21	22.87187
631860.07	4175399.83	29.02112	631859.73	4175419.44	33.39683
631859.40	4175439.06	47.56123	631859.06	4175458.67	69.15486
631858.72	4175478.29	88.62533	631858.38	4175497.90	103.62968
631858.04	4175517.52	70.31358	631857.70	4175537.13	33.66356
631857.37	4175556.75	14.73386	631857.03	4175576.36	6.43603
631856.69	4175595.98	3.75963	631856.35	4175615.59	2.76432
631856.01	4175635.21	2.33684	631855.67	4175654.82	2.16976
631855.33	4175674.44	1.84729	631855.00	4175694.05	1.70723
631854.66	4175713.67	1.53942	631854.32	4175733.28	1.41113
631853.98	4175752.90	1.25816	631853.64	4175772.51	1.12287
631853.30	4175792.13	1.02509	631852.97	4175811.74	1.00930
631852.63	4175831.36	0.91491	631852.29	4175850.97	0.90297
631851.95	4175870.59	0.88879	631851.61	4175890.20	0.91242
631851.27	4175909.82	1.09703	631850.94	4175929.43	1.66165
631850.60	4175949.05	1.50607	631850.26	4175968.66	1.39706
631830.54	4175988.13	1.33015	631811.15	4175987.98	1.34555
631791.77	4175987.83	1.38965	631772.39	4175987.67	1.46866
631753.00	4175987.52	1.57970	631733.62	4175987.37	1.70836
631714.24	4175987.22	1.82297	631694.85	4175987.07	1.89333
631675.47	4175986.92	1.92662	631656.09	4175986.77	2.04367
631636.70	4175986.62	2.19819	631617.32	4175986.46	2.19494
631597.94	4175986.31	2.00431	631578.55	4175986.16	1.74622

631559.17	4175986.01	1.66521	631539.79	4175985.86	1.62080
631520.40	4175985.71	1.58929	631501.02	4175985.56	1.57179
631481.64	4175985.40	1.55587	631462.25	4175985.25	1.53716
631442.87	4175985.10	1.51494	631423.49	4175984.95	1.48830
631404.10	4175984.80	1.45659	631384.72	4175984.65	1.42020
631365.34	4175984.50	1.37950	631345.95	4175984.35	1.33478
631326.57	4175984.19	1.28700	631307.19	4175984.04	1.23731
631287.80	4175983.89	1.18599			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	2.23662	632304.44	4174354.52	0.38426
632192.15	4174956.32	2.15069	632420.62	4175510.15	3.37046
632418.97	4175552.92	3.01986	631187.00	4175727.00	0.89979
631166.00	4175729.00	0.84710	631121.00	4175719.00	0.74029
631035.00	4174830.00	0.26373	631106.00	4174825.00	0.28699
631937.00	4174528.00	0.42378	631322.00	4174522.00	0.24115
629800.63	4173850.44	0.05254	630150.63	4173850.44	0.06056
630500.63	4173850.44	0.07165	630850.63	4173850.44	0.08737
631200.63	4173850.44	0.10519	631550.63	4173850.44	0.11028
631900.63	4173850.44	0.12697	632250.63	4173850.44	0.15796
632600.63	4173850.44	0.17515	632950.63	4173850.44	0.18429
633300.63	4173850.44	0.17013	629800.63	4174200.44	0.06240
630150.63	4174200.44	0.07388	630500.63	4174200.44	0.08951
630850.63	4174200.44	0.11339	631200.63	4174200.44	0.14790
631550.63	4174200.44	0.16997	631900.63	4174200.44	0.20870
632250.63	4174200.44	0.27360	632600.63	4174200.44	0.30336
632950.63	4174200.44	0.27401	633300.63	4174200.44	0.23314
629800.63	4174550.44	0.07297	630150.63	4174550.44	0.09090
630500.63	4174550.44	0.11661	630850.63	4174550.44	0.15603
631200.63	4174550.44	0.22175	631550.63	4174550.44	0.30092
631900.63	4174550.44	0.42243	632250.63	4174550.44	0.61019
632600.63	4174550.44	0.56134	632950.63	4174550.44	0.42933
633300.63	4174550.44	0.36310	629800.63	4174900.44	0.08143
630150.63	4174900.44	0.10646	630500.63	4174900.44	0.14853
630850.63	4174900.44	0.22567	631200.63	4174900.44	0.36746
631550.63	4174900.44	0.64854	631900.63	4174900.44	1.26576
632250.63	4174900.44	1.70730	632600.63	4174900.44	1.11302
632950.63	4174900.44	0.79186	633300.63	4174900.44	0.60828
629800.63	4175250.44	0.08850	630150.63	4175250.44	0.11862
630500.63	4175250.44	0.17187	630850.63	4175250.44	0.28737
631200.63	4175250.44	0.61892	631550.63	4175250.44	2.23699
631900.63	4175250.44	12.47667	632250.63	4175250.44	5.70186

632600.63	4175250.44	2.33850	632950.63	4175250.44	1.30552
633300.63	4175250.44	0.86798	629800.63	4175600.44	0.09127
630150.63	4175600.44	0.12431	630500.63	4175600.44	0.18576
630850.63	4175600.44	0.33669	631200.63	4175600.44	0.84774
631550.63	4175600.44	7.86364	631900.63	4175600.44	1.00613
632250.63	4175600.44	3.15484	632600.63	4175600.44	1.93870
632950.63	4175600.44	1.19166	633300.63	4175600.44	0.81924
629800.63	4175950.44	0.09599	630150.63	4175950.44	0.13590

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.22074	630850.63	4175950.44	0.42844
631200.63	4175950.44	0.92847	631550.63	4175950.44	2.30368
631900.63	4175950.44	1.14085	632250.63	4175950.44	0.96775
632600.63	4175950.44	0.84352	632950.63	4175950.44	0.68664
633300.63	4175950.44	0.54526	629800.63	4176300.44	0.10693
630150.63	4176300.44	0.15406	630500.63	4176300.44	0.24135
630850.63	4176300.44	0.41849	631200.63	4176300.44	0.63125
631550.63	4176300.44	0.72494	631900.63	4176300.44	0.64465
632250.63	4176300.44	0.57758	632600.63	4176300.44	0.52021
632950.63	4176300.44	0.42604	633300.63	4176300.44	0.35441
629800.63	4176650.44	0.11313	630150.63	4176650.44	0.15541
630500.63	4176650.44	0.22761	630850.63	4176650.44	0.32665
631200.63	4176650.44	0.40570	631550.63	4176650.44	0.46438
631900.63	4176650.44	0.41927	632250.63	4176650.44	0.38601
632600.63	4176650.44	0.36558	632950.63	4176650.44	0.31020
633300.63	4176650.44	0.26238	629800.63	4177000.44	0.11139
630150.63	4177000.44	0.14644	630500.63	4177000.44	0.19180
630850.63	4177000.44	0.24147	631200.63	4177000.44	0.28232
631550.63	4177000.44	0.31145	631900.63	4177000.44	0.29087
632250.63	4177000.44	0.28049	632600.63	4177000.44	0.25348
632950.63	4177000.44	0.23785	633300.63	4177000.44	0.20653
629800.63	4177350.44	0.10580	630150.63	4177350.44	0.13013
630500.63	4177350.44	0.15663	630850.63	4177350.44	0.18290
631200.63	4177350.44	0.21205	631550.63	4177350.44	0.22113
631900.63	4177350.44	0.21336	632250.63	4177350.44	0.20950
632600.63	4177350.44	0.18602	632950.63	4177350.44	0.18268
633300.63	4177350.44	0.16770	631670.70	4175493.59	20.80322
631669.80	4175641.41	9.01857	631665.32	4175796.39	2.54448
631417.17	4175826.85	2.94607	631417.17	4175673.66	2.71057
631422.55	4175484.63	1.41525	631268.42	4175983.74	1.02951
631275.69	4175523.99	1.00554	631345.65	4175419.50	1.20937
631384.72	4175441.30	1.26171	631491.93	4175442.21	1.49857

631491.93	4175414.95	1.64877	631385.63	4175413.14	1.28817
631358.37	4175395.87	1.20553	631409.25	4175336.81	1.41166
631567.35	4175235.96	2.27477	631756.33	4175028.80	1.40838
631807.22	4175003.36	1.45753	631867.18	4174987.91	1.69142
631849.92	4175988.28	1.03715	631268.74	4175963.75	1.05317
631269.05	4175943.76	1.07541	631269.37	4175923.77	1.09579
631269.68	4175903.78	1.11336	631270.00	4175883.79	1.12819
631270.32	4175863.81	1.14026	631270.63	4175843.82	1.14961

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	1.15654	631271.26	4175803.84	1.16118
631271.58	4175783.85	1.16514	631271.90	4175763.86	1.16675
631272.21	4175743.87	1.16152	631272.53	4175723.88	1.15888
631272.85	4175703.89	1.14628	631273.16	4175683.90	1.13084
631273.48	4175663.91	1.12397	631273.79	4175643.92	1.12969
631274.11	4175623.94	1.13164	631274.43	4175603.95	1.08305
631274.74	4175583.96	1.04461	631275.06	4175563.97	1.02409
631275.37	4175543.98	1.01265	631285.68	4175509.06	1.04597
631295.68	4175494.14	1.05023	631305.67	4175479.21	1.03053
631315.67	4175464.28	1.06773	631325.66	4175449.35	1.10411
631335.66	4175434.43	1.15154	631358.67	4175426.77	1.26806
631371.70	4175434.03	1.29947	631402.59	4175441.45	1.35931
631420.46	4175441.60	1.45672	631438.33	4175441.76	1.74285
631456.19	4175441.91	1.89829	631474.06	4175442.06	1.42636
631491.93	4175428.58	1.56943	631474.21	4175414.65	1.52317
631456.50	4175414.35	1.88445	631438.78	4175414.05	1.74808
631421.06	4175413.74	1.49762	631403.35	4175413.44	1.39009
631372.00	4175404.51	1.21627	631371.09	4175381.11	1.22275
631383.81	4175366.34	1.28923	631396.53	4175351.58	1.34788
631425.06	4175326.73	1.51123	631440.87	4175316.64	1.57362
631456.68	4175306.56	1.59380	631472.49	4175296.47	1.70083
631488.30	4175286.39	1.80443	631504.11	4175276.30	1.90339
631519.92	4175266.22	1.99351	631535.73	4175256.13	2.09407
631551.54	4175246.05	2.19971	631579.95	4175222.15	2.24228
631592.55	4175208.34	2.20208	631605.15	4175194.53	2.14408
631617.74	4175180.72	2.09320	631630.34	4175166.91	2.03410
631642.94	4175153.10	1.97840	631655.54	4175139.29	1.91507
631668.14	4175125.47	1.84683	631680.74	4175111.66	1.77811
631693.34	4175097.85	1.71316	631705.94	4175084.04	1.64175
631718.53	4175070.23	1.57315	631731.13	4175056.42	1.51582
631743.73	4175042.61	1.45610	631773.29	4175020.32	1.42286
631790.26	4175011.84	1.43442	631822.21	4174999.50	1.50920

631837.20	4174995.64	1.56994	631852.19	4174991.77	1.63152
631866.84	4175007.53	1.86391	631866.50	4175027.14	2.06815
631866.16	4175046.76	2.30384	631865.83	4175066.37	2.58205
631865.49	4175085.99	2.91786	631865.15	4175105.60	3.32947
631864.81	4175125.22	3.82628	631864.47	4175144.83	4.43861
631864.13	4175164.45	5.20751	631863.80	4175184.06	6.18349
631863.46	4175203.68	7.41258	631863.12	4175223.29	9.02309
631862.78	4175242.91	11.08725	631862.44	4175262.52	13.72538

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	17.26183	631861.77	4175301.75	24.08532
631861.43	4175321.37	34.77788	631861.09	4175340.98	41.11948
631860.75	4175360.60	50.29488	631860.41	4175380.21	58.78541
631860.07	4175399.83	62.60845	631859.73	4175419.44	29.60531
631859.40	4175439.06	10.97302	631859.06	4175458.67	5.20372
631858.72	4175478.29	2.81141	631858.38	4175497.90	1.97047
631858.04	4175517.52	1.70972	631857.70	4175537.13	1.48016
631857.37	4175556.75	1.37185	631857.03	4175576.36	1.52222
631856.69	4175595.98	1.65253	631856.35	4175615.59	1.74577
631856.01	4175635.21	1.69050	631855.67	4175654.82	1.53466
631855.33	4175674.44	1.44647	631855.00	4175694.05	1.29494
631854.66	4175713.67	1.18229	631854.32	4175733.28	1.16935
631853.98	4175752.90	1.01470	631853.64	4175772.51	0.88034
631853.30	4175792.13	0.86777	631852.97	4175811.74	0.85275
631852.63	4175831.36	0.76062	631852.29	4175850.97	0.75239
631851.95	4175870.59	0.66944	631851.61	4175890.20	0.74057
631851.27	4175909.82	0.79870	631850.94	4175929.43	1.26158
631850.60	4175949.05	1.16215	631850.26	4175968.66	1.08740
631830.54	4175988.13	1.01843	631811.15	4175987.98	1.03075
631791.77	4175987.83	1.05650	631772.39	4175987.67	1.14204
631753.00	4175987.52	1.25250	631733.62	4175987.37	1.39465
631714.24	4175987.22	1.50787	631694.85	4175987.07	1.54873
631675.47	4175986.92	1.55870	631656.09	4175986.77	1.63503
631636.70	4175986.62	1.77339	631617.32	4175986.46	1.68319
631597.94	4175986.31	1.40621	631578.55	4175986.16	1.35639
631559.17	4175986.01	1.33228	631539.79	4175985.86	1.30022
631520.40	4175985.71	1.26554	631501.02	4175985.56	1.24701
631481.64	4175985.40	1.23930	631462.25	4175985.25	1.23056
631442.87	4175985.10	1.22163	631423.49	4175984.95	1.21024
631404.10	4175984.80	1.19651	631384.72	4175984.65	1.18041
631365.34	4175984.50	1.16147	631345.95	4175984.35	1.14014
631326.57	4175984.19	1.11594	631307.19	4175984.04	1.08924

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.71291	632304.44	4174354.52	0.21491
632192.15	4174956.32	0.72296	632420.62	4175510.15	1.94296
632418.97	4175552.92	2.11634	631187.00	4175727.00	1.32776
631166.00	4175729.00	1.21914	631121.00	4175719.00	1.01040
631035.00	4174830.00	0.20581	631106.00	4174825.00	0.21751
631937.00	4174528.00	0.24909	631322.00	4174522.00	0.15735
629800.63	4173850.44	0.04770	630150.63	4173850.44	0.05516
630500.63	4173850.44	0.06482	630850.63	4173850.44	0.07447
631200.63	4173850.44	0.07709	631550.63	4173850.44	0.08050
631900.63	4173850.44	0.09893	632250.63	4173850.44	0.11014
632600.63	4173850.44	0.11786	632950.63	4173850.44	0.12383
633300.63	4173850.44	0.11929	629800.63	4174200.44	0.05613
630150.63	4174200.44	0.06567	630500.63	4174200.44	0.07949
630850.63	4174200.44	0.09742	631200.63	4174200.44	0.10746
631550.63	4174200.44	0.11420	631900.63	4174200.44	0.14817
632250.63	4174200.44	0.16730	632600.63	4174200.44	0.18014
632950.63	4174200.44	0.17298	633300.63	4174200.44	0.15235
629800.63	4174550.44	0.06767	630150.63	4174550.44	0.08088
630500.63	4174550.44	0.10088	630850.63	4174550.44	0.13163
631200.63	4174550.44	0.16093	631550.63	4174550.44	0.17773
631900.63	4174550.44	0.25298	632250.63	4174550.44	0.30021
632600.63	4174550.44	0.29602	632950.63	4174550.44	0.24200
633300.63	4174550.44	0.20737	629800.63	4174900.44	0.08194
630150.63	4174900.44	0.10283	630500.63	4174900.44	0.13419
630850.63	4174900.44	0.18586	631200.63	4174900.44	0.25885
631550.63	4174900.44	0.31094	631900.63	4174900.44	0.52407
632250.63	4174900.44	0.63013	632600.63	4174900.44	0.48421
632950.63	4174900.44	0.37151	633300.63	4174900.44	0.31448
629800.63	4175250.44	0.09490	630150.63	4175250.44	0.12754
630500.63	4175250.44	0.18394	630850.63	4175250.44	0.28385
631200.63	4175250.44	0.46973	631550.63	4175250.44	0.72608
631900.63	4175250.44	1.63175	632250.63	4175250.44	1.28291
632600.63	4175250.44	0.88737	632950.63	4175250.44	0.63175
633300.63	4175250.44	0.49372	629800.63	4175600.44	0.10535
630150.63	4175600.44	0.14680	630500.63	4175600.44	0.22705
630850.63	4175600.44	0.42577	631200.63	4175600.44	1.09169
631550.63	4175600.44	2.16396	631900.63	4175600.44	6.45047
632250.63	4175600.44	3.32649	632600.63	4175600.44	1.57366
632950.63	4175600.44	0.95718	633300.63	4175600.44	0.67956

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.25467	630850.63	4175950.44	0.53029
631200.63	4175950.44	1.91809	631550.63	4175950.44	7.89625
631900.63	4175950.44	4.12310	632250.63	4175950.44	2.85050
632600.63	4175950.44	1.49536	632950.63	4175950.44	0.96221
633300.63	4175950.44	0.68501	629800.63	4176300.44	0.11732
630150.63	4176300.44	0.17613	630500.63	4176300.44	0.31170
630850.63	4176300.44	0.68442	631200.63	4176300.44	1.53387
631550.63	4176300.44	1.46563	631900.63	4176300.44	1.11366
632250.63	4176300.44	0.97445	632600.63	4176300.44	0.81690
632950.63	4176300.44	0.63271	633300.63	4176300.44	0.50036
629800.63	4176650.44	0.13234	630150.63	4176650.44	0.19834
630500.63	4176650.44	0.32723	630850.63	4176650.44	0.56610
631200.63	4176650.44	0.77655	631550.63	4176650.44	0.76698
631900.63	4176650.44	0.64217	632250.63	4176650.44	0.58514
632600.63	4176650.44	0.48131	632950.63	4176650.44	0.39614
633300.63	4176650.44	0.34006	629800.63	4177000.44	0.13775
630150.63	4177000.44	0.19466	630500.63	4177000.44	0.28238
630850.63	4177000.44	0.38706	631200.63	4177000.44	0.47564
631550.63	4177000.44	0.47066	631900.63	4177000.44	0.42749
632250.63	4177000.44	0.39012	632600.63	4177000.44	0.34061
632950.63	4177000.44	0.28815	633300.63	4177000.44	0.24411
629800.63	4177350.44	0.13335	630150.63	4177350.44	0.17490
630500.63	4177350.44	0.22329	630850.63	4177350.44	0.27065
631200.63	4177350.44	0.31859	631550.63	4177350.44	0.31357
631900.63	4177350.44	0.29923	632250.63	4177350.44	0.26503
632600.63	4177350.44	0.25534	632950.63	4177350.44	0.22269
633300.63	4177350.44	0.19565	631670.70	4175493.59	3.47216
631669.80	4175641.41	9.88980	631665.32	4175796.39	10.41440
631417.17	4175826.85	7.30812	631417.17	4175673.66	2.43356
631422.55	4175484.63	1.09446	631268.42	4175983.74	2.88315
631275.69	4175523.99	1.27898	631345.65	4175419.50	1.09112
631384.72	4175441.30	1.02775	631491.93	4175442.21	1.01479
631491.93	4175414.95	0.89699	631385.63	4175413.14	0.94770
631358.37	4175395.87	0.97716	631409.25	4175336.81	1.00617
631567.35	4175235.96	0.70373	631756.33	4175028.80	0.60747
631807.22	4175003.36	0.61361	631867.18	4174987.91	0.63728
631849.92	4175988.28	2.85510	631268.74	4175963.75	2.84796
631269.05	4175943.76	2.78832	631269.37	4175923.77	2.70652
631269.68	4175903.78	2.61106	631270.00	4175883.79	2.51155

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.28234	631271.26	4175803.84	2.23895
631271.58	4175783.85	2.20144	631271.90	4175763.86	2.15957
631272.21	4175743.87	2.08958	631272.53	4175723.88	2.00789
631272.85	4175703.89	1.87919	631273.16	4175683.90	1.76202
631273.48	4175663.91	1.60095	631273.79	4175643.92	1.74955
631274.11	4175623.94	1.60249	631274.43	4175603.95	1.46374
631274.74	4175583.96	1.33102	631275.06	4175563.97	1.22600
631275.37	4175543.98	1.31533	631285.68	4175509.06	1.23003
631295.68	4175494.14	1.13572	631305.67	4175479.21	1.08388
631315.67	4175464.28	1.03062	631325.66	4175449.35	1.00779
631335.66	4175434.43	1.16101	631358.67	4175426.77	0.95769
631371.70	4175434.03	1.03163	631402.59	4175441.45	1.01712
631420.46	4175441.60	1.04086	631438.33	4175441.76	1.09496
631456.19	4175441.91	0.99449	631474.06	4175442.06	0.97632
631491.93	4175428.58	0.91045	631474.21	4175414.65	0.92708
631456.50	4175414.35	0.90694	631438.78	4175414.05	0.97616
631421.06	4175413.74	1.03574	631403.35	4175413.44	0.94244
631372.00	4175404.51	1.02459	631371.09	4175381.11	0.90604
631383.81	4175366.34	1.11133	631396.53	4175351.58	1.06258
631425.06	4175326.73	0.90216	631440.87	4175316.64	0.91916
631456.68	4175306.56	0.87142	631472.49	4175296.47	0.81686
631488.30	4175286.39	0.77044	631504.11	4175276.30	0.76901
631519.92	4175266.22	0.72256	631535.73	4175256.13	0.73713
631551.54	4175246.05	0.70169	631579.95	4175222.15	0.68934
631592.55	4175208.34	0.69892	631605.15	4175194.53	0.68555
631617.74	4175180.72	0.69242	631630.34	4175166.91	0.69334
631642.94	4175153.10	0.68793	631655.54	4175139.29	0.68251
631668.14	4175125.47	0.67572	631680.74	4175111.66	0.66720
631693.34	4175097.85	0.65775	631705.94	4175084.04	0.64778
631718.53	4175070.23	0.63883	631731.13	4175056.42	0.62832
631743.73	4175042.61	0.61741	631773.29	4175020.32	0.61048
631790.26	4175011.84	0.61249	631822.21	4174999.50	0.62006
631837.20	4174995.64	0.62607	631852.19	4174991.77	0.63185
631866.84	4175007.53	0.67411	631866.50	4175027.14	0.71382
631866.16	4175046.76	0.75782	631865.83	4175066.37	0.80554
631865.49	4175085.99	0.85845	631865.15	4175105.60	0.91615
631864.81	4175125.22	0.98036	631864.47	4175144.83	1.05061
631864.13	4175164.45	1.12824	631863.80	4175184.06	1.21421
631863.46	4175203.68	1.30854	631863.12	4175223.29	1.41224

631862.78 4175242.91 1.52848 631862.44 4175262.52 1.65699

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	1.81775	631861.77	4175301.75	2.31256
631861.43	4175321.37	3.42265	631861.09	4175340.98	3.88821
631860.75	4175360.60	4.34491	631860.41	4175380.21	4.32621
631860.07	4175399.83	4.65369	631859.73	4175419.44	4.83854
631859.40	4175439.06	5.10414	631859.06	4175458.67	5.33855
631858.72	4175478.29	5.48567	631858.38	4175497.90	5.63414
631858.04	4175517.52	5.74368	631857.70	4175537.13	5.82186
631857.37	4175556.75	5.87755	631857.03	4175576.36	5.94267
631856.69	4175595.98	6.05388	631856.35	4175615.59	6.21952
631856.01	4175635.21	6.59056	631855.67	4175654.82	7.20471
631855.33	4175674.44	8.28699	631855.00	4175694.05	10.57841
631854.66	4175713.67	14.23327	631854.32	4175733.28	17.58606
631853.98	4175752.90	13.84060	631853.64	4175772.51	15.18750
631853.30	4175792.13	15.78339	631852.97	4175811.74	15.45452
631852.63	4175831.36	14.20427	631852.29	4175850.97	12.27492
631851.95	4175870.59	10.07258	631851.61	4175890.20	7.99415
631851.27	4175909.82	6.26078	631850.94	4175929.43	4.93521
631850.60	4175949.05	3.98246	631850.26	4175968.66	3.31646
631830.54	4175988.13	2.83653	631811.15	4175987.98	2.83864
631791.77	4175987.83	2.86293	631772.39	4175987.67	2.91755
631753.00	4175987.52	3.00682	631733.62	4175987.37	3.06158
631714.24	4175987.22	2.93222	631694.85	4175987.07	2.76697
631675.47	4175986.92	2.17849	631656.09	4175986.77	2.30168
631636.70	4175986.62	1.95226	631617.32	4175986.46	2.60346
631597.94	4175986.31	3.04802	631578.55	4175986.16	3.84607
631559.17	4175986.01	4.97718	631539.79	4175985.86	5.53417
631520.40	4175985.71	5.95092	631501.02	4175985.56	6.26562
631481.64	4175985.40	6.39426	631462.25	4175985.25	6.41524
631442.87	4175985.10	6.32117	631423.49	4175984.95	6.10817
631404.10	4175984.80	5.78605	631384.72	4175984.65	5.38205
631365.34	4175984.50	4.92589	631345.95	4175984.35	4.45647
631326.57	4175984.19	4.00647	631307.19	4175984.04	3.59127
631287.80	4175983.89	3.21726			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	0.90488	632304.44	4174354.52	0.24907
632192.15	4174956.32	0.88995	632420.62	4175510.15	2.30291
632418.97	4175552.92	2.41367	631187.00	4175727.00	1.55154
631166.00	4175729.00	1.40881	631121.00	4175719.00	1.14031
631035.00	4174830.00	0.23135	631106.00	4174825.00	0.24709
631937.00	4174528.00	0.29152	631322.00	4174522.00	0.17833
629800.63	4173850.44	0.04982	630150.63	4173850.44	0.05776
630500.63	4173850.44	0.06835	630850.63	4173850.44	0.07973
631200.63	4173850.44	0.08359	631550.63	4173850.44	0.08752
631900.63	4173850.44	0.10830	632250.63	4173850.44	0.12095
632600.63	4173850.44	0.13070	632950.63	4173850.44	0.13570
633300.63	4173850.44	0.12760	629800.63	4174200.44	0.05908
630150.63	4174200.44	0.06932	630500.63	4174200.44	0.08440
630850.63	4174200.44	0.10493	631200.63	4174200.44	0.11836
631550.63	4174200.44	0.12675	631900.63	4174200.44	0.16613
632250.63	4174200.44	0.18980	632600.63	4174200.44	0.20364
632950.63	4174200.44	0.18862	633300.63	4174200.44	0.16435
629800.63	4174550.44	0.07156	630150.63	4174550.44	0.08632
630500.63	4174550.44	0.10831	630850.63	4174550.44	0.14318
631200.63	4174550.44	0.18109	631550.63	4174550.44	0.20458
631900.63	4174550.44	0.29686	632250.63	4174550.44	0.35727
632600.63	4174550.44	0.33371	632950.63	4174550.44	0.26733
633300.63	4174550.44	0.23066	629800.63	4174900.44	0.08601
630150.63	4174900.44	0.11003	630500.63	4174900.44	0.14655
630850.63	4174900.44	0.20696	631200.63	4174900.44	0.30180
631550.63	4174900.44	0.38520	631900.63	4174900.44	0.67983
632250.63	4174900.44	0.76143	632600.63	4174900.44	0.55626
632950.63	4174900.44	0.42754	633300.63	4174900.44	0.35797
629800.63	4175250.44	0.09797	630150.63	4175250.44	0.13349
630500.63	4175250.44	0.19863	630850.63	4175250.44	0.32721
631200.63	4175250.44	0.58963	631550.63	4175250.44	1.10987
631900.63	4175250.44	2.36311	632250.63	4175250.44	1.60771
632600.63	4175250.44	1.06901	632950.63	4175250.44	0.72880
633300.63	4175250.44	0.55204	629800.63	4175600.44	0.10742
630150.63	4175600.44	0.15113	630500.63	4175600.44	0.23705
630850.63	4175600.44	0.46250	631200.63	4175600.44	1.40686
631550.63	4175600.44	9.28925	631900.63	4175600.44	15.61108
632250.63	4175600.44	3.96759	632600.63	4175600.44	1.66640
632950.63	4175600.44	1.01121	633300.63	4175600.44	0.70842
629800.63	4175950.44	0.11172	630150.63	4175950.44	0.16084

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*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.26667	630850.63	4175950.44	0.60164
631200.63	4175950.44	2.06712	631550.63	4175950.44	3.48762
631900.63	4175950.44	2.14172	632250.63	4175950.44	2.11413
632600.63	4175950.44	1.31417	632950.63	4175950.44	0.87756
633300.63	4175950.44	0.64125	629800.63	4176300.44	0.12120
630150.63	4176300.44	0.18471	630500.63	4176300.44	0.32568
630850.63	4176300.44	0.66714	631200.63	4176300.44	1.15498
631550.63	4176300.44	1.12267	631900.63	4176300.44	0.90964
632250.63	4176300.44	0.82111	632600.63	4176300.44	0.68612
632950.63	4176300.44	0.55305	633300.63	4176300.44	0.44747
629800.63	4176650.44	0.13546	630150.63	4176650.44	0.19955
630500.63	4176650.44	0.31895	630850.63	4176650.44	0.50254
631200.63	4176650.44	0.63046	631550.63	4176650.44	0.64301
631900.63	4176650.44	0.55699	632250.63	4176650.44	0.52224
632600.63	4176650.44	0.43659	632950.63	4176650.44	0.35644
633300.63	4176650.44	0.30607	629800.63	4177000.44	0.13716
630150.63	4177000.44	0.19053	630500.63	4177000.44	0.26501
630850.63	4177000.44	0.34392	631200.63	4177000.44	0.41085
631550.63	4177000.44	0.41267	631900.63	4177000.44	0.38439
632250.63	4177000.44	0.34748	632600.63	4177000.44	0.31393
632950.63	4177000.44	0.26786	633300.63	4177000.44	0.22766
629800.63	4177350.44	0.13095	630150.63	4177350.44	0.16778
630500.63	4177350.44	0.20824	630850.63	4177350.44	0.24607
631200.63	4177350.44	0.28607	631550.63	4177350.44	0.28306
631900.63	4177350.44	0.27341	632250.63	4177350.44	0.24190
632600.63	4177350.44	0.23549	632950.63	4177350.44	0.20870
633300.63	4177350.44	0.18454	631670.70	4175493.59	7.45924
631669.80	4175641.41	29.69476	631665.32	4175796.39	5.40613
631417.17	4175826.85	8.89294	631417.17	4175673.66	7.55761
631422.55	4175484.63	1.75094	631268.42	4175983.74	2.57184
631275.69	4175523.99	1.66457	631345.65	4175419.50	1.52688
631384.72	4175441.30	1.59478	631491.93	4175442.21	1.58283
631491.93	4175414.95	1.42023	631385.63	4175413.14	1.32128
631358.37	4175395.87	1.37701	631409.25	4175336.81	1.39203
631567.35	4175235.96	1.03535	631756.33	4175028.80	0.82156
631807.22	4175003.36	0.82513	631867.18	4174987.91	0.85588
631849.92	4175988.28	1.86938	631268.74	4175963.75	2.66342
631269.05	4175943.76	2.74404	631269.37	4175923.77	2.81149
631269.68	4175903.78	2.86218	631270.00	4175883.79	2.89655
631270.32	4175863.81	2.91554	631270.63	4175843.82	2.91995

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.90183	631271.26	4175803.84	2.86003
631271.58	4175783.85	2.80579	631271.90	4175763.86	2.72128
631272.21	4175743.87	2.60667	631272.53	4175723.88	2.48989
631272.85	4175703.89	2.36738	631273.16	4175683.90	2.26936
631273.48	4175663.91	2.21126	631273.79	4175643.92	2.21930
631274.11	4175623.94	2.16413	631274.43	4175603.95	1.99845
631274.74	4175583.96	1.81560	631275.06	4175563.97	1.70791
631275.37	4175543.98	1.71282	631285.68	4175509.06	1.62671
631295.68	4175494.14	1.55144	631305.67	4175479.21	1.45480
631315.67	4175464.28	1.38066	631325.66	4175449.35	1.42482
631335.66	4175434.43	1.55539	631358.67	4175426.77	1.46130
631371.70	4175434.03	1.54439	631402.59	4175441.45	1.53029
631420.46	4175441.60	1.53997	631438.33	4175441.76	1.69691
631456.19	4175441.91	1.61453	631474.06	4175442.06	1.55365
631491.93	4175428.58	1.49136	631474.21	4175414.65	1.35793
631456.50	4175414.35	1.37431	631438.78	4175414.05	1.51131
631421.06	4175413.74	1.49481	631403.35	4175413.44	1.43347
631372.00	4175404.51	1.46293	631371.09	4175381.11	1.26778
631383.81	4175366.34	1.33775	631396.53	4175351.58	1.41847
631425.06	4175326.73	1.27019	631440.87	4175316.64	1.27539
631456.68	4175306.56	1.24851	631472.49	4175296.47	1.19953
631488.30	4175286.39	1.16378	631504.11	4175276.30	1.10666
631519.92	4175266.22	1.09450	631535.73	4175256.13	1.08323
631551.54	4175246.05	1.05939	631579.95	4175222.15	1.02364
631592.55	4175208.34	1.02908	631605.15	4175194.53	0.98392
631617.74	4175180.72	0.99364	631630.34	4175166.91	0.98748
631642.94	4175153.10	0.97868	631655.54	4175139.29	0.96674
631668.14	4175125.47	0.94893	631680.74	4175111.66	0.93133
631693.34	4175097.85	0.91311	631705.94	4175084.04	0.89420
631718.53	4175070.23	0.87712	631731.13	4175056.42	0.85864
631743.73	4175042.61	0.84013	631773.29	4175020.32	0.82438
631790.26	4175011.84	0.82536	631822.21	4174999.50	0.83415
631837.20	4174995.64	0.84202	631852.19	4174991.77	0.84897
631866.84	4175007.53	0.91341	631866.50	4175027.14	0.97650
631866.16	4175046.76	1.04647	631865.83	4175066.37	1.12360
631865.49	4175085.99	1.20877	631865.15	4175105.60	1.30288
631864.81	4175125.22	1.40657	631864.47	4175144.83	1.52132
631864.13	4175164.45	1.64771	631863.80	4175184.06	1.78676
631863.46	4175203.68	1.94002	631863.12	4175223.29	2.10754
631862.78	4175242.91	2.29142	631862.44	4175262.52	2.49349

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	2.72672	631861.77	4175301.75	3.17526
631861.43	4175321.37	4.92131	631861.09	4175340.98	6.03129
631860.75	4175360.60	7.84769	631860.41	4175380.21	7.80476
631860.07	4175399.83	8.70430	631859.73	4175419.44	8.63321
631859.40	4175439.06	9.09333	631859.06	4175458.67	9.78194
631858.72	4175478.29	10.04449	631858.38	4175497.90	10.89779
631858.04	4175517.52	12.03658	631857.70	4175537.13	13.40234
631857.37	4175556.75	14.94183	631857.03	4175576.36	16.92147
631856.69	4175595.98	22.31205	631856.35	4175615.59	27.07434
631856.01	4175635.21	30.37946	631855.67	4175654.82	31.15243
631855.33	4175674.44	29.15111	631855.00	4175694.05	25.93604
631854.66	4175713.67	21.80781	631854.32	4175733.28	18.54790
631853.98	4175752.90	14.82225	631853.64	4175772.51	11.25050
631853.30	4175792.13	8.90017	631852.97	4175811.74	7.00556
631852.63	4175831.36	5.32584	631852.29	4175850.97	4.27508
631851.95	4175870.59	3.51682	631851.61	4175890.20	3.00338
631851.27	4175909.82	2.65737	631850.94	4175929.43	2.38654
631850.60	4175949.05	2.17553	631850.26	4175968.66	2.00684
631830.54	4175988.13	1.89665	631811.15	4175987.98	1.92815
631791.77	4175987.83	1.96248	631772.39	4175987.67	2.00070
631753.00	4175987.52	2.04632	631733.62	4175987.37	2.12289
631714.24	4175987.22	2.34396	631694.85	4175987.07	2.40047
631675.47	4175986.92	2.33211	631656.09	4175986.77	2.21003
631636.70	4175986.62	2.04421	631617.32	4175986.46	2.28338
631597.94	4175986.31	2.39653	631578.55	4175986.16	2.48670
631559.17	4175986.01	2.77328	631539.79	4175985.86	2.91852
631520.40	4175985.71	2.99604	631501.02	4175985.56	3.05334
631481.64	4175985.40	3.11820	631462.25	4175985.25	3.15946
631442.87	4175985.10	3.18897	631423.49	4175984.95	3.20970
631404.10	4175984.80	3.21350	631384.72	4175984.65	3.20233
631365.34	4175984.50	3.16325	631345.95	4175984.35	3.09243
631326.57	4175984.19	2.99267	631307.19	4175984.04	2.86759
631287.80	4175983.89	2.72456			

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.12021	632304.44	4174354.52	0.29112
632192.15	4174956.32	1.06825	632420.62	4175510.15	2.43410
632418.97	4175552.92	2.43487	631187.00	4175727.00	1.81903
631166.00	4175729.00	1.65074	631121.00	4175719.00	1.33471
631035.00	4174830.00	0.26512	631106.00	4174825.00	0.28585
631937.00	4174528.00	0.34865	631322.00	4174522.00	0.20488
629800.63	4173850.44	0.05215	630150.63	4173850.44	0.06063
630500.63	4173850.44	0.07224	630850.63	4173850.44	0.08558
631200.63	4173850.44	0.09109	631550.63	4173850.44	0.09568
631900.63	4173850.44	0.11933	632250.63	4173850.44	0.13390
632600.63	4173850.44	0.14576	632950.63	4173850.44	0.14853
633300.63	4173850.44	0.13648	629800.63	4174200.44	0.06229
630150.63	4174200.44	0.07344	630500.63	4174200.44	0.08998
630850.63	4174200.44	0.11356	631200.63	4174200.44	0.13137
631550.63	4174200.44	0.14193	631900.63	4174200.44	0.18833
632250.63	4174200.44	0.21793	632600.63	4174200.44	0.23012
632950.63	4174200.44	0.20544	633300.63	4174200.44	0.17860
629800.63	4174550.44	0.07565	630150.63	4174550.44	0.09234
630500.63	4174550.44	0.11709	630850.63	4174550.44	0.15727
631200.63	4174550.44	0.20630	631550.63	4174550.44	0.23939
631900.63	4174550.44	0.35620	632250.63	4174550.44	0.42730
632600.63	4174550.44	0.37389	632950.63	4174550.44	0.29819
633300.63	4174550.44	0.25908	629800.63	4174900.44	0.08983
630150.63	4174900.44	0.11727	630500.63	4174900.44	0.16104
630850.63	4174900.44	0.23470	631200.63	4174900.44	0.36004
631550.63	4174900.44	0.49368	631900.63	4174900.44	0.90838
632250.63	4174900.44	0.90095	632600.63	4174900.44	0.64641
632950.63	4174900.44	0.49518	633300.63	4174900.44	0.40806
629800.63	4175250.44	0.10103	630150.63	4175250.44	0.13894
630500.63	4175250.44	0.21170	630850.63	4175250.44	0.37657
631200.63	4175250.44	0.77415	631550.63	4175250.44	1.70414
631900.63	4175250.44	3.22691	632250.63	4175250.44	2.08454
632600.63	4175250.44	1.26921	632950.63	4175250.44	0.82495
633300.63	4175250.44	0.60846	629800.63	4175600.44	0.10871
630150.63	4175600.44	0.15403	630500.63	4175600.44	0.24405
630850.63	4175600.44	0.48139	631200.63	4175600.44	1.61012
631550.63	4175600.44	0.00000	631900.63	4175600.44	16.22002
632250.63	4175600.44	3.89987	632600.63	4175600.44	1.65593
632950.63	4175600.44	1.02443	633300.63	4175600.44	0.71599
629800.63	4175950.44	0.11345	630150.63	4175950.44	0.16551

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.28508	630850.63	4175950.44	0.65141
631200.63	4175950.44	1.82584	631550.63	4175950.44	2.11246
631900.63	4175950.44	1.62634	632250.63	4175950.44	1.55353
632600.63	4175950.44	1.11493	632950.63	4175950.44	0.77885
633300.63	4175950.44	0.58676	629800.63	4176300.44	0.12581
630150.63	4176300.44	0.19256	630500.63	4176300.44	0.33182
630850.63	4176300.44	0.63167	631200.63	4176300.44	0.92458
631550.63	4176300.44	0.91477	631900.63	4176300.44	0.76836
632250.63	4176300.44	0.72925	632600.63	4176300.44	0.59344
632950.63	4176300.44	0.48550	633300.63	4176300.44	0.40089
629800.63	4176650.44	0.13730	630150.63	4176650.44	0.19916
630500.63	4176650.44	0.30812	630850.63	4176650.44	0.45056
631200.63	4176650.44	0.54824	631550.63	4176650.44	0.55735
631900.63	4176650.44	0.49711	632250.63	4176650.44	0.47364
632600.63	4176650.44	0.40002	632950.63	4176650.44	0.32739
633300.63	4176650.44	0.27754	629800.63	4177000.44	0.13608
630150.63	4177000.44	0.18543	630500.63	4177000.44	0.24892
630850.63	4177000.44	0.31203	631200.63	4177000.44	0.37002
631550.63	4177000.44	0.36908	631900.63	4177000.44	0.34992
632250.63	4177000.44	0.31284	632600.63	4177000.44	0.29237
632950.63	4177000.44	0.24949	633300.63	4177000.44	0.21414
629800.63	4177350.44	0.12807	630150.63	4177350.44	0.16060
630500.63	4177350.44	0.19512	630850.63	4177350.44	0.22733
631200.63	4177350.44	0.26203	631550.63	4177350.44	0.25834
631900.63	4177350.44	0.25155	632250.63	4177350.44	0.22310
632600.63	4177350.44	0.21731	632950.63	4177350.44	0.19669
633300.63	4177350.44	0.17402	631670.70	4175493.59	14.02439
631669.80	4175641.41	31.57105	631665.32	4175796.39	2.82085
631417.17	4175826.85	3.65238	631417.17	4175673.66	9.73056
631422.55	4175484.63	4.70111	631268.42	4175983.74	1.95348
631275.69	4175523.99	2.23079	631345.65	4175419.50	2.31882
631384.72	4175441.30	3.05120	631491.93	4175442.21	3.89900
631491.93	4175414.95	3.09692	631385.63	4175413.14	2.39923
631358.37	4175395.87	2.14732	631409.25	4175336.81	2.10752
631567.35	4175235.96	1.60781	631756.33	4175028.80	1.16732
631807.22	4175003.36	1.15697	631867.18	4174987.91	1.18646
631849.92	4175988.28	1.48930	631268.74	4175963.75	2.05736
631269.05	4175943.76	2.16428	631269.37	4175923.77	2.27157
631269.68	4175903.78	2.37556	631270.00	4175883.79	2.47510
631270.32	4175863.81	2.56630	631270.63	4175843.82	2.64838

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.71978	631271.26	4175803.84	2.78021
631271.58	4175783.85	2.83269	631271.90	4175763.86	2.85477
631272.21	4175743.87	2.87095	631272.53	4175723.88	2.88963
631272.85	4175703.89	2.83220	631273.16	4175683.90	2.74648
631273.48	4175663.91	2.70386	631273.79	4175643.92	2.65656
631274.11	4175623.94	2.60393	631274.43	4175603.95	2.47749
631274.74	4175583.96	2.36378	631275.06	4175563.97	2.31737
631275.37	4175543.98	2.29339	631285.68	4175509.06	2.28344
631295.68	4175494.14	2.27294	631305.67	4175479.21	2.22712
631315.67	4175464.28	2.17501	631325.66	4175449.35	2.21941
631335.66	4175434.43	2.28255	631358.67	4175426.77	2.39714
631371.70	4175434.03	2.79486	631402.59	4175441.45	3.08992
631420.46	4175441.60	3.37596	631438.33	4175441.76	3.63468
631456.19	4175441.91	3.84477	631474.06	4175442.06	3.67958
631491.93	4175428.58	3.47467	631474.21	4175414.65	2.97227
631456.50	4175414.35	3.04190	631438.78	4175414.05	3.07716
631421.06	4175413.74	2.78116	631403.35	4175413.44	2.84370
631372.00	4175404.51	2.35130	631371.09	4175381.11	1.96718
631383.81	4175366.34	1.98984	631396.53	4175351.58	2.11587
631425.06	4175326.73	2.13464	631440.87	4175316.64	2.10638
631456.68	4175306.56	1.99841	631472.49	4175296.47	1.90837
631488.30	4175286.39	1.84501	631504.11	4175276.30	1.75812
631519.92	4175266.22	1.69975	631535.73	4175256.13	1.63248
631551.54	4175246.05	1.63025	631579.95	4175222.15	1.62301
631592.55	4175208.34	1.58659	631605.15	4175194.53	1.53966
631617.74	4175180.72	1.55689	631630.34	4175166.91	1.49427
631642.94	4175153.10	1.48069	631655.54	4175139.29	1.45356
631668.14	4175125.47	1.41805	631680.74	4175111.66	1.38051
631693.34	4175097.85	1.34497	631705.94	4175084.04	1.30873
631718.53	4175070.23	1.27315	631731.13	4175056.42	1.23777
631743.73	4175042.61	1.20202	631773.29	4175020.32	1.16663
631790.26	4175011.84	1.16288	631822.21	4174999.50	1.16654
631837.20	4174995.64	1.17493	631852.19	4174991.77	1.18183
631866.84	4175007.53	1.27689	631866.50	4175027.14	1.37578
631866.16	4175046.76	1.48462	631865.83	4175066.37	1.60468
631865.49	4175085.99	1.73662	631865.15	4175105.60	1.88121
631864.81	4175125.22	2.03959	631864.47	4175144.83	2.21223
631864.13	4175164.45	2.39945	631863.80	4175184.06	2.60083
631863.46	4175203.68	2.81886	631863.12	4175223.29	3.05064
631862.78	4175242.91	3.29739	631862.44	4175262.52	3.56304

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	3.85647	631861.77	4175301.75	4.20833
631861.43	4175321.37	4.40724	631861.09	4175340.98	5.42413
631860.75	4175360.60	7.04017	631860.41	4175380.21	8.48367
631860.07	4175399.83	9.68462	631859.73	4175419.44	9.50682
631859.40	4175439.06	13.33004	631859.06	4175458.67	15.60111
631858.72	4175478.29	15.84181	631858.38	4175497.90	17.14202
631858.04	4175517.52	18.29762	631857.70	4175537.13	19.35751
631857.37	4175556.75	25.22231	631857.03	4175576.36	26.80137
631856.69	4175595.98	25.98617	631856.35	4175615.59	22.49612
631856.01	4175635.21	18.36456	631855.67	4175654.82	15.64965
631855.33	4175674.44	13.49699	631855.00	4175694.05	11.69859
631854.66	4175713.67	10.16996	631854.32	4175733.28	8.76093
631853.98	4175752.90	7.73598	631853.64	4175772.51	5.47908
631853.30	4175792.13	5.14721	631852.97	4175811.74	4.63209
631852.63	4175831.36	3.63147	631852.29	4175850.97	3.00913
631851.95	4175870.59	2.51143	631851.61	4175890.20	2.07312
631851.27	4175909.82	1.96329	631850.94	4175929.43	1.80833
631850.60	4175949.05	1.68653	631850.26	4175968.66	1.58127
631830.54	4175988.13	1.50053	631811.15	4175987.98	1.51085
631791.77	4175987.83	1.52053	631772.39	4175987.67	1.53136
631753.00	4175987.52	1.54484	631733.62	4175987.37	1.57563
631714.24	4175987.22	1.75276	631694.85	4175987.07	1.95215
631675.47	4175986.92	2.03732	631656.09	4175986.77	1.93817
631636.70	4175986.62	1.89015	631617.32	4175986.46	1.93951
631597.94	4175986.31	1.96276	631578.55	4175986.16	1.89623
631559.17	4175986.01	1.93529	631539.79	4175985.86	1.95960
631520.40	4175985.71	1.97583	631501.02	4175985.56	1.99203
631481.64	4175985.40	2.01057	631462.25	4175985.25	2.02517
631442.87	4175985.10	2.03716	631423.49	4175984.95	2.04147
631404.10	4175984.80	2.04640	631384.72	4175984.65	2.05378
631365.34	4175984.50	2.05936	631345.95	4175984.35	2.05853
631326.57	4175984.19	2.04774	631307.19	4175984.04	2.02716
631287.80	4175983.89	1.99563			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
632121.21	4174952.36	1.36696	632304.44	4174354.52	0.34306
632192.15	4174956.32	1.28147	632420.62	4175510.15	2.37838
632418.97	4175552.92	2.33979	631187.00	4175727.00	1.79893
631166.00	4175729.00	1.65493	631121.00	4175719.00	1.38821

631035.00	4174830.00	0.30979	631106.00	4174825.00	0.33796
631937.00	4174528.00	0.42761	631322.00	4174522.00	0.23970
629800.63	4173850.44	0.05473	630150.63	4173850.44	0.06379
630500.63	4173850.44	0.07654	630850.63	4173850.44	0.09213
631200.63	4173850.44	0.09984	631550.63	4173850.44	0.10527
631900.63	4173850.44	0.13250	632250.63	4173850.44	0.14967
632600.63	4173850.44	0.16349	632950.63	4173850.44	0.16236
633300.63	4173850.44	0.14626	629800.63	4174200.44	0.06577
630150.63	4174200.44	0.07808	630500.63	4174200.44	0.09633
630850.63	4174200.44	0.12368	631200.63	4174200.44	0.14722
631550.63	4174200.44	0.16068	631900.63	4174200.44	0.21650
632250.63	4174200.44	0.25357	632600.63	4174200.44	0.25968
632950.63	4174200.44	0.22445	633300.63	4174200.44	0.19586
629800.63	4174550.44	0.07982	630150.63	4174550.44	0.09898
630500.63	4174550.44	0.12743	630850.63	4174550.44	0.17450
631200.63	4174550.44	0.23902	631550.63	4174550.44	0.28582
631900.63	4174550.44	0.43835	632250.63	4174550.44	0.51233
632600.63	4174550.44	0.42038	632950.63	4174550.44	0.33713
633300.63	4174550.44	0.29325	629800.63	4174900.44	0.09329
630150.63	4174900.44	0.12420	630500.63	4174900.44	0.17650
630850.63	4174900.44	0.26884	631200.63	4174900.44	0.44226
631550.63	4174900.44	0.65725	631900.63	4174900.44	1.24412
632250.63	4174900.44	1.06743	632600.63	4174900.44	0.76300
632950.63	4174900.44	0.57598	633300.63	4174900.44	0.46371
629800.63	4175250.44	0.10402	630150.63	4175250.44	0.14432
630500.63	4175250.44	0.22233	630850.63	4175250.44	0.41957
631200.63	4175250.44	1.03324	631550.63	4175250.44	3.01447
631900.63	4175250.44	4.28395	632250.63	4175250.44	2.74359
632600.63	4175250.44	1.45451	632950.63	4175250.44	0.91578
633300.63	4175250.44	0.65877	629800.63	4175600.44	0.10974
630150.63	4175600.44	0.15640	630500.63	4175600.44	0.25154
630850.63	4175600.44	0.51990	631200.63	4175600.44	1.79628
631550.63	4175600.44	8.48631	631900.63	4175600.44	11.12431
632250.63	4175600.44	3.45757	632600.63	4175600.44	1.58665
632950.63	4175600.44	0.99338	633300.63	4175600.44	0.70055
629800.63	4175950.44	0.11580	630150.63	4175950.44	0.17236

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
630500.63	4175950.44	0.30433	630850.63	4175950.44	0.66128
631200.63	4175950.44	1.50461	631550.63	4175950.44	1.59354
631900.63	4175950.44	1.31289	632250.63	4175950.44	1.15092
632600.63	4175950.44	0.93773	632950.63	4175950.44	0.68249

633300.63	4175950.44	0.52889	629800.63	4176300.44	0.13041
630150.63	4176300.44	0.19774	630500.63	4176300.44	0.33086
630850.63	4176300.44	0.58521	631200.63	4176300.44	0.77351
631550.63	4176300.44	0.77092	631900.63	4176300.44	0.66473
632250.63	4176300.44	0.64651	632600.63	4176300.44	0.52821
632950.63	4176300.44	0.42691	633300.63	4176300.44	0.36004
629800.63	4176650.44	0.13795	630150.63	4176650.44	0.19738
630500.63	4176650.44	0.29461	630850.63	4176650.44	0.40782
631200.63	4176650.44	0.48852	631550.63	4176650.44	0.49159
631900.63	4176650.44	0.45397	632250.63	4176650.44	0.42989
632600.63	4176650.44	0.36659	632950.63	4176650.44	0.30422
633300.63	4176650.44	0.25454	629800.63	4177000.44	0.13454
630150.63	4177000.44	0.17940	630500.63	4177000.44	0.23371
630850.63	4177000.44	0.28562	631200.63	4177000.44	0.33729
631550.63	4177000.44	0.33352	631900.63	4177000.44	0.32180
632250.63	4177000.44	0.28426	632600.63	4177000.44	0.27244
632950.63	4177000.44	0.23276	633300.63	4177000.44	0.20211
629800.63	4177350.44	0.12475	630150.63	4177350.44	0.15343
630500.63	4177350.44	0.18324	630850.63	4177350.44	0.21145
631200.63	4177350.44	0.24142	631550.63	4177350.44	0.23728
631900.63	4177350.44	0.23300	632250.63	4177350.44	0.20779
632600.63	4177350.44	0.20066	632950.63	4177350.44	0.18590
633300.63	4177350.44	0.16427	631670.70	4175493.59	40.29938
631669.80	4175641.41	6.15426	631665.32	4175796.39	2.14083
631417.17	4175826.85	1.33014	631417.17	4175673.66	2.44666
631422.55	4175484.63	8.56621	631268.42	4175983.74	1.47961
631275.69	4175523.99	2.47564	631345.65	4175419.50	3.43337
631384.72	4175441.30	5.03772	631491.93	4175442.21	14.27064
631491.93	4175414.95	9.92155	631385.63	4175413.14	4.33166
631358.37	4175395.87	3.36360	631409.25	4175336.81	3.48247
631567.35	4175235.96	2.77436	631756.33	4175028.80	1.74135
631807.22	4175003.36	1.68795	631867.18	4174987.91	1.68238
631849.92	4175988.28	1.20310	631268.74	4175963.75	1.55655
631269.05	4175943.76	1.63913	631269.37	4175923.77	1.72752
631269.68	4175903.78	1.82081	631270.00	4175883.79	1.91842
631270.32	4175863.81	2.01948	631270.63	4175843.82	2.12102

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631270.95	4175823.83	2.22302	631271.26	4175803.84	2.32949
631271.58	4175783.85	2.43740	631271.90	4175763.86	2.50818
631272.21	4175743.87	2.57870	631272.53	4175723.88	2.72011
631272.85	4175703.89	2.67507	631273.16	4175683.90	2.45141

631273.48	4175663.91	2.55516	631273.79	4175643.92	2.70971
631274.11	4175623.94	2.74728	631274.43	4175603.95	2.63890
631274.74	4175583.96	2.49224	631275.06	4175563.97	2.50983
631275.37	4175543.98	2.50777	631285.68	4175509.06	2.60663
631295.68	4175494.14	2.69763	631305.67	4175479.21	2.77467
631315.67	4175464.28	2.93270	631325.66	4175449.35	3.08510
631335.66	4175434.43	3.24018	631358.67	4175426.77	3.78649
631371.70	4175434.03	4.35429	631402.59	4175441.45	5.80536
631420.46	4175441.60	7.29704	631438.33	4175441.76	8.50366
631456.19	4175441.91	11.44434	631474.06	4175442.06	12.27131
631491.93	4175428.58	11.83033	631474.21	4175414.65	9.59170
631456.50	4175414.35	8.26843	631438.78	4175414.05	7.53907
631421.06	4175413.74	5.86354	631403.35	4175413.44	5.45630
631372.00	4175404.51	3.83045	631371.09	4175381.11	3.32711
631383.81	4175366.34	3.35051	631396.53	4175351.58	3.45624
631425.06	4175326.73	3.65190	631440.87	4175316.64	3.71542
631456.68	4175306.56	3.60520	631472.49	4175296.47	3.41806
631488.30	4175286.39	3.38716	631504.11	4175276.30	3.17746
631519.92	4175266.22	3.00217	631535.73	4175256.13	2.96696
631551.54	4175246.05	2.89729	631579.95	4175222.15	2.74987
631592.55	4175208.34	2.62070	631605.15	4175194.53	2.54683
631617.74	4175180.72	2.55104	631630.34	4175166.91	2.42989
631642.94	4175153.10	2.40660	631655.54	4175139.29	2.33913
631668.14	4175125.47	2.26676	631680.74	4175111.66	2.18904
631693.34	4175097.85	2.11036	631705.94	4175084.04	2.03362
631718.53	4175070.23	1.95771	631731.13	4175056.42	1.88263
631743.73	4175042.61	1.81169	631773.29	4175020.32	1.72773
631790.26	4175011.84	1.70974	631822.21	4174999.50	1.69150
631837.20	4174995.64	1.69204	631852.19	4174991.77	1.68853
631866.84	4175007.53	1.81667	631866.50	4175027.14	1.96368
631866.16	4175046.76	2.12313	631865.83	4175066.37	2.29573
631865.49	4175085.99	2.48198	631865.15	4175105.60	2.68148
631864.81	4175125.22	2.89441	631864.47	4175144.83	3.12013
631864.13	4175164.45	3.35949	631863.80	4175184.06	3.61088
631863.46	4175203.68	3.87812	631863.12	4175223.29	4.16203
631862.78	4175242.91	4.47028	631862.44	4175262.52	4.81806

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
631862.10	4175282.14	5.23478	631861.77	4175301.75	5.74307
631861.43	4175321.37	6.09129	631861.09	4175340.98	6.86488
631860.75	4175360.60	7.89063	631860.41	4175380.21	9.51342
631860.07	4175399.83	11.16668	631859.73	4175419.44	13.23420

631859.40	4175439.06	16.39219	631859.06	4175458.67	18.31262
631858.72	4175478.29	20.56445	631858.38	4175497.90	23.66494
631858.04	4175517.52	26.54224	631857.70	4175537.13	27.84799
631857.37	4175556.75	26.19544	631857.03	4175576.36	19.89462
631856.69	4175595.98	13.25500	631856.35	4175615.59	9.81857
631856.01	4175635.21	8.38141	631855.67	4175654.82	7.24768
631855.33	4175674.44	6.25174	631855.00	4175694.05	5.44537
631854.66	4175713.67	4.83593	631854.32	4175733.28	4.35189
631853.98	4175752.90	4.07877	631853.64	4175772.51	3.78824
631853.30	4175792.13	3.53871	631852.97	4175811.74	3.32035
631852.63	4175831.36	3.13759	631852.29	4175850.97	2.73781
631851.95	4175870.59	2.62382	631851.61	4175890.20	1.87082
631851.27	4175909.82	1.68951	631850.94	4175929.43	1.46347
631850.60	4175949.05	1.35746	631850.26	4175968.66	1.27431
631830.54	4175988.13	1.20312	631811.15	4175987.98	1.20137
631791.77	4175987.83	1.20443	631772.39	4175987.67	1.21262
631753.00	4175987.52	1.22572	631733.62	4175987.37	1.25118
631714.24	4175987.22	1.31233	631694.85	4175987.07	1.48605
631675.47	4175986.92	1.64777	631656.09	4175986.77	1.60691
631636.70	4175986.62	1.59418	631617.32	4175986.46	1.62385
631597.94	4175986.31	1.61935	631578.55	4175986.16	1.54692
631559.17	4175986.01	1.49795	631539.79	4175985.86	1.47694
631520.40	4175985.71	1.45399	631501.02	4175985.56	1.46318
631481.64	4175985.40	1.47985	631462.25	4175985.25	1.49088
631442.87	4175985.10	1.49925	631423.49	4175984.95	1.50322
631404.10	4175984.80	1.50120	631384.72	4175984.65	1.49755
631365.34	4175984.50	1.49646	631345.95	4175984.35	1.49641
631326.57	4175984.19	1.49624	631307.19	4175984.04	1.49364
631287.80	4175983.89	1.48850			

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	94.90443	(06011617)	632304.44	4174354.52	39.89195	(06020318)
632192.15	4174956.32	92.90400	(06011617)	632420.62	4175510.15	44.55060	(06011619)
632418.97	4175552.92	43.97688	(07011518)	631187.00	4175727.00	163.29044	(04021521)
631166.00	4175729.00	153.36615	(04021521)	631121.00	4175719.00	134.63198	(04021520)
631035.00	4174830.00	50.24844	(05012117)	631106.00	4174825.00	48.59569	(05012117)
631937.00	4174528.00	50.88105	(07012317)	631322.00	4174522.00	40.22894	(05122422)
629800.63	4173850.44	14.58168	(06011022)	630150.63	4173850.44	16.77601	(07121217)

630500.63	4173850.44	24.08970	(05012117)	630850.63	4173850.44	23.21119	(06121017)
631200.63	4173850.44	24.54886	(06121420)	631550.63	4173850.44	25.03015	(04122823)
631900.63	4173850.44	25.92335	(04122824)	632250.63	4173850.44	27.45532	(06020105)
632600.63	4173850.44	27.23603	(05122303)	632950.63	4173850.44	26.39835	(05122304)
633300.63	4173850.44	23.09026	(07012702)	629800.63	4174200.44	16.95610	(06121421)
630150.63	4174200.44	18.42664	(06011022)	630500.63	4174200.44	23.41646	(07011517)
630850.63	4174200.44	27.25621	(05012117)	631200.63	4174200.44	31.15162	(06121420)
631550.63	4174200.44	34.20624	(07012317)	631900.63	4174200.44	36.46294	(07011417)
632250.63	4174200.44	35.66861	(04122822)	632600.63	4174200.44	35.11111	(05122304)
632950.63	4174200.44	30.93533	(07012702)	633300.63	4174200.44	28.78708	(06011617)
629800.63	4174550.44	41.16469	(06020109)	630150.63	4174550.44	28.21088	(06020109)
630500.63	4174550.44	24.13767	(06011022)	630850.63	4174550.44	38.24682	(05012117)
631200.63	4174550.44	39.68418	(08022002)	631550.63	4174550.44	50.01023	(07012317)
631900.63	4174550.44	51.53446	(07012317)	632250.63	4174550.44	50.96921	(05011521)
632600.63	4174550.44	42.95996	(07012702)	632950.63	4174550.44	34.77252	(06011617)
633300.63	4174550.44	27.65201	(06120617)	629800.63	4174900.44	71.87112	(06020109)
630150.63	4174900.44	62.76262	(06020109)	630500.63	4174900.44	53.79676	(06020109)
630850.63	4174900.44	45.05795	(06020109)	631200.63	4174900.44	54.96065	(08022002)
631550.63	4174900.44	75.32751	(07012317)	631900.63	4174900.44	94.19280	(07012317)
632250.63	4174900.44	82.22269	(06011617)	632600.63	4174900.44	48.51017	(06120617)
632950.63	4174900.44	33.65130	(05021801)	633300.63	4174900.44	35.23964	(06100508)
629800.63	4175250.44	51.20978	(06020109)	630150.63	4175250.44	69.91130	(06020109)
630500.63	4175250.44	79.32905	(06020109)	630850.63	4175250.44	87.53191	(06020109)
631200.63	4175250.44	92.41214	(05012117)	631550.63	4175250.44	209.67957	(07011417)
631900.63	4175250.44	237.76836	(06120617)	632250.63	4175250.44	67.20463	(07020218)
632600.63	4175250.44	43.37332	(06100508)	632950.63	4175250.44	37.52623	(06100508)
633300.63	4175250.44	32.48930	(06100508)	629800.63	4175600.44	24.48444	(05122618)
630150.63	4175600.44	29.89925	(05122618)	630500.63	4175600.44	39.35682	(07020701)
630850.63	4175600.44	72.97274	(06020109)	631200.63	4175600.44	199.05401	(06122121)
631550.63	4175600.44	217.72943	(07022408)	631900.63	4175600.44	150.81735	(04021506)
632250.63	4175600.44	52.73856	(07012318)	632600.63	4175600.44	36.85056	(07012318)
632950.63	4175600.44	29.10781	(07011518)	633300.63	4175600.44	24.19835	(07011518)
629800.63	4175950.44	24.06429	(06011024)	630150.63	4175950.44	32.04263	(07120621)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	44.11576	(07120404)	630850.63	4175950.44	69.97957	(04021520)
631200.63	4175950.44	151.51453	(07021218)	631550.63	4175950.44	144.42458	(05122402)
631900.63	4175950.44	139.37063	(08021908)	632250.63	4175950.44	48.46868	(05011818)

632600.63	4175950.44	35.04867	(05122401)	632950.63	4175950.44	27.55960	(07120624)
633300.63	4175950.44	23.03816	(05012018)	629800.63	4176300.44	25.60811	(07120404)
630150.63	4176300.44	33.79933	(07013018)	630500.63	4176300.44	43.76832	(07120403)
630850.63	4176300.44	58.32716	(05021421)	631200.63	4176300.44	85.49074	(08011009)
631550.63	4176300.44	70.11607	(06020918)	631900.63	4176300.44	76.15685	(05022220)
632250.63	4176300.44	50.13239	(08021908)	632600.63	4176300.44	36.35587	(08021808)
632950.63	4176300.44	32.78989	(08031008)	633300.63	4176300.44	26.34669	(08031008)
629800.63	4176650.44	26.29536	(06022523)	630150.63	4176650.44	31.13754	(07012618)
630500.63	4176650.44	37.83869	(04120903)	630850.63	4176650.44	47.89393	(05011001)
631200.63	4176650.44	50.44694	(08011009)	631550.63	4176650.44	46.60313	(06020918)
631900.63	4176650.44	43.93787	(06011704)	632250.63	4176650.44	39.79833	(07091007)
632600.63	4176650.44	33.43794	(08021908)	632950.63	4176650.44	28.85424	(08021808)
633300.63	4176650.44	31.06798	(08031008)	629800.63	4177000.44	24.27018	(07012618)
630150.63	4177000.44	27.31798	(05122923)	630500.63	4177000.44	31.05920	(05022705)
630850.63	4177000.44	36.26475	(07122907)	631200.63	4177000.44	36.81096	(07021108)
631550.63	4177000.44	35.11405	(05010603)	631900.63	4177000.44	52.03373	(07091007)
632250.63	4177000.44	48.55669	(07091007)	632600.63	4177000.44	26.95014	(07022408)
632950.63	4177000.44	25.47759	(08021908)	633300.63	4177000.44	22.15470	(08021808)
629800.63	4177350.44	21.81399	(05122923)	630150.63	4177350.44	24.30798	(05022703)
630500.63	4177350.44	29.18613	(05011001)	630850.63	4177350.44	29.27580	(06020123)
631200.63	4177350.44	28.15052	(07122906)	631550.63	4177350.44	28.45102	(06011704)
631900.63	4177350.44	54.35645	(07091007)	632250.63	4177350.44	44.70394	(07091007)
632600.63	4177350.44	25.01880	(04102908)	632950.63	4177350.44	21.95174	(07022408)
633300.63	4177350.44	20.44825	(08021908)	631670.70	4175493.59	140.79049	(07012318)
631669.80	4175641.41	120.72764	(08021808)	631665.32	4175796.39	97.06254	(07022408)
631417.17	4175826.85	156.44196	(06011109)	631417.17	4175673.66	189.86850	(06011109)
631422.55	4175484.63	426.61123	(06011109)	631268.42	4175983.74	200.62508	(08011009)
631275.69	4175523.99	310.35443	(07120622)	631345.65	4175419.50	314.39260	(07012317)
631384.72	4175441.30	514.90866	(07011417)	631491.93	4175442.21	467.94381	(06011109)
631491.93	4175414.95	343.67640	(06011109)	631385.63	4175413.14	348.77136	(07011417)
631358.37	4175395.87	295.81213	(07012317)	631409.25	4175336.81	205.62518	(07011417)
631567.35	4175235.96	188.58545	(07011417)	631756.33	4175028.80	149.68444	(08022002)
631807.22	4175003.36	176.99563	(05122422)	631867.18	4174987.91	141.47293	(07012317)
631849.92	4175988.28	377.30957	(05122220)	631268.74	4175963.75	218.70290	(08011009)
631269.05	4175943.76	239.14404	(08011009)	631269.37	4175923.77	263.00212	(08011009)
631269.68	4175903.78	289.22466	(08011009)	631270.00	4175883.79	309.20970	(08011009)
631270.32	4175863.81	314.77817	(08011009)	631270.63	4175843.82	317.19966	(08011009)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)

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631270.95	4175823.83	316.80757	(05010917)	631271.26	4175803.84	314.56577	(05010917)
631271.58	4175783.85	314.32309	(07021218)	631271.90	4175763.86	314.79449	(07021218)
631272.21	4175743.87	314.62323	(07021218)	631272.53	4175723.88	313.76853	(07021218)
631272.85	4175703.89	311.84616	(07021218)	631273.16	4175683.90	310.29835	(07122917)
631273.48	4175663.91	310.79204	(04120908)	631273.79	4175643.92	315.58054	(04120903)
631274.11	4175623.94	322.37794	(04021521)	631274.43	4175603.95	335.14958	(04021521)
631274.74	4175583.96	347.76001	(04021521)	631275.06	4175563.97	371.36915	(04021520)
631275.37	4175543.98	343.15672	(06122121)	631285.68	4175509.06	316.50693	(07120622)
631295.68	4175494.14	322.81459	(06011024)	631305.67	4175479.21	339.92936	(06011024)
631315.67	4175464.28	366.43333	(04121304)	631325.66	4175449.35	364.50970	(08012221)
631335.66	4175434.43	321.43788	(06121217)	631358.67	4175426.77	410.64483	(07012317)
631371.70	4175434.03	436.27397	(07012317)	631402.59	4175441.45	475.78407	(04122822)
631420.46	4175441.60	466.38220	(06011617)	631438.33	4175441.76	479.56155	(06011617)
631456.19	4175441.91	469.68502	(06011617)	631474.06	4175442.06	456.55437	(06011617)
631491.93	4175428.58	384.37038	(06011109)	631474.21	4175414.65	300.75526	(06011617)
631456.50	4175414.35	291.49033	(04022018)	631438.78	4175414.05	294.22106	(05011521)
631421.06	4175413.74	309.92599	(04022318)	631403.35	4175413.44	350.98432	(07011417)
631372.00	4175404.51	333.23811	(07012317)	631371.09	4175381.11	279.33957	(07012317)
631383.81	4175366.34	251.09018	(07012317)	631396.53	4175351.58	218.43213	(07012317)
631425.06	4175326.73	199.71789	(07011417)	631440.87	4175316.64	187.33925	(07011417)
631456.68	4175306.56	172.55295	(07011417)	631472.49	4175296.47	168.09814	(06121420)
631488.30	4175286.39	206.32470	(06121420)	631504.11	4175276.30	236.06723	(05010417)
631519.92	4175266.22	244.12689	(07012317)	631535.73	4175256.13	234.99524	(07012317)
631551.54	4175246.05	203.68877	(07011417)	631579.95	4175222.15	170.37253	(07011417)
631592.55	4175208.34	159.09720	(04122822)	631605.15	4175194.53	151.41925	(04122822)
631617.74	4175180.72	144.10412	(04122822)	631630.34	4175166.91	137.21695	(04122822)
631642.94	4175153.10	130.77263	(04122822)	631655.54	4175139.29	125.00738	(05020818)
631668.14	4175125.47	120.06239	(05020818)	631680.74	4175111.66	115.39045	(05020818)
631693.34	4175097.85	110.94040	(05020818)	631705.94	4175084.04	114.42442	(05012117)
631718.53	4175070.23	129.00469	(05012117)	631731.13	4175056.42	144.46502	(05012117)
631743.73	4175042.61	149.68939	(05012117)	631773.29	4175020.32	164.92151	(05022218)
631790.26	4175011.84	174.35533	(05122422)	631822.21	4174999.50	162.57047	(05010417)
631837.20	4174995.64	153.13774	(07012317)	631852.19	4174991.77	153.84296	(07012317)
631866.84	4175007.53	149.63439	(07012317)	631866.50	4175027.14	158.00979	(07012317)
631866.16	4175046.76	174.43386	(07011417)	631865.83	4175066.37	189.85449	(07011417)
631865.49	4175085.99	215.37173	(05011521)	631865.15	4175105.60	262.41822	(04022018)
631864.81	4175125.22	285.82356	(06011617)	631864.47	4175144.83	292.98841	(06011617)
631864.13	4175164.45	305.22198	(06011617)	631863.80	4175184.06	311.12986	(06011617)
631863.46	4175203.68	309.17357	(06011617)	631863.12	4175223.29	322.15377	(06011617)
631862.78	4175242.91	367.93705	(07012317)	631862.44	4175262.52	408.28851	(07022408)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE1 ***

INCLUDING SOURCE(S): 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 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	412.55520	(05022620)	631861.77	4175301.75	402.45245	(06012820)
631861.43	4175321.37	395.80393	(04021506)	631861.09	4175340.98	392.19078	(04121819)
631860.75	4175360.60	390.67309	(05021302)	631860.41	4175380.21	389.83644	(05021302)
631860.07	4175399.83	391.82647	(05122402)	631859.73	4175419.44	394.07979	(05122402)
631859.40	4175439.06	395.66651	(05122402)	631859.06	4175458.67	396.69286	(05122402)
631858.72	4175478.29	396.84136	(05122402)	631858.38	4175497.90	396.21299	(05122402)
631858.04	4175517.52	395.00212	(05122402)	631857.70	4175537.13	393.39494	(05122402)
631857.37	4175556.75	391.37289	(05122402)	631857.03	4175576.36	390.77848	(06020918)
631856.69	4175595.98	390.86777	(06020918)	631856.35	4175615.59	390.80172	(06020918)
631856.01	4175635.21	390.62372	(06020918)	631855.67	4175654.82	390.36329	(06020918)
631855.33	4175674.44	390.04576	(06020918)	631855.00	4175694.05	389.50323	(06020918)
631854.66	4175713.67	389.12231	(06020918)	631854.32	4175733.28	388.73552	(06020918)
631853.98	4175752.90	388.33025	(06020918)	631853.64	4175772.51	388.07012	(05122220)
631853.30	4175792.13	387.88083	(05122220)	631852.97	4175811.74	387.44778	(05122220)
631852.63	4175831.36	387.15615	(05122220)	631852.29	4175850.97	386.80459	(05122220)
631851.95	4175870.59	386.34164	(05122220)	631851.61	4175890.20	385.72661	(05122220)
631851.27	4175909.82	384.88754	(05122220)	631850.94	4175929.43	383.89826	(05122220)
631850.60	4175949.05	386.25634	(05122220)	631850.26	4175968.66	388.00167	(05122220)
631830.54	4175988.13	290.95666	(08011009)	631811.15	4175987.98	172.75389	(08011009)
631791.77	4175987.83	126.67108	(08011009)	631772.39	4175987.67	101.78623	(08011009)
631753.00	4175987.52	86.01625	(08011009)	631733.62	4175987.37	78.44491	(08021908)
631714.24	4175987.22	81.43518	(08021908)	631694.85	4175987.07	84.91242	(08021908)
631675.47	4175986.92	88.74265	(08021908)	631656.09	4175986.77	92.75412	(08021908)
631636.70	4175986.62	97.07149	(07022408)	631617.32	4175986.46	103.04926	(07022408)
631597.94	4175986.31	108.28264	(07022408)	631578.55	4175986.16	112.92960	(07022408)
631559.17	4175986.01	124.37075	(05122402)	631539.79	4175985.86	143.94616	(05122402)
631520.40	4175985.71	167.06038	(05122220)	631501.02	4175985.56	194.35741	(05122403)
631481.64	4175985.40	231.88149	(07022408)	631462.25	4175985.25	477.08060	(08011009)
631442.87	4175985.10	277.07284	(07021218)	631423.49	4175984.95	161.40958	(04120908)
631404.10	4175984.80	126.79633	(04020619)	631384.72	4175984.65	139.50418	(05122402)
631365.34	4175984.50	154.96661	(05122402)	631345.95	4175984.35	168.75146	(05122220)
631326.57	4175984.19	178.83674	(05121504)	631307.19	4175984.04	179.40462	(08122907)
631287.80	4175983.89	187.14735	(07021108)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC

(YYMMDDHH)

632121.21	4174952.36	26.65133	(06011617)	632304.44	4174354.52	17.34662	(04022018)
632192.15	4174956.32	27.60037	(06011617)	632420.62	4175510.15	49.69852	(06100508)
632418.97	4175552.92	58.65481	(06100508)	631187.00	4175727.00	84.61298	(06011617)
631166.00	4175729.00	85.24265	(06011617)	631121.00	4175719.00	83.09513	(06011617)
631035.00	4174830.00	24.11937	(07012317)	631106.00	4174825.00	24.02634	(07012317)
631937.00	4174528.00	18.63608	(05011521)	631322.00	4174522.00	20.09022	(07012317)
629800.63	4173850.44	16.28504	(05012117)	630150.63	4173850.44	13.79369	(08022002)
630500.63	4173850.44	14.13150	(08022002)	630850.63	4173850.44	14.08879	(07012317)
631200.63	4173850.44	15.13877	(07012317)	631550.63	4173850.44	14.80747	(07011417)
631900.63	4173850.44	13.97025	(04022318)	632250.63	4173850.44	13.65649	(05020818)
632600.63	4173850.44	13.73542	(05011520)	632950.63	4173850.44	13.98790	(04022018)
633300.63	4173850.44	13.32102	(07012702)	629800.63	4174200.44	18.63279	(05012117)
630150.63	4174200.44	18.40140	(05012117)	630500.63	4174200.44	16.24289	(08022002)
630850.63	4174200.44	16.96419	(07012317)	631200.63	4174200.44	17.33956	(07012317)
631550.63	4174200.44	16.98001	(07011417)	631900.63	4174200.44	15.79084	(04122822)
632250.63	4174200.44	15.89987	(05011521)	632600.63	4174200.44	16.40705	(04022018)
632950.63	4174200.44	15.50512	(07012702)	633300.63	4174200.44	17.06290	(06011617)
629800.63	4174550.44	21.15683	(05012117)	630150.63	4174550.44	22.08391	(05012117)
630500.63	4174550.44	20.21285	(05012117)	630850.63	4174550.44	20.39936	(07012317)
631200.63	4174550.44	20.44553	(07012317)	631550.63	4174550.44	19.98472	(07011417)
631900.63	4174550.44	18.85298	(05011521)	632250.63	4174550.44	19.61315	(04022018)
632600.63	4174550.44	18.66935	(06011617)	632950.63	4174550.44	21.20411	(06011617)
633300.63	4174550.44	17.81359	(07012703)	629800.63	4174900.44	21.88845	(06121421)
630150.63	4174900.44	27.07913	(05012117)	630500.63	4174900.44	27.38580	(05012117)
630850.63	4174900.44	25.29688	(07012317)	631200.63	4174900.44	25.24292	(07012317)
631550.63	4174900.44	24.50524	(07011417)	631900.63	4174900.44	24.38474	(04022018)
632250.63	4174900.44	26.19677	(06011617)	632600.63	4174900.44	26.26645	(06011617)
632950.63	4174900.44	23.65066	(06120617)	633300.63	4174900.44	22.01055	(04022221)
629800.63	4175250.44	32.50938	(04011017)	630150.63	4175250.44	35.63851	(05012117)
630500.63	4175250.44	36.63110	(05012117)	630850.63	4175250.44	36.64508	(05012117)
631200.63	4175250.44	33.85540	(07012317)	631550.63	4175250.44	32.96089	(04022018)
631900.63	4175250.44	36.95037	(06011617)	632250.63	4175250.44	33.91980	(06120617)
632600.63	4175250.44	32.12496	(04022223)	632950.63	4175250.44	29.09644	(04022222)
633300.63	4175250.44	38.14394	(06100508)	629800.63	4175600.44	131.26577	(06020109)
630150.63	4175600.44	108.78773	(06020109)	630500.63	4175600.44	58.84004	(05012117)
630850.63	4175600.44	60.42270	(05012117)	631200.63	4175600.44	62.19340	(06011617)
631550.63	4175600.44	60.20500	(06011617)	631900.63	4175600.44	56.88003	(05021801)
632250.63	4175600.44	61.94302	(06100508)	632600.63	4175600.44	65.58287	(06100508)
632950.63	4175600.44	51.07830	(06100508)	633300.63	4175600.44	33.35178	(06100508)
629800.63	4175950.44	112.80023	(04121224)	630150.63	4175950.44	241.41304	(04121224)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	324.82753	(04022207)	630850.63	4175950.44	338.25964	(07010217)
631200.63	4175950.44	352.87273	(07010217)	631550.63	4175950.44	304.03403	(05122420)
631900.63	4175950.44	138.21624	(07021102)	632250.63	4175950.44	81.66114	(07021102)
632600.63	4175950.44	57.82910	(06012822)	632950.63	4175950.44	43.92668	(06012822)
633300.63	4175950.44	34.87576	(06012822)	629800.63	4176300.44	62.98418	(07120621)
630150.63	4176300.44	67.57800	(07120622)	630500.63	4176300.44	69.56060	(08011009)
630850.63	4176300.44	80.15018	(08021908)	631200.63	4176300.44	81.66048	(08021808)
631550.63	4176300.44	76.65092	(08021808)	631900.63	4176300.44	69.82515	(05122401)
632250.63	4176300.44	63.33869	(06020208)	632600.63	4176300.44	52.69052	(06020205)
632950.63	4176300.44	42.72568	(04121118)	633300.63	4176300.44	34.82318	(07021221)
629800.63	4176650.44	36.28280	(04021520)	630150.63	4176650.44	35.89892	(04021521)
630500.63	4176650.44	39.24492	(08011009)	630850.63	4176650.44	42.55109	(07091007)
631200.63	4176650.44	42.17577	(07091007)	631550.63	4176650.44	43.63821	(08021908)
631900.63	4176650.44	43.77073	(08021808)	632250.63	4176650.44	45.37702	(08031008)
632600.63	4176650.44	36.26345	(05122323)	632950.63	4176650.44	33.34095	(05121218)
633300.63	4176650.44	29.80013	(05010918)	629800.63	4177000.44	25.50979	(04021521)
630150.63	4177000.44	26.14808	(07021218)	630500.63	4177000.44	28.47309	(08011009)
630850.63	4177000.44	39.70327	(07091007)	631200.63	4177000.44	39.78329	(07091007)
631550.63	4177000.44	38.83977	(07091007)	631900.63	4177000.44	31.35689	(08021908)
632250.63	4177000.44	31.49530	(08021808)	632600.63	4177000.44	37.88063	(08031008)
632950.63	4177000.44	40.17877	(08031008)	633300.63	4177000.44	27.31736	(08031008)
629800.63	4177350.44	19.99572	(04120908)	630150.63	4177350.44	21.69163	(05010917)
630500.63	4177350.44	22.75520	(08011009)	630850.63	4177350.44	34.38905	(07091007)
631200.63	4177350.44	38.30868	(07091007)	631550.63	4177350.44	37.94780	(07091007)
631900.63	4177350.44	23.94119	(07022408)	632250.63	4177350.44	24.67906	(08021908)
632600.63	4177350.44	23.75850	(08021908)	632950.63	4177350.44	24.81060	(08031008)
633300.63	4177350.44	35.22628	(08031008)	631670.70	4175493.59	50.06206	(06011617)
631669.80	4175641.41	63.88409	(06011617)	631665.32	4175796.39	105.38358	(07010217)
631417.17	4175826.85	124.87357	(07010217)	631417.17	4175673.66	71.40414	(06011617)
631422.55	4175484.63	50.13625	(06011617)	631268.42	4175983.74	981.89703	(05121217)
631275.69	4175523.99	53.11299	(06011617)	631345.65	4175419.50	42.61957	(06011617)
631384.72	4175441.30	45.87984	(06011617)	631491.93	4175442.21	46.87714	(06011617)
631491.93	4175414.95	44.80683	(06011617)	631385.63	4175413.14	43.06927	(06011617)
631358.37	4175395.87	40.31215	(06011617)	631409.25	4175336.81	36.48515	(04022018)
631567.35	4175235.96	32.45975	(04022018)	631756.33	4175028.80	26.87936	(04022018)
631807.22	4175003.36	26.32993	(04022018)	631867.18	4174987.91	25.99034	(04022018)
631849.92	4175988.28	155.63210	(04122902)	631268.74	4175963.75	466.71280	(08011001)
631269.05	4175943.76	319.59004	(07010217)	631269.37	4175923.77	250.62057	(07010217)
631269.68	4175903.78	208.06004	(07010217)	631270.00	4175883.79	178.46684	(07010217)
631270.32	4175863.81	156.11925	(07010217)	631270.63	4175843.82	138.09820	(07010217)

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22

*** AERMET - VERSION 18081 *** *** *** 12:14:02

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 ,

L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 ,
L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	122.78536	(07010217)	631271.26	4175803.84	109.20942	(07010217)
631271.58	4175783.85	100.33107	(06011617)	631271.90	4175763.86	93.70677	(06011617)
631272.21	4175743.87	88.01519	(06011617)	631272.53	4175723.88	83.06437	(06011617)
631272.85	4175703.89	78.71137	(06011617)	631273.16	4175683.90	74.84622	(06011617)
631273.48	4175663.91	71.38123	(06011617)	631273.79	4175643.92	68.24426	(06011617)
631274.11	4175623.94	65.37402	(06011617)	631274.43	4175603.95	62.71121	(06011617)
631274.74	4175583.96	60.20411	(06011617)	631275.06	4175563.97	57.80139	(06011617)
631275.37	4175543.98	55.45336	(06011617)	631285.68	4175509.06	51.50855	(06011617)
631295.68	4175494.14	49.94802	(06011617)	631305.67	4175479.21	48.42331	(06011617)
631315.67	4175464.28	46.93145	(06011617)	631325.66	4175449.35	45.46833	(06011617)
631335.66	4175434.43	44.03273	(06011617)	631358.67	4175426.77	43.82325	(06011617)
631371.70	4175434.03	44.90535	(06011617)	631402.59	4175441.45	46.15888	(06011617)
631420.46	4175441.60	46.38399	(06011617)	631438.33	4175441.76	46.56303	(06011617)
631456.19	4175441.91	46.70066	(06011617)	631474.06	4175442.06	46.80366	(06011617)
631491.93	4175428.58	45.84567	(06011617)	631474.21	4175414.65	44.64051	(06011617)
631456.50	4175414.35	44.43362	(06011617)	631438.78	4175414.05	44.17988	(06011617)
631421.06	4175413.74	43.87187	(06011617)	631403.35	4175413.44	43.50456	(06011617)
631372.00	4175404.51	41.76629	(06011617)	631371.09	4175381.11	39.07602	(06011617)
631383.81	4175366.34	37.88901	(07012317)	631396.53	4175351.58	37.15140	(04022018)
631425.06	4175326.73	36.03013	(04022018)	631440.87	4175316.64	35.58765	(04022018)
631456.68	4175306.56	35.15802	(04022018)	631472.49	4175296.47	34.73998	(04022018)
631488.30	4175286.39	34.33383	(04022018)	631504.11	4175276.30	33.93838	(04022018)
631519.92	4175266.22	33.55393	(04022018)	631535.73	4175256.13	33.17937	(04022018)
631551.54	4175246.05	32.81499	(04022018)	631579.95	4175222.15	32.00419	(04022018)
631592.55	4175208.34	31.56325	(04022018)	631605.15	4175194.53	31.13617	(04022018)
631617.74	4175180.72	30.72229	(04022018)	631630.34	4175166.91	30.32092	(04022018)
631642.94	4175153.10	29.93147	(04022018)	631655.54	4175139.29	29.55336	(04022018)
631668.14	4175125.47	29.18583	(04022018)	631680.74	4175111.66	28.82887	(04022018)
631693.34	4175097.85	28.48176	(04022018)	631705.94	4175084.04	28.14406	(04022018)
631718.53	4175070.23	27.81535	(04022018)	631731.13	4175056.42	27.49524	(04022018)
631743.73	4175042.61	27.18336	(04022018)	631773.29	4175020.32	26.69340	(04022018)
631790.26	4175011.84	26.51027	(04022018)	631822.21	4174999.50	26.24508	(04022018)
631837.20	4174995.64	26.16018	(04022018)	631852.19	4174991.77	26.07513	(04022018)
631866.84	4175007.53	26.37161	(04022018)	631866.50	4175027.14	26.76256	(04022018)
631866.16	4175046.76	27.16470	(04022018)	631865.83	4175066.37	27.76403	(06011617)
631865.49	4175085.99	28.92506	(06011617)	631865.15	4175105.60	30.03232	(06011617)
631864.81	4175125.22	31.08760	(06011617)	631864.47	4175144.83	32.09251	(06011617)
631864.13	4175164.45	33.05247	(06011617)	631863.80	4175184.06	33.97247	(06011617)
631863.46	4175203.68	34.86027	(06011617)	631863.12	4175223.29	35.72284	(06011617)
631862.78	4175242.91	36.56929	(06011617)	631862.44	4175262.52	37.40716	(06011617)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE2 ***

INCLUDING SOURCE(S): L0000870 , L0000871 , L0000872 , L0000873 , L0000874 , L0000875 , L0000876 , L0000877 , L0000878 , L0000879 , L0000880 , L0000881 , L0000882 , L0000883 , L0000884 , L0000885 , L0000886 , L0000887 , L0000888 , L0000889 , L0000890 , L0000891 , L0000892 , L0000893 , L0000894 , L0000895 , L0000896 , L0000897 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	38.24561	(06011617)	631861.77	4175301.75	39.09180	(06011617)
631861.43	4175321.37	39.95423	(06011617)	631861.09	4175340.98	40.83913	(06011617)
631860.75	4175360.60	41.75398	(06011617)	631860.41	4175380.21	42.70372	(06011617)
631860.07	4175399.83	43.69433	(06011617)	631859.73	4175419.44	44.72852	(06011617)
631859.40	4175439.06	45.80896	(06011617)	631859.06	4175458.67	46.93271	(06011617)
631858.72	4175478.29	48.09310	(06011617)	631858.38	4175497.90	49.27146	(06011617)
631858.04	4175517.52	50.43638	(06011617)	631857.70	4175537.13	51.53174	(06011617)
631857.37	4175556.75	52.96584	(06120617)	631857.03	4175576.36	54.71169	(06120617)
631856.69	4175595.98	56.50276	(06120617)	631856.35	4175615.59	58.73054	(05021801)
631856.01	4175635.21	61.36455	(05021801)	631855.67	4175654.82	64.55302	(07010217)
631855.33	4175674.44	69.25662	(07010217)	631855.00	4175694.05	74.01118	(07010217)
631854.66	4175713.67	78.79368	(07010217)	631854.32	4175733.28	83.49456	(07010217)
631853.98	4175752.90	87.86207	(07010217)	631853.64	4175772.51	91.39775	(07010217)
631853.30	4175792.13	93.78508	(07020218)	631852.97	4175811.74	99.60971	(05011606)
631852.63	4175831.36	107.95227	(05011606)	631852.29	4175850.97	115.40710	(06121504)
631851.95	4175870.59	123.89506	(08011020)	631851.61	4175890.20	130.59112	(05122420)
631851.27	4175909.82	139.21933	(07012218)	631850.94	4175929.43	146.09338	(05020819)
631850.60	4175949.05	150.92306	(07021102)	631850.26	4175968.66	152.57073	(06012822)
631830.54	4175988.13	162.09923	(04122902)	631811.15	4175987.98	169.12085	(04122902)
631791.77	4175987.83	176.76734	(04122902)	631772.39	4175987.67	185.13323	(04122902)
631753.00	4175987.52	194.34292	(04122902)	631733.62	4175987.37	204.68459	(06012822)
631714.24	4175987.22	216.26819	(06012822)	631694.85	4175987.07	229.28164	(06012822)
631675.47	4175986.92	244.01444	(06012822)	631656.09	4175986.77	260.87394	(06012822)
631636.70	4175986.62	280.41553	(06012822)	631617.32	4175986.46	303.38044	(06012822)
631597.94	4175986.31	330.87945	(06012822)	631578.55	4175986.16	364.60009	(06012822)
631559.17	4175986.01	407.16927	(06012822)	631539.79	4175985.86	463.14450	(06012822)
631520.40	4175985.71	540.99857	(06012822)	631501.02	4175985.56	659.50268	(07021102)
631481.64	4175985.40	866.85650	(07021102)	631462.25	4175985.25	1091.93959	(05121217)
631442.87	4175985.10	1130.92896	(05121217)	631423.49	4175984.95	1123.34025	(05121217)
631404.10	4175984.80	1107.16749	(05121217)	631384.72	4175984.65	1089.41625	(05121217)
631365.34	4175984.50	1071.03450	(05121217)	631345.95	4175984.35	1052.53612	(05121217)
631326.57	4175984.19	1033.81583	(05121217)	631307.19	4175984.04	1016.10892	(05121217)
631287.80	4175983.89	998.77198	(05121217)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 ,

L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 ,
L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 ,
L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	22.39126	(07012317)	632304.44	4174354.52	15.78969	(07012317)
632192.15	4174956.32	22.45016	(07012317)	632420.62	4175510.15	44.08901	(06011617)
632418.97	4175552.92	48.26721	(06011617)	631187.00	4175727.00	124.27268	(06020109)
631166.00	4175729.00	124.18682	(06020109)	631121.00	4175719.00	123.52060	(06020109)
631035.00	4174830.00	20.78890	(05012117)	631106.00	4174825.00	21.62900	(05012117)
631937.00	4174528.00	16.99666	(07012317)	631322.00	4174522.00	18.58032	(05012117)
629800.63	4173850.44	10.77353	(06121421)	630150.63	4173850.44	10.69795	(06011022)
630500.63	4173850.44	11.82790	(07011517)	630850.63	4173850.44	13.91360	(05012117)
631200.63	4173850.44	13.85163	(05012117)	631550.63	4173850.44	12.06462	(08022002)
631900.63	4173850.44	12.04275	(06121420)	632250.63	4173850.44	12.84758	(07012317)
632600.63	4173850.44	12.82886	(07012317)	632950.63	4173850.44	12.54174	(07011417)
633300.63	4173850.44	11.77044	(04022318)	629800.63	4174200.44	12.26819	(06121421)
630150.63	4174200.44	12.84515	(06121421)	630500.63	4174200.44	12.31323	(07121217)
630850.63	4174200.44	15.66330	(05012117)	631200.63	4174200.44	15.99481	(05012117)
631550.63	4174200.44	15.44370	(05012117)	631900.63	4174200.44	13.85969	(08022002)
632250.63	4174200.44	14.74363	(07012317)	632600.63	4174200.44	14.69474	(07012317)
632950.63	4174200.44	14.34481	(07011417)	633300.63	4174200.44	13.42654	(05011521)
629800.63	4174550.44	16.22697	(04011017)	630150.63	4174550.44	14.57484	(06121421)
630500.63	4174550.44	15.56526	(06121421)	630850.63	4174550.44	16.28461	(05012117)
631200.63	4174550.44	18.79619	(05012117)	631550.63	4174550.44	18.92735	(05012117)
631900.63	4174550.44	17.01358	(07012317)	632250.63	4174550.44	17.41325	(07012317)
632600.63	4174550.44	17.32523	(07012317)	632950.63	4174550.44	16.83367	(07011417)
633300.63	4174550.44	16.45385	(04022018)	629800.63	4174900.44	52.07273	(06020109)
630150.63	4174900.44	25.78377	(06020109)	630500.63	4174900.44	20.50388	(04011017)
630850.63	4174900.44	19.48238	(06121421)	631200.63	4174900.44	22.98990	(05012117)
631550.63	4174900.44	23.33330	(05012117)	631900.63	4174900.44	23.41697	(05012117)
632250.63	4174900.44	21.55019	(07012317)	632600.63	4174900.44	21.36975	(07012317)
632950.63	4174900.44	20.64409	(04022018)	633300.63	4174900.44	21.17170	(06011617)
629800.63	4175250.44	96.03782	(06020109)	630150.63	4175250.44	99.66679	(06020109)
630500.63	4175250.44	79.63308	(06020109)	630850.63	4175250.44	45.53492	(06020109)
631200.63	4175250.44	28.64912	(05012117)	631550.63	4175250.44	31.07781	(05012117)
631900.63	4175250.44	31.60835	(05012117)	632250.63	4175250.44	30.40875	(05012117)
632600.63	4175250.44	28.56215	(07012317)	632950.63	4175250.44	31.18366	(06011617)
633300.63	4175250.44	30.94821	(06011617)	629800.63	4175600.44	34.01979	(08012221)
630150.63	4175600.44	36.46301	(08012221)	630500.63	4175600.44	89.10722	(06020109)
630850.63	4175600.44	118.19096	(06020109)	631200.63	4175600.44	113.50145	(06020109)
631550.63	4175600.44	88.37915	(06020109)	631900.63	4175600.44	51.25244	(05012117)
632250.63	4175600.44	51.78824	(06011617)	632600.63	4175600.44	52.36787	(06011617)
632950.63	4175600.44	49.55227	(06011617)	633300.63	4175600.44	49.04112	(07010217)
629800.63	4175950.44	37.45619	(04010517)	630150.63	4175950.44	47.71438	(04010517)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 , L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	63.89714	(04010517)	630850.63	4175950.44	92.41888	(04010517)
631200.63	4175950.44	178.69441	(04121224)	631550.63	4175950.44	281.37859	(04022207)
631900.63	4175950.44	281.22323	(04022207)	632250.63	4175950.44	274.55491	(07010217)
632600.63	4175950.44	271.82080	(08011001)	632950.63	4175950.44	216.48301	(07012218)
633300.63	4175950.44	113.89232	(07021102)	629800.63	4176300.44	31.41331	(07020701)
630150.63	4176300.44	36.79564	(07020701)	630500.63	4176300.44	45.21173	(06011024)
630850.63	4176300.44	49.24801	(07120621)	631200.63	4176300.44	56.60556	(07120622)
631550.63	4176300.44	59.26893	(07120622)	631900.63	4176300.44	64.58341	(07022408)
632250.63	4176300.44	71.66334	(08021808)	632600.63	4176300.44	70.33870	(08021808)
632950.63	4176300.44	66.11862	(08021808)	633300.63	4176300.44	62.75024	(05122401)
629800.63	4176650.44	22.28370	(07120621)	630150.63	4176650.44	28.04884	(07120621)
630500.63	4176650.44	30.28143	(07120622)	630850.63	4176650.44	30.66804	(06122121)
631200.63	4176650.44	31.01878	(04021520)	631550.63	4176650.44	33.05429	(08011009)
631900.63	4176650.44	36.74223	(07091007)	632250.63	4176650.44	36.89947	(07091007)
632600.63	4176650.44	38.35187	(08021908)	632950.63	4176650.44	38.52636	(08021808)
633300.63	4176650.44	39.27666	(08031008)	629800.63	4177000.44	19.78733	(07120622)
630150.63	4177000.44	20.52553	(05021923)	630500.63	4177000.44	21.82427	(04021520)
630850.63	4177000.44	21.72483	(04021520)	631200.63	4177000.44	21.88592	(07021218)
631550.63	4177000.44	24.09325	(08011009)	631900.63	4177000.44	32.59673	(07091007)
632250.63	4177000.44	34.48869	(07091007)	632600.63	4177000.44	34.21043	(07091007)
632950.63	4177000.44	32.31675	(07091007)	633300.63	4177000.44	27.01946	(08021908)
629800.63	4177350.44	16.67996	(07013018)	630150.63	4177350.44	17.21889	(04021520)
630500.63	4177350.44	17.19991	(04021521)	630850.63	4177350.44	16.92972	(04120903)
631200.63	4177350.44	17.69980	(07021218)	631550.63	4177350.44	19.28447	(08011009)
631900.63	4177350.44	23.09590	(07091007)	632250.63	4177350.44	33.01882	(07091007)
632600.63	4177350.44	32.89211	(07091007)	632950.63	4177350.44	32.27598	(07091007)
633300.63	4177350.44	20.78327	(08021908)	631670.70	4175493.59	42.09165	(05012117)
631669.80	4175641.41	91.13772	(06020109)	631665.32	4175796.39	134.36148	(06020109)
631417.17	4175826.85	132.17762	(06020109)	631417.17	4175673.66	119.10557	(06020109)
631422.55	4175484.63	56.70679	(06020109)	631268.42	4175983.74	233.54385	(04010517)
631275.69	4175523.99	89.73254	(06020109)	631345.65	4175419.50	42.62131	(06020109)
631384.72	4175441.30	45.32467	(06020109)	631491.93	4175442.21	38.47831	(05012117)
631491.93	4175414.95	37.15432	(05012117)	631385.63	4175413.14	36.67404	(05012117)
631358.37	4175395.87	35.79647	(05012117)	631409.25	4175336.81	33.64954	(05012117)
631567.35	4175235.96	30.66996	(05012117)	631756.33	4175028.80	25.80465	(05012117)
631807.22	4175003.36	25.33368	(05012117)	631867.18	4174987.91	25.05900	(05012117)
631849.92	4175988.28	833.40243	(04121304)	631268.74	4175963.75	219.35927	(04121224)
631269.05	4175943.76	199.55248	(04121224)	631269.37	4175923.77	169.68048	(08012221)
631269.68	4175903.78	151.35886	(08012221)	631270.00	4175883.79	131.26545	(08012221)
631270.32	4175863.81	127.96408	(06020109)	631270.63	4175843.82	128.62415	(06020109)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 , L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	128.27429	(06020109)	631271.26	4175803.84	127.72315	(06020109)
631271.58	4175783.85	127.11306	(06020109)	631271.90	4175763.86	126.43840	(06020109)
631272.21	4175743.87	125.66081	(06020109)	631272.53	4175723.88	124.72696	(06020109)
631272.85	4175703.89	123.56929	(06020109)	631273.16	4175683.90	122.10721	(06020109)
631273.48	4175663.91	120.24964	(06020109)	631273.79	4175643.92	117.90053	(06020109)
631274.11	4175623.94	114.96778	(06020109)	631274.43	4175603.95	111.36791	(06020109)
631274.74	4175583.96	107.04585	(06020109)	631275.06	4175563.97	101.97791	(06020109)
631275.37	4175543.98	96.18511	(06020109)	631285.68	4175509.06	83.49479	(06020109)
631295.68	4175494.14	76.85211	(06020109)	631305.67	4175479.21	69.93077	(06020109)
631315.67	4175464.28	62.88407	(06020109)	631325.66	4175449.35	55.87755	(06020109)
631335.66	4175434.43	49.07476	(06020109)	631358.67	4175426.77	43.50297	(06020109)
631371.70	4175434.03	44.40082	(06020109)	631402.59	4175441.45	43.13949	(06020109)
631420.46	4175441.60	40.98679	(06020109)	631438.33	4175441.76	38.87757	(06020109)
631456.19	4175441.91	38.31976	(05012117)	631474.06	4175442.06	38.39926	(05012117)
631491.93	4175428.58	37.80280	(05012117)	631474.21	4175414.65	37.07619	(05012117)
631456.50	4175414.35	36.99775	(05012117)	631438.78	4175414.05	36.91899	(05012117)
631421.06	4175413.74	36.83930	(05012117)	631403.35	4175413.44	36.75872	(05012117)
631372.00	4175404.51	36.23287	(05012117)	631371.09	4175381.11	35.24324	(05012117)
631383.81	4175366.34	34.69731	(05012117)	631396.53	4175351.58	34.16563	(05012117)
631425.06	4175326.73	33.32635	(05012117)	631440.87	4175316.64	33.00881	(05012117)
631456.68	4175306.56	32.69762	(05012117)	631472.49	4175296.47	32.39189	(05012117)
631488.30	4175286.39	32.09213	(05012117)	631504.11	4175276.30	31.79744	(05012117)
631519.92	4175266.22	31.50831	(05012117)	631535.73	4175256.13	31.22391	(05012117)
631551.54	4175246.05	30.94472	(05012117)	631579.95	4175222.15	30.28515	(05012117)
631592.55	4175208.34	29.91054	(05012117)	631605.15	4175194.53	29.54570	(05012117)
631617.74	4175180.72	29.19023	(05012117)	631630.34	4175166.91	28.84377	(05012117)
631642.94	4175153.10	28.50595	(05012117)	631655.54	4175139.29	28.17645	(05012117)
631668.14	4175125.47	27.85471	(05012117)	631680.74	4175111.66	27.54091	(05012117)
631693.34	4175097.85	27.23452	(05012117)	631705.94	4175084.04	26.93528	(05012117)
631718.53	4175070.23	26.64291	(05012117)	631731.13	4175056.42	26.35719	(05012117)
631743.73	4175042.61	26.07785	(05012117)	631773.29	4175020.32	25.64649	(05012117)
631790.26	4175011.84	25.48959	(05012117)	631822.21	4174999.50	25.26677	(05012117)
631837.20	4174995.64	25.19902	(05012117)	631852.19	4174991.77	25.12982	(05012117)
631866.84	4175007.53	25.44287	(05012117)	631866.50	4175027.14	25.83873	(05012117)
631866.16	4175046.76	26.24811	(05012117)	631865.83	4175066.37	26.67168	(05012117)
631865.49	4175085.99	27.11099	(05012117)	631865.15	4175105.60	27.56670	(05012117)
631864.81	4175125.22	28.04045	(05012117)	631864.47	4175144.83	28.53296	(05012117)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE3 ***

INCLUDING SOURCE(S): L0001296 , L0001297 , L0001298 , L0001299 , L0001300 , L0001301 , L0001302 , L0001303 , L0001304 , L0001305 , L0001306 , L0001307 , L0001308 , L0001309 , L0001310 , L0001311 , L0001312 , L0001313 , L0001314 , L0001315 , L0001316 , L0001317 , L0001318 , L0001319 , L0001320 , L0001321 , L0001322 , L0001323 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631864.13	4175164.45	29.04604	(05012117)	631863.80	4175184.06	29.58056	(05012117)
631863.46	4175203.68	30.13853	(05012117)	631863.12	4175223.29	30.72104	(05012117)
631862.78	4175242.91	31.33045	(05012117)	631862.44	4175262.52	31.96809	(05012117)
631862.10	4175282.14	32.63676	(05012117)	631861.77	4175301.75	33.33816	(05012117)
631861.43	4175321.37	34.07561	(05012117)	631861.09	4175340.98	34.85127	(05012117)
631860.75	4175360.60	35.66919	(05012117)	631860.41	4175380.21	36.53216	(05012117)
631860.07	4175399.83	37.44514	(05012117)	631859.73	4175419.44	38.41176	(05012117)
631859.40	4175439.06	39.43820	(05012117)	631859.06	4175458.67	40.52925	(05012117)
631858.72	4175478.29	41.69274	(05012117)	631858.38	4175497.90	42.93511	(05012117)
631858.04	4175517.52	44.26644	(05012117)	631857.70	4175537.13	45.69556	(05012117)
631857.37	4175556.75	47.23580	(05012117)	631857.03	4175576.36	48.89939	(05012117)
631856.69	4175595.98	50.70441	(05012117)	631856.35	4175615.59	52.66842	(05012117)
631856.01	4175635.21	57.69651	(06020109)	631855.67	4175654.82	68.26205	(06020109)
631855.33	4175674.44	79.23646	(06020109)	631855.00	4175694.05	90.10428	(06020109)
631854.66	4175713.67	100.39046	(06020109)	631854.32	4175733.28	109.68079	(06020109)
631853.98	4175752.90	117.75620	(06020109)	631853.64	4175772.51	124.63708	(06020109)
631853.30	4175792.13	130.37452	(06020109)	631852.97	4175811.74	135.17193	(06020109)
631852.63	4175831.36	139.35764	(06020109)	631852.29	4175850.97	143.36137	(06020109)
631851.95	4175870.59	147.72164	(06020109)	631851.61	4175890.20	152.93558	(06020109)
631851.27	4175909.82	178.49805	(04022207)	631850.94	4175929.43	216.21235	(04022207)
631850.60	4175949.05	276.50113	(04022207)	631850.26	4175968.66	395.83226	(04022207)
631830.54	4175988.13	830.99381	(04121304)	631811.15	4175987.98	828.54725	(04121304)
631791.77	4175987.83	826.08383	(04121304)	631772.39	4175987.67	823.09050	(04121304)
631753.00	4175987.52	820.58727	(04121304)	631733.62	4175987.37	818.03477	(04121304)
631714.24	4175987.22	815.45358	(04121304)	631694.85	4175987.07	812.83154	(04121304)
631675.47	4175986.92	810.13687	(04121304)	631656.09	4175986.77	807.37804	(04121304)
631636.70	4175986.62	804.55125	(04121304)	631617.32	4175986.46	801.09514	(04121304)
631597.94	4175986.31	797.95387	(04121304)	631578.55	4175986.16	794.58131	(04121304)
631559.17	4175986.01	790.84290	(04121304)	631539.79	4175985.86	786.49860	(04121304)
631520.40	4175985.71	781.08140	(04121304)	631501.02	4175985.56	773.35947	(04121304)
631481.64	4175985.40	758.80129	(04121304)	631462.25	4175985.25	721.51262	(04121304)
631442.87	4175985.10	667.26936	(04121224)	631423.49	4175984.95	547.80877	(04121224)
631404.10	4175984.80	452.99957	(04010517)	631384.72	4175984.65	396.28902	(04010517)
631365.34	4175984.50	353.07228	(04010517)	631345.95	4175984.35	319.12932	(04010517)
631326.57	4175984.19	291.71285	(04010517)	631307.19	4175984.04	269.05148	(04010517)
631287.80	4175983.89	249.92721	(04010517)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	29.29388	(05012117)	632304.44	4174354.52	20.79157	(07012317)
632192.15	4174956.32	30.02040	(07012317)	632420.62	4175510.15	57.73859	(05012117)
632418.97	4175552.92	63.18823	(05012117)	631187.00	4175727.00	122.52585	(06020109)
631166.00	4175729.00	114.15227	(06020109)	631121.00	4175719.00	107.60454	(06020109)
631035.00	4174830.00	24.46958	(06121421)	631106.00	4174825.00	23.68332	(06121421)
631937.00	4174528.00	22.03365	(08022002)	631322.00	4174522.00	24.63381	(05012117)
629800.63	4173850.44	13.57092	(04121301)	630150.63	4173850.44	12.49798	(06011022)
630500.63	4173850.44	14.09859	(04121302)	630850.63	4173850.44	15.99608	(07011517)
631200.63	4173850.44	18.95774	(05012117)	631550.63	4173850.44	15.99115	(05010318)
631900.63	4173850.44	16.39892	(08022002)	632250.63	4173850.44	15.65617	(05122422)
632600.63	4173850.44	17.55323	(07012317)	632950.63	4173850.44	17.00342	(07011417)
633300.63	4173850.44	15.93729	(04022318)	629800.63	4174200.44	13.38793	(04012322)
630150.63	4174200.44	15.96377	(06121421)	630500.63	4174200.44	15.35157	(06011022)
630850.63	4174200.44	16.57216	(07121217)	631200.63	4174200.44	21.35729	(05012117)
631550.63	4174200.44	21.11252	(05012117)	631900.63	4174200.44	18.90666	(08022002)
632250.63	4174200.44	18.31571	(06121420)	632600.63	4174200.44	20.11345	(07012317)
632950.63	4174200.44	19.62897	(07011417)	633300.63	4174200.44	18.09784	(04122822)
629800.63	4174550.44	17.66516	(06120217)	630150.63	4174550.44	18.86483	(04011017)
630500.63	4174550.44	19.34832	(06121421)	630850.63	4174550.44	19.07583	(06011022)
631200.63	4174550.44	21.69793	(07011517)	631550.63	4174550.44	25.80430	(05012117)
631900.63	4174550.44	22.27094	(08022002)	632250.63	4174550.44	22.78929	(07012317)
632600.63	4174550.44	23.68185	(07012317)	632950.63	4174550.44	23.02876	(07011417)
633300.63	4174550.44	21.42464	(05011521)	629800.63	4174900.44	70.19050	(06020109)
630150.63	4174900.44	34.36763	(06020109)	630500.63	4174900.44	26.01606	(04011017)
630850.63	4174900.44	24.25760	(06121421)	631200.63	4174900.44	25.03920	(06121421)
631550.63	4174900.44	31.51620	(05012117)	631900.63	4174900.44	31.77016	(05012117)
632250.63	4174900.44	29.15327	(07012317)	632600.63	4174900.44	29.17280	(07012317)
632950.63	4174900.44	27.92103	(07011417)	633300.63	4174900.44	27.73255	(04022018)
629800.63	4175250.44	80.90952	(06020109)	630150.63	4175250.44	117.16969	(06020109)
630500.63	4175250.44	107.81806	(06020109)	630850.63	4175250.44	60.93710	(06020109)
631200.63	4175250.44	37.42402	(04011017)	631550.63	4175250.44	37.07704	(05012117)
631900.63	4175250.44	42.53783	(05012117)	632250.63	4175250.44	41.23876	(05012117)
632600.63	4175250.44	38.99218	(07012317)	632950.63	4175250.44	37.61229	(04022018)
633300.63	4175250.44	41.52275	(06011617)	629800.63	4175600.44	30.74639	(08012221)
630150.63	4175600.44	37.76165	(08012221)	630500.63	4175600.44	40.78256	(06020109)
630850.63	4175600.44	113.33165	(06020109)	631200.63	4175600.44	152.85732	(06020109)

631550.63	4175600.44	116.61242	(06020109)	631900.63	4175600.44	67.95415	(05012117)
632250.63	4175600.44	69.82011	(05012117)	632600.63	4175600.44	67.92748	(06011617)
632950.63	4175600.44	68.09432	(06011617)	633300.63	4175600.44	62.76411	(08010918)
629800.63	4175950.44	32.69421	(04010517)	630150.63	4175950.44	40.55160	(04010517)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	52.18785	(04010517)	630850.63	4175950.44	70.81277	(04010517)
631200.63	4175950.44	104.23527	(04010517)	631550.63	4175950.44	210.60369	(04121224)
631900.63	4175950.44	392.40408	(04022207)	632250.63	4175950.44	379.07110	(04022207)
632600.63	4175950.44	371.12421	(07010217)	632950.63	4175950.44	283.12418	(05122420)
633300.63	4175950.44	136.96267	(07021102)	629800.63	4176300.44	27.57838	(07020701)
630150.63	4176300.44	34.67954	(07020701)	630500.63	4176300.44	39.88818	(06011024)
630850.63	4176300.44	51.33621	(06011024)	631200.63	4176300.44	64.16866	(07120621)
631550.63	4176300.44	75.32235	(07120622)	631900.63	4176300.44	78.76798	(08011009)
632250.63	4176300.44	87.74720	(07022408)	632600.63	4176300.44	96.22753	(08021808)
632950.63	4176300.44	91.44039	(08021808)	633300.63	4176300.44	80.98022	(05121218)
629800.63	4176650.44	17.24769	(06011024)	630150.63	4176650.44	27.50359	(07120621)
630500.63	4176650.44	33.21348	(04121817)	630850.63	4176650.44	37.08029	(07120404)
631200.63	4176650.44	40.84598	(06122121)	631550.63	4176650.44	40.88119	(04021521)
631900.63	4176650.44	45.10651	(08011009)	632250.63	4176650.44	48.89764	(07091007)
632600.63	4176650.44	48.65834	(07091007)	632950.63	4176650.44	51.32023	(08021908)
633300.63	4176650.44	51.92382	(08021808)	629800.63	4177000.44	22.20219	(07020707)
630150.63	4177000.44	24.24275	(07120404)	630500.63	4177000.44	26.70559	(07013018)
630850.63	4177000.44	28.80145	(04021520)	631200.63	4177000.44	29.04766	(04021521)
631550.63	4177000.44	29.72285	(07021218)	631900.63	4177000.44	32.90225	(08011009)
632250.63	4177000.44	41.66541	(07091007)	632600.63	4177000.44	46.06470	(07091007)
632950.63	4177000.44	43.66639	(07091007)	633300.63	4177000.44	36.39610	(08021908)
629800.63	4177350.44	18.07519	(05021923)	630150.63	4177350.44	20.55774	(07013018)
630500.63	4177350.44	21.72922	(07120403)	630850.63	4177350.44	22.15768	(04021521)
631200.63	4177350.44	22.82290	(04120908)	631550.63	4177350.44	24.20189	(07021218)
631900.63	4177350.44	26.37101	(08011009)	632250.63	4177350.44	26.65832	(07091007)
632600.63	4177350.44	44.42644	(07091007)	632950.63	4177350.44	43.76961	(07091007)
633300.63	4177350.44	27.71055	(07022408)	631670.70	4175493.59	51.83650	(05012117)
631669.80	4175641.41	119.52050	(06020109)	631665.32	4175796.39	174.12619	(06020109)
631417.17	4175826.85	118.36387	(06020109)	631417.17	4175673.66	159.34495	(06020109)
631422.55	4175484.63	74.02210	(06020109)	631268.42	4175983.74	123.15204	(04010517)
631275.69	4175523.99	120.70851	(06020109)	631345.65	4175419.50	55.00256	(06020109)
631384.72	4175441.30	58.52480	(06020109)	631491.93	4175442.21	48.60084	(04011017)

631491.93	4175414.95	46.11063	(04011017)	631385.63	4175413.14	47.01434	(04011017)
631358.37	4175395.87	45.88661	(04011017)	631409.25	4175336.81	40.50765	(04011017)
631567.35	4175235.96	38.37986	(05012117)	631756.33	4175028.80	34.88977	(05012117)
631807.22	4175003.36	34.28298	(05012117)	631867.18	4174987.91	33.93665	(05012117)
631849.92	4175988.28	1383.55531	(04121304)	631268.74	4175963.75	120.32074	(04010517)
631269.05	4175943.76	116.09275	(04121224)	631269.37	4175923.77	121.07268	(04121224)
631269.68	4175903.78	118.05720	(04121224)	631270.00	4175883.79	108.30066	(04121224)
631270.32	4175863.81	106.19594	(08012221)	631270.63	4175843.82	107.96275	(08012221)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	104.26884	(08012221)	631271.26	4175803.84	96.51559	(08012221)
631271.58	4175783.85	102.39895	(06020109)	631271.90	4175763.86	121.46121	(06020109)
631272.21	4175743.87	137.02708	(06020109)	631272.53	4175723.88	148.32044	(06020109)
631272.85	4175703.89	155.40140	(06020109)	631273.16	4175683.90	158.87160	(06020109)
631273.48	4175663.91	159.51046	(06020109)	631273.79	4175643.92	158.00436	(06020109)
631274.11	4175623.94	154.83928	(06020109)	631274.43	4175603.95	150.29571	(06020109)
631274.74	4175583.96	144.52331	(06020109)	631275.06	4175563.97	137.60625	(06020109)
631275.37	4175543.98	129.62950	(06020109)	631285.68	4175509.06	112.00328	(06020109)
631295.68	4175494.14	102.73215	(06020109)	631305.67	4175479.21	93.07373	(06020109)
631315.67	4175464.28	83.24320	(06020109)	631325.66	4175449.35	73.47270	(06020109)
631335.66	4175434.43	63.99116	(06020109)	631358.67	4175426.77	56.15174	(06020109)
631371.70	4175434.03	57.32126	(06020109)	631402.59	4175441.45	55.40353	(06020109)
631420.46	4175441.60	52.33028	(06020109)	631438.33	4175441.76	49.32066	(06020109)
631456.19	4175441.91	48.87208	(04011017)	631474.06	4175442.06	48.74907	(04011017)
631491.93	4175428.58	47.36587	(04011017)	631474.21	4175414.65	46.32935	(04011017)
631456.50	4175414.35	46.51875	(04011017)	631438.78	4175414.05	46.68107	(04011017)
631421.06	4175413.74	46.81681	(04011017)	631403.35	4175413.44	46.92821	(04011017)
631372.00	4175404.51	46.44410	(04011017)	631371.09	4175381.11	44.69746	(04011017)
631383.81	4175366.34	43.41000	(04011017)	631396.53	4175351.58	42.01750	(04011017)
631425.06	4175326.73	39.23282	(04011017)	631440.87	4175316.64	38.21116	(06121421)
631456.68	4175306.56	37.84509	(06121421)	631472.49	4175296.47	37.46099	(06121421)
631488.30	4175286.39	37.06138	(06121421)	631504.11	4175276.30	36.64266	(06121421)
631519.92	4175266.22	36.19971	(06121421)	631535.73	4175256.13	35.72341	(06121421)
631551.54	4175246.05	37.17805	(05012117)	631579.95	4175222.15	38.89680	(05012117)
631592.55	4175208.34	39.10117	(05012117)	631605.15	4175194.53	39.07793	(05012117)
631617.74	4175180.72	38.89860	(05012117)	631630.34	4175166.91	38.61919	(05012117)
631642.94	4175153.10	38.27978	(05012117)	631655.54	4175139.29	37.90778	(05012117)
631668.14	4175125.47	37.52047	(05012117)	631680.74	4175111.66	37.12915	(05012117)

631693.34	4175097.85	36.73965	(05012117)	631705.94	4175084.04	36.35526	(05012117)
631718.53	4175070.23	35.97760	(05012117)	631731.13	4175056.42	35.60740	(05012117)
631743.73	4175042.61	35.24481	(05012117)	631773.29	4175020.32	34.68595	(05012117)
631790.26	4175011.84	34.48381	(05012117)	631822.21	4174999.50	34.19862	(05012117)
631837.20	4174995.64	34.11324	(05012117)	631852.19	4174991.77	34.02602	(05012117)
631866.84	4175007.53	34.44217	(05012117)	631866.50	4175027.14	34.96295	(05012117)
631866.16	4175046.76	35.50098	(05012117)	631865.83	4175066.37	36.05715	(05012117)
631865.49	4175085.99	36.63341	(05012117)	631865.15	4175105.60	37.23063	(05012117)
631864.81	4175125.22	37.85089	(05012117)	631864.47	4175144.83	38.49509	(05012117)
631864.13	4175164.45	39.16553	(05012117)	631863.80	4175184.06	39.86328	(05012117)
631863.46	4175203.68	40.59089	(05012117)	631863.12	4175223.29	41.34969	(05012117)
631862.78	4175242.91	42.14266	(05012117)	631862.44	4175262.52	42.97145	(05012117)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE4 ***

INCLUDING SOURCE(S): L0001666 , L0001667 , L0001668 , L0001669 , L0001670 , L0001671 , L0001672 , L0001673 , L0001674 , L0001675 , L0001676 , L0001677 , L0001678 , L0001679 , L0001680 , L0001681 , L0001682 , L0001683 , L0001684 , L0001685 , L0001686 , L0001687 , L0001688 , L0001689 , L0001690 , L0001691 , L0001692 , L0001693 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	43.83957	(05012117)	631861.77	4175301.75	44.74913	(05012117)
631861.43	4175321.37	45.70426	(05012117)	631861.09	4175340.98	46.70765	(05012117)
631860.75	4175360.60	47.76438	(05012117)	631860.41	4175380.21	48.87786	(05012117)
631860.07	4175399.83	50.05431	(05012117)	631859.73	4175419.44	51.29821	(05012117)
631859.40	4175439.06	52.61731	(05012117)	631859.06	4175458.67	54.01747	(05012117)
631858.72	4175478.29	55.50848	(05012117)	631858.38	4175497.90	57.09833	(05012117)
631858.04	4175517.52	58.79961	(05012117)	631857.70	4175537.13	60.62323	(05012117)
631857.37	4175556.75	62.58591	(05012117)	631857.03	4175576.36	64.70277	(05012117)
631856.69	4175595.98	66.99647	(05012117)	631856.35	4175615.59	69.48891	(05012117)
631856.01	4175635.21	73.52746	(06020109)	631855.67	4175654.82	88.03382	(06020109)
631855.33	4175674.44	103.09235	(06020109)	631855.00	4175694.05	117.97739	(06020109)
631854.66	4175713.67	132.01756	(06020109)	631854.32	4175733.28	144.62656	(06020109)
631853.98	4175752.90	155.48838	(06020109)	631853.64	4175772.51	164.52679	(06020109)
631853.30	4175792.13	171.81605	(06020109)	631852.97	4175811.74	177.62376	(06020109)
631852.63	4175831.36	182.37169	(06020109)	631852.29	4175850.97	186.59805	(06020109)
631851.95	4175870.59	190.91678	(06020109)	631851.61	4175890.20	199.05447	(04022207)
631851.27	4175909.82	234.94754	(04022207)	631850.94	4175929.43	286.12874	(04022207)
631850.60	4175949.05	370.20088	(04022207)	631850.26	4175968.66	546.78237	(04022207)
631830.54	4175988.13	1192.64382	(04121224)	631811.15	4175987.98	856.46487	(04010517)
631791.77	4175987.83	681.44298	(04010517)	631772.39	4175987.67	570.92762	(04010517)
631753.00	4175987.52	494.53657	(04010517)	631733.62	4175987.37	438.06465	(04010517)
631714.24	4175987.22	394.24902	(04010517)	631694.85	4175987.07	359.03021	(04010517)
631675.47	4175986.92	329.99460	(04010517)	631656.09	4175986.77	305.54540	(04010517)
631636.70	4175986.62	284.60662	(04010517)	631617.32	4175986.46	266.44864	(04010517)

631597.94	4175986.31	250.51920	(04010517)	631578.55	4175986.16	236.40346	(04010517)
631559.17	4175986.01	223.80620	(04010517)	631539.79	4175985.86	212.47879	(04010517)
631520.40	4175985.71	202.22554	(04010517)	631501.02	4175985.56	192.90387	(04010517)
631481.64	4175985.40	184.38414	(04010517)	631462.25	4175985.25	176.55917	(04010517)
631442.87	4175985.10	169.35215	(04010517)	631423.49	4175984.95	162.68734	(04010517)
631404.10	4175984.80	156.50117	(04010517)	631384.72	4175984.65	150.74844	(04010517)
631365.34	4175984.50	145.38154	(04010517)	631345.95	4175984.35	140.35971	(04010517)
631326.57	4175984.19	135.65563	(04010517)	631307.19	4175984.04	131.23611	(04010517)
631287.80	4175983.89	127.07431	(04010517)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	20.64565	(06011617)	632304.44	4174354.52	13.26428	(04022018)
632192.15	4174956.32	21.23641	(06011617)	632420.62	4175510.15	39.28610	(06100508)
632418.97	4175552.92	46.25100	(06100508)	631187.00	4175727.00	66.06400	(06011617)
631166.00	4175729.00	66.47864	(06011617)	631121.00	4175719.00	64.67966	(06011617)
631035.00	4174830.00	18.89562	(05012117)	631106.00	4174825.00	18.50754	(07012317)
631937.00	4174528.00	15.01046	(07011417)	631322.00	4174522.00	15.44273	(07012317)
629800.63	4173850.44	12.50500	(05012117)	630150.63	4173850.44	12.51916	(05012117)
630500.63	4173850.44	10.84544	(08022002)	630850.63	4173850.44	10.84248	(08022002)
631200.63	4173850.44	11.55329	(07012317)	631550.63	4173850.44	11.52628	(07012317)
631900.63	4173850.44	11.27002	(07011417)	632250.63	4173850.44	10.71560	(07011417)
632600.63	4173850.44	10.54583	(05011521)	632950.63	4173850.44	10.84550	(04022018)
633300.63	4173850.44	10.77344	(04022018)	629800.63	4174200.44	14.25353	(05012117)
630150.63	4174200.44	14.38431	(05012117)	630500.63	4174200.44	14.24976	(05012117)
630850.63	4174200.44	13.00678	(07012317)	631200.63	4174200.44	13.26615	(07012317)
631550.63	4174200.44	13.21969	(07012317)	631900.63	4174200.44	12.91422	(07011417)
632250.63	4174200.44	12.14714	(05011521)	632600.63	4174200.44	12.55531	(04022018)
632950.63	4174200.44	12.52959	(04022018)	633300.63	4174200.44	13.23003	(06011617)
629800.63	4174550.44	16.18586	(05012117)	630150.63	4174550.44	16.93256	(05012117)
630500.63	4174550.44	17.07122	(05012117)	630850.63	4174550.44	16.03967	(05012117)
631200.63	4174550.44	15.69761	(07012317)	631550.63	4174550.44	15.61359	(07012317)
631900.63	4174550.44	15.21602	(07011417)	632250.63	4174550.44	14.97901	(04022018)
632600.63	4174550.44	14.88746	(04022018)	632950.63	4174550.44	16.53335	(06011617)
633300.63	4174550.44	16.41365	(06011617)	629800.63	4174900.44	17.63394	(06121421)
630150.63	4174900.44	20.79953	(05012117)	630500.63	4174900.44	21.09276	(05012117)
630850.63	4174900.44	21.25714	(05012117)	631200.63	4174900.44	19.47940	(07012317)
631550.63	4174900.44	19.30910	(07012317)	631900.63	4174900.44	18.76525	(04022018)
632250.63	4174900.44	20.15556	(06011617)	632600.63	4174900.44	20.85444	(06011617)

632950.63	4174900.44	19.98613	(06011617)	633300.63	4174900.44	19.13725	(06120617)
629800.63	4175250.44	50.67611	(06020109)	630150.63	4175250.44	27.45724	(05012117)
630500.63	4175250.44	28.24798	(05012117)	630850.63	4175250.44	28.69412	(05012117)
631200.63	4175250.44	28.53947	(05012117)	631550.63	4175250.44	25.92768	(06011617)
631900.63	4175250.44	28.60369	(06011617)	632250.63	4175250.44	27.99057	(06011617)
632600.63	4175250.44	26.69488	(06120617)	632950.63	4175250.44	25.83415	(05021801)
633300.63	4175250.44	31.16550	(06100508)	629800.63	4175600.44	107.27016	(06020109)
630150.63	4175600.44	105.63468	(06020109)	630500.63	4175600.44	90.84548	(06020109)
630850.63	4175600.44	46.92079	(05012117)	631200.63	4175600.44	48.71623	(06011617)
631550.63	4175600.44	48.00015	(06011617)	631900.63	4175600.44	45.45633	(06011617)
632250.63	4175600.44	48.48890	(06100508)	632600.63	4175600.44	57.35001	(06100508)
632950.63	4175600.44	55.96475	(06100508)	633300.63	4175600.44	42.68272	(06100508)
629800.63	4175950.44	101.88741	(04010517)	630150.63	4175950.44	215.11665	(04121224)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	300.06497	(04022207)	630850.63	4175950.44	293.39748	(04022207)
631200.63	4175950.44	286.19503	(08011001)	631550.63	4175950.44	285.67584	(05122223)
631900.63	4175950.44	245.11759	(05122223)	632250.63	4175950.44	120.55134	(07021102)
632600.63	4175950.44	73.72404	(06012822)	632950.63	4175950.44	52.88108	(06012822)
633300.63	4175950.44	40.50101	(06012822)	629800.63	4176300.44	46.25812	(07120621)
630150.63	4176300.44	50.18685	(07120622)	630500.63	4176300.44	52.86105	(07120622)
630850.63	4176300.44	59.84635	(08021908)	631200.63	4176300.44	62.92048	(08021808)
631550.63	4176300.44	61.98030	(08021808)	631900.63	4176300.44	58.64216	(08021808)
632250.63	4176300.44	56.15781	(05122401)	632600.63	4176300.44	52.53045	(06020208)
632950.63	4176300.44	46.05335	(06011620)	633300.63	4176300.44	38.35317	(04121118)
629800.63	4176650.44	27.31926	(06122121)	630150.63	4176650.44	27.67206	(04021520)
630500.63	4176650.44	29.45421	(08011009)	630850.63	4176650.44	33.25263	(07091007)
631200.63	4176650.44	33.35548	(07091007)	631550.63	4176650.44	34.17200	(08021908)
631900.63	4176650.44	34.33882	(08021808)	632250.63	4176650.44	35.55387	(08031008)
632600.63	4176650.44	35.73061	(08031008)	632950.63	4176650.44	29.49340	(07010308)
633300.63	4176650.44	28.31506	(06012919)	629800.63	4177000.44	19.55779	(04021520)
630150.63	4177000.44	19.62557	(07021218)	630500.63	4177000.44	21.48760	(08011009)
630850.63	4177000.44	30.86796	(07091007)	631200.63	4177000.44	31.11919	(07091007)
631550.63	4177000.44	30.86604	(07091007)	631900.63	4177000.44	30.24187	(07091007)
632250.63	4177000.44	24.32804	(08021808)	632600.63	4177000.44	28.87781	(08031008)
632950.63	4177000.44	33.34650	(08031008)	633300.63	4177000.44	32.51171	(08031008)
629800.63	4177350.44	15.10244	(04120903)	630150.63	4177350.44	16.36927	(05010917)
630500.63	4177350.44	17.20235	(08011009)	630850.63	4177350.44	26.60012	(07091007)

631200.63	4177350.44	29.74989	(07091007)	631550.63	4177350.44	29.61564	(07091007)
631900.63	4177350.44	29.31546	(07091007)	632250.63	4177350.44	18.95950	(08021908)
632600.63	4177350.44	19.19611	(08021908)	632950.63	4177350.44	19.42502	(08021808)
633300.63	4177350.44	27.30880	(08031008)	631670.70	4175493.59	39.47925	(06011617)
631669.80	4175641.41	51.32115	(06011617)	631665.32	4175796.39	86.91322	(07010217)
631417.17	4175826.85	100.66631	(07010217)	631417.17	4175673.66	56.85117	(06011617)
631422.55	4175484.63	39.50775	(06011617)	631268.42	4175983.74	910.16397	(05121217)
631275.69	4175523.99	41.85962	(06011617)	631345.65	4175419.50	34.54937	(05012117)
631384.72	4175441.30	36.30514	(06011617)	631491.93	4175442.21	36.92518	(06011617)
631491.93	4175414.95	35.32037	(06011617)	631385.63	4175413.14	34.22618	(06011617)
631358.37	4175395.87	33.05299	(05012117)	631409.25	4175336.81	28.74819	(07012317)
631567.35	4175235.96	25.51864	(07012317)	631756.33	4175028.80	20.90613	(07012317)
631807.22	4175003.36	20.33274	(04022018)	631867.18	4174987.91	20.04032	(04022018)
631849.92	4175988.28	841.67063	(07021102)	631268.74	4175963.75	385.76168	(05122223)
631269.05	4175943.76	255.35042	(08011001)	631269.37	4175923.77	196.87799	(07010217)
631269.68	4175903.78	163.07652	(07010217)	631270.00	4175883.79	139.96664	(07010217)
631270.32	4175863.81	122.76094	(07010217)	631270.63	4175843.82	109.06809	(07010217)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	97.57168	(07010217)	631271.26	4175803.84	87.47520	(07010217)
631271.58	4175783.85	78.90204	(06011617)	631271.90	4175763.86	73.68294	(06011617)
631272.21	4175743.87	69.19206	(06011617)	631272.53	4175723.88	65.28018	(06011617)
631272.85	4175703.89	61.83656	(06011617)	631273.16	4175683.90	58.77660	(06011617)
631273.48	4175663.91	56.03363	(06011617)	631273.79	4175643.92	53.55337	(06011617)
631274.11	4175623.94	51.29071	(06011617)	631274.43	4175603.95	49.20240	(06011617)
631274.74	4175583.96	47.25144	(06011617)	631275.06	4175563.97	45.40113	(06011617)
631275.37	4175543.98	43.61550	(06011617)	631285.68	4175509.06	40.65365	(06011617)
631295.68	4175494.14	39.48259	(06011617)	631305.67	4175479.21	38.34000	(06011617)
631315.67	4175464.28	37.22322	(06011617)	631325.66	4175449.35	36.29387	(05012117)
631335.66	4175434.43	35.43812	(05012117)	631358.67	4175426.77	34.84468	(06011617)
631371.70	4175434.03	35.60973	(06011617)	631402.59	4175441.45	36.48194	(06011617)
631420.46	4175441.60	36.62364	(06011617)	631438.33	4175441.76	36.73552	(06011617)
631456.19	4175441.91	36.82034	(06011617)	631474.06	4175442.06	36.88252	(06011617)
631491.93	4175428.58	36.12145	(06011617)	631474.21	4175414.65	35.21963	(06011617)
631456.50	4175414.35	35.09209	(06011617)	631438.78	4175414.05	34.93364	(06011617)
631421.06	4175413.74	34.73922	(06011617)	631403.35	4175413.44	34.50544	(06011617)
631372.00	4175404.51	33.30641	(06011617)	631371.09	4175381.11	31.85710	(05012117)
631383.81	4175366.34	30.43262	(06011617)	631396.53	4175351.58	29.54093	(06011617)

631425.06	4175326.73	28.38751	(07012317)	631440.87	4175316.64	28.03570	(07012317)
631456.68	4175306.56	27.69308	(07012317)	631472.49	4175296.47	27.35873	(07012317)
631488.30	4175286.39	27.03298	(07012317)	631504.11	4175276.30	26.71495	(07012317)
631519.92	4175266.22	26.40497	(07012317)	631535.73	4175256.13	26.10223	(07012317)
631551.54	4175246.05	25.80704	(07012317)	631579.95	4175222.15	25.14975	(07012317)
631592.55	4175208.34	24.79276	(07012317)	631605.15	4175194.53	24.44709	(07012317)
631617.74	4175180.72	24.11223	(07012317)	631630.34	4175166.91	23.78759	(07012317)
631642.94	4175153.10	23.47265	(07012317)	631655.54	4175139.29	23.16678	(07012317)
631668.14	4175125.47	22.86910	(07012317)	631680.74	4175111.66	22.57914	(07012317)
631693.34	4175097.85	22.29558	(07012317)	631705.94	4175084.04	22.01697	(07012317)
631718.53	4175070.23	21.74145	(07012317)	631731.13	4175056.42	21.46656	(07012317)
631743.73	4175042.61	21.18932	(07012317)	631773.29	4175020.32	20.66734	(07012317)
631790.26	4175011.84	20.48243	(04022018)	631822.21	4174999.50	20.25948	(04022018)
631837.20	4174995.64	20.18630	(04022018)	631852.19	4174991.77	20.11313	(04022018)
631866.84	4175007.53	20.34266	(04022018)	631866.50	4175027.14	20.65366	(04022018)
631866.16	4175046.76	20.98975	(06011617)	631865.83	4175066.37	21.87072	(06011617)
631865.49	4175085.99	22.71362	(06011617)	631865.15	4175105.60	23.51799	(06011617)
631864.81	4175125.22	24.28638	(06011617)	631864.47	4175144.83	25.02106	(06011617)
631864.13	4175164.45	25.72699	(06011617)	631863.80	4175184.06	26.40853	(06011617)
631863.46	4175203.68	27.07201	(06011617)	631863.12	4175223.29	27.72290	(06011617)
631862.78	4175242.91	28.36813	(06011617)	631862.44	4175262.52	29.01329	(06011617)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: SLINE5 ***

INCLUDING SOURCE(S): L0001932 , L0001933 , L0001934 , L0001935 , L0001936 , L0001937 , L0001938 , L0001939 , L0001940 , L0001941 , L0001942 , L0001943 , L0001944 , L0001945 , L0001946 , L0001947 , L0001948 , L0001949 , L0001950 , L0001951 , L0001952 , L0001953 , L0001954 , L0001955 , L0001956 , L0001957 , L0001958 , L0001959 , . . . ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	29.66514	(06011617)	631861.77	4175301.75	30.32885	(06011617)
631861.43	4175321.37	31.01071	(06011617)	631861.09	4175340.98	31.71531	(06011617)
631860.75	4175360.60	32.44843	(06011617)	631860.41	4175380.21	33.21423	(06011617)
631860.07	4175399.83	34.01834	(06011617)	631859.73	4175419.44	34.86484	(06011617)
631859.40	4175439.06	35.75967	(06011617)	631859.06	4175458.67	36.70743	(06011617)
631858.72	4175478.29	37.71500	(06011617)	631858.38	4175497.90	38.78795	(06011617)
631858.04	4175517.52	39.93486	(06011617)	631857.70	4175537.13	41.16309	(06011617)
631857.37	4175556.75	42.48373	(06011617)	631857.03	4175576.36	43.90710	(06011617)
631856.69	4175595.98	45.44820	(06011617)	631856.35	4175615.59	47.12163	(06011617)
631856.01	4175635.21	48.94852	(06011617)	631855.67	4175654.82	51.86694	(07010217)
631855.33	4175674.44	55.44710	(07010217)	631855.00	4175694.05	59.13766	(07010217)
631854.66	4175713.67	62.99727	(07010217)	631854.32	4175733.28	67.09569	(07010217)
631853.98	4175752.90	71.53339	(07010217)	631853.64	4175772.51	76.43082	(07010217)
631853.30	4175792.13	81.95741	(07010217)	631852.97	4175811.74	88.32880	(07010217)
631852.63	4175831.36	95.86216	(07010217)	631852.29	4175850.97	105.00378	(07010217)

631851.95	4175870.59	116.46789	(07010217)	631851.61	4175890.20	133.58157	(08011001)
631851.27	4175909.82	156.56431	(08011001)	631850.94	4175929.43	190.98425	(05122223)
631850.60	4175949.05	252.19690	(05122223)	631850.26	4175968.66	379.33600	(05121217)
631830.54	4175988.13	996.90559	(08011019)	631811.15	4175987.98	959.38709	(08011019)
631791.77	4175987.83	979.23456	(08011019)	631772.39	4175987.67	1010.09254	(08011019)
631753.00	4175987.52	1016.43548	(08011019)	631733.62	4175987.37	967.74903	(08011019)
631714.24	4175987.22	977.49530	(08011019)	631694.85	4175987.07	999.83781	(08011019)
631675.47	4175986.92	952.67604	(08011019)	631656.09	4175986.77	960.83290	(08011019)
631636.70	4175986.62	982.29788	(08011019)	631617.32	4175986.46	981.74524	(08011019)
631597.94	4175986.31	943.23739	(08011019)	631578.55	4175986.16	964.01597	(08011019)
631559.17	4175986.01	964.72761	(05121217)	631539.79	4175985.86	964.05788	(05121217)
631520.40	4175985.71	947.90272	(05121217)	631501.02	4175985.56	949.16467	(05121217)
631481.64	4175985.40	947.28148	(05121217)	631462.25	4175985.25	961.86051	(05121217)
631442.87	4175985.10	933.28288	(05121217)	631423.49	4175984.95	949.70028	(05121217)
631404.10	4175984.80	945.96940	(05121217)	631384.72	4175984.65	941.80816	(05121217)
631365.34	4175984.50	934.18609	(05121217)	631345.95	4175984.35	930.46286	(05121217)
631326.57	4175984.19	925.41106	(05121217)	631307.19	4175984.04	918.22724	(05121217)
631287.80	4175983.89	914.55745	(05121217)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	110.65723	(08071406)	632304.44	4174354.52	65.11936	(04022218)
632192.15	4174956.32	98.98281	(06051924)	632420.62	4175510.15	134.41556	(08010918)
632418.97	4175552.92	134.20115	(05021801)	631187.00	4175727.00	204.78458	(06051906)
631166.00	4175729.00	194.75883	(06032819)	631121.00	4175719.00	178.57801	(06051906)
631035.00	4174830.00	92.19630	(07121217)	631106.00	4174825.00	101.54464	(07011517)
631937.00	4174528.00	81.18672	(07012317)	631322.00	4174522.00	81.62940	(06102817)
629800.63	4173850.44	22.33373	(06121421)	630150.63	4173850.44	26.04783	(04012317)
630500.63	4173850.44	39.69145	(07011517)	630850.63	4173850.44	43.34645	(06011021)
631200.63	4173850.44	40.59775	(06121017)	631550.63	4173850.44	45.25855	(06121420)
631900.63	4173850.44	43.58739	(04122823)	632250.63	4173850.44	45.23261	(04122824)
632600.63	4173850.44	41.15790	(06020105)	632950.63	4173850.44	37.18131	(05020818)
633300.63	4173850.44	33.24943	(05011520)	629800.63	4174200.44	28.65924	(06121421)
630150.63	4174200.44	29.71499	(06121421)	630500.63	4174200.44	37.37364	(07121217)
630850.63	4174200.44	55.92424	(05012117)	631200.63	4174200.44	56.85724	(06102817)
631550.63	4174200.44	64.35384	(06121420)	631900.63	4174200.44	54.76297	(04122823)
632250.63	4174200.44	60.05145	(07011417)	632600.63	4174200.44	49.26789	(04122822)
632950.63	4174200.44	44.77415	(05011521)	633300.63	4174200.44	39.97177	(04022018)
629800.63	4174550.44	34.42306	(04011017)	630150.63	4174550.44	34.51181	(06121421)
630500.63	4174550.44	43.49767	(06121421)	630850.63	4174550.44	66.20317	(07121217)
631200.63	4174550.44	83.81521	(06011021)	631550.63	4174550.44	83.82658	(06121420)
631900.63	4174550.44	76.23440	(07012317)	632250.63	4174550.44	73.42710	(04022218)

632600.63	4174550.44	59.91890	(05020818)	632950.63	4174550.44	56.03883	(04022018)
633300.63	4174550.44	41.75298	(06011617)	629800.63	4174900.44	34.87525	(06121217)
630150.63	4174900.44	44.69474	(06120217)	630500.63	4174900.44	57.38674	(07020624)
630850.63	4174900.44	75.47792	(05110618)	631200.63	4174900.44	125.29625	(06011109)
631550.63	4174900.44	116.62826	(07111022)	631900.63	4174900.44	110.28932	(04102617)
632250.63	4174900.44	92.42122	(04122822)	632600.63	4174900.44	81.00053	(04022018)
632950.63	4174900.44	67.03263	(06011617)	633300.63	4174900.44	49.76527	(05020802)
629800.63	4175250.44	41.68319	(04022207)	630150.63	4175250.44	44.60102	(04022208)
630500.63	4175250.44	65.23280	(06121217)	630850.63	4175250.44	112.64847	(06120217)
631200.63	4175250.44	151.77702	(05110618)	631550.63	4175250.44	203.60244	(06102817)
631900.63	4175250.44	162.63260	(07101005)	632250.63	4175250.44	135.50222	(05011317)
632600.63	4175250.44	93.82516	(06011617)	632950.63	4175250.44	72.36114	(04022223)
633300.63	4175250.44	56.47641	(07010217)	629800.63	4175600.44	39.12691	(04121304)
630150.63	4175600.44	45.50826	(04121224)	630500.63	4175600.44	68.36098	(08012221)
630850.63	4175600.44	111.91569	(04022207)	631200.63	4175600.44	200.44095	(07101502)
631550.63	4175600.44	521.74907	(06052306)	631900.63	4175600.44	368.83027	(08071406)
632250.63	4175600.44	180.03875	(06092719)	632600.63	4175600.44	112.97643	(07020218)
632950.63	4175600.44	75.97936	(06011618)	633300.63	4175600.44	58.42340	(05122223)
629800.63	4175950.44	39.16834	(05122618)	630150.63	4175950.44	46.58887	(05122618)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	60.21598	(07020701)	630850.63	4175950.44	103.32416	(06011024)
631200.63	4175950.44	175.23924	(05030324)	631550.63	4175950.44	329.50796	(07120623)
631900.63	4175950.44	657.55966	(06062806)	632250.63	4175950.44	195.07855	(05122401)
632600.63	4175950.44	111.12011	(06121320)	632950.63	4175950.44	78.14973	(07012418)
633300.63	4175950.44	58.78716	(07012318)	629800.63	4176300.44	35.34577	(06011024)
630150.63	4176300.44	42.06628	(04041820)	630500.63	4176300.44	64.71332	(07120622)
630850.63	4176300.44	84.87102	(05030322)	631200.63	4176300.44	118.15369	(07080202)
631550.63	4176300.44	168.59248	(08091907)	631900.63	4176300.44	222.81457	(06032303)
632250.63	4176300.44	200.08235	(05010604)	632600.63	4176300.44	121.10452	(05011818)
632950.63	4176300.44	75.28360	(04011021)	633300.63	4176300.44	57.24917	(05122401)
629800.63	4176650.44	37.79346	(07120622)	630150.63	4176650.44	39.84621	(06122121)
630500.63	4176650.44	58.07659	(04021520)	630850.63	4176650.44	74.14379	(04021521)
631200.63	4176650.44	89.82343	(07012719)	631550.63	4176650.44	102.72749	(08122721)
631900.63	4176650.44	127.31057	(06020918)	632250.63	4176650.44	139.98916	(06120218)
632600.63	4176650.44	103.51496	(05021219)	632950.63	4176650.44	81.78218	(08021808)
633300.63	4176650.44	52.03301	(05011818)	629800.63	4177000.44	34.52321	(06122121)
630150.63	4177000.44	40.65877	(04021520)	630500.63	4177000.44	48.04194	(04021521)
630850.63	4177000.44	61.31864	(04120908)	631200.63	4177000.44	71.85513	(04022021)
631550.63	4177000.44	81.78034	(07021108)	631900.63	4177000.44	91.50185	(05122220)
632250.63	4177000.44	92.39940	(05021722)	632600.63	4177000.44	78.80093	(04121820)

632950.63	4177000.44	61.08593	(05021219)	633300.63	4177000.44	50.45831	(08021808)
629800.63	4177350.44	28.09553	(04021521)	630150.63	4177350.44	33.73915	(04010518)
630500.63	4177350.44	40.14437	(04121223)	630850.63	4177350.44	50.64164	(07122917)
631200.63	4177350.44	55.73496	(07012722)	631550.63	4177350.44	61.23026	(06020124)
631900.63	4177350.44	64.56738	(05122220)	632250.63	4177350.44	66.38050	(04021506)
632600.63	4177350.44	58.14620	(06010520)	632950.63	4177350.44	49.87905	(07022408)
633300.63	4177350.44	43.29874	(08021908)	631670.70	4175493.59	366.74570	(07102901)
631669.80	4175641.41	944.90037	(06062806)	631665.32	4175796.39	161.57415	(06072903)
631417.17	4175826.85	318.75352	(05083119)	631417.17	4175673.66	539.86300	(07101502)
631422.55	4175484.63	353.46073	(08062901)	631268.42	4175983.74	177.22554	(06011217)
631275.69	4175523.99	204.34701	(06120217)	631345.65	4175419.50	211.41801	(06121421)
631384.72	4175441.30	443.93400	(07082819)	631491.93	4175442.21	317.76885	(04110819)
631491.93	4175414.95	338.22452	(07121217)	631385.63	4175413.14	227.18663	(04012317)
631358.37	4175395.87	205.22038	(05110618)	631409.25	4175336.81	193.26923	(06011109)
631567.35	4175235.96	205.69465	(06102817)	631756.33	4175028.80	107.12829	(05010417)
631807.22	4175003.36	108.76573	(06040124)	631867.18	4174987.91	118.99858	(04102617)
631849.92	4175988.28	523.16299	(06100919)	631268.74	4175963.75	186.99050	(06011217)
631269.05	4175943.76	198.27005	(05030324)	631269.37	4175923.77	197.51566	(05030324)
631269.68	4175903.78	205.06706	(06072906)	631270.00	4175883.79	202.72052	(06111024)
631270.32	4175863.81	206.94583	(04101623)	631270.63	4175843.82	215.54520	(05083119)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	226.56944	(05122618)	631271.26	4175803.84	222.28632	(05122618)
631271.58	4175783.85	225.94805	(04121304)	631271.90	4175763.86	246.67028	(06032819)
631272.21	4175743.87	243.24780	(06032819)	631272.53	4175723.88	244.59697	(06051906)
631272.85	4175703.89	233.82107	(04110818)	631273.16	4175683.90	221.07851	(04022207)
631273.48	4175663.91	230.37210	(04022207)	631273.79	4175643.92	234.97645	(06041224)
631274.11	4175623.94	228.54979	(07101502)	631274.43	4175603.95	213.94304	(06100918)
631274.74	4175583.96	218.11960	(06100918)	631275.06	4175563.97	218.31573	(05112423)
631275.37	4175543.98	213.64359	(07111023)	631285.68	4175509.06	217.62858	(06120217)
631295.68	4175494.14	215.01870	(07020624)	631305.67	4175479.21	213.46059	(07020624)
631315.67	4175464.28	198.60322	(04101819)	631325.66	4175449.35	208.18263	(04101819)
631335.66	4175434.43	206.05467	(06121421)	631358.67	4175426.77	221.51610	(06121421)
631371.70	4175434.03	337.80288	(04012317)	631402.59	4175441.45	342.02584	(07082819)
631420.46	4175441.60	536.25617	(05110618)	631438.33	4175441.76	354.14251	(07082819)
631456.19	4175441.91	340.91882	(04110819)	631474.06	4175442.06	337.27110	(04110819)
631491.93	4175428.58	323.76896	(07121217)	631474.21	4175414.65	328.77561	(04110819)
631456.50	4175414.35	354.32232	(04110819)	631438.78	4175414.05	364.04836	(04110819)
631421.06	4175413.74	380.05120	(08121017)	631403.35	4175413.44	495.45361	(04012317)
631372.00	4175404.51	210.10182	(04012317)	631371.09	4175381.11	198.63861	(05110618)
631383.81	4175366.34	194.43922	(04012317)	631396.53	4175351.58	197.61277	(04110819)

631425.06	4175326.73	216.98162	(06011109)	631440.87	4175316.64	234.88332	(06011109)
631456.68	4175306.56	245.17061	(06011109)	631472.49	4175296.47	246.75925	(06011109)
631488.30	4175286.39	239.49958	(06011109)	631504.11	4175276.30	224.15665	(06011109)
631519.92	4175266.22	202.48061	(05012117)	631535.73	4175256.13	196.44900	(06040921)
631551.54	4175246.05	202.46070	(06102817)	631579.95	4175222.15	200.73017	(06102817)
631592.55	4175208.34	191.65412	(06102817)	631605.15	4175194.53	179.13355	(06102817)
631617.74	4175180.72	167.14544	(07111022)	631630.34	4175166.91	156.10961	(04112917)
631642.94	4175153.10	155.33373	(05071804)	631655.54	4175139.29	154.86650	(05071804)
631668.14	4175125.47	150.70972	(04102621)	631680.74	4175111.66	147.96648	(04102621)
631693.34	4175097.85	146.71073	(05050803)	631705.94	4175084.04	142.68827	(05050803)
631718.53	4175070.23	134.76273	(05050803)	631731.13	4175056.42	123.86015	(05050803)
631743.73	4175042.61	111.01305	(05050803)	631773.29	4175020.32	100.75669	(05010417)
631790.26	4175011.84	104.20526	(05021805)	631822.21	4174999.50	114.93313	(06040124)
631837.20	4174995.64	118.29646	(06040124)	631852.19	4174991.77	118.69022	(06040124)
631866.84	4175007.53	122.03108	(04102617)	631866.50	4175027.14	125.15011	(04102617)
631866.16	4175046.76	128.36238	(04102617)	631865.83	4175066.37	131.66968	(04102617)
631865.49	4175085.99	135.07578	(04102617)	631865.15	4175105.60	138.58241	(04102617)
631864.81	4175125.22	142.19553	(04102617)	631864.47	4175144.83	145.90416	(04102617)
631864.13	4175164.45	149.72424	(04102617)	631863.80	4175184.06	153.65470	(04102617)
631863.46	4175203.68	157.69917	(04102617)	631863.12	4175223.29	161.85099	(04102617)
631862.78	4175242.91	168.85962	(04102617)	631862.44	4175262.52	175.23913	(04102617)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK1 ***

INCLUDING SOURCE(S): STCK1 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	207.19770	(04102617)	631861.77	4175301.75	214.55209	(04102617)
631861.43	4175321.37	207.88234	(04102623)	631861.09	4175340.98	256.92122	(04102617)
631860.75	4175360.60	265.92388	(04102617)	631860.41	4175380.21	275.51929	(04102617)
631860.07	4175399.83	285.69695	(04102617)	631859.73	4175419.44	296.40303	(04102617)
631859.40	4175439.06	287.83911	(04102617)	631859.06	4175458.67	300.88538	(04102617)
631858.72	4175478.29	313.97079	(04102617)	631858.38	4175497.90	326.84560	(04102617)
631858.04	4175517.52	339.13332	(04102617)	631857.70	4175537.13	353.27743	(04122824)
631857.37	4175556.75	367.33715	(04122824)	631857.03	4175576.36	371.36764	(04122824)
631856.69	4175595.98	372.18762	(04122824)	631856.35	4175615.59	440.00390	(08102618)
631856.01	4175635.21	448.06553	(08102618)	631855.67	4175654.82	445.99087	(08102618)
631855.33	4175674.44	573.39701	(05011817)	631855.00	4175694.05	554.05911	(08071406)
631854.66	4175713.67	470.21407	(08071406)	631854.32	4175733.28	338.96622	(08071406)
631853.98	4175752.90	384.90229	(08090903)	631853.64	4175772.51	203.05799	(08031018)
631853.30	4175792.13	454.48205	(07020602)	631852.97	4175811.74	599.46518	(05091919)
631852.63	4175831.36	1022.22569	(04121018)	631852.29	4175850.97	1334.67944	(07020318)
631851.95	4175870.59	1675.10273	(06062806)	631851.61	4175890.20	1567.45666	(08102318)
631851.27	4175909.82	1352.99852	(06112624)	631850.94	4175929.43	794.94600	(07102901)
631850.60	4175949.05	657.20831	(06081406)	631850.26	4175968.66	588.46775	(06081406)

631830.54	4175988.13	521.99199	(06012924)	631811.15	4175987.98	493.46004	(05072006)
631791.77	4175987.83	455.04792	(05072006)	631772.39	4175987.67	396.05736	(04111519)
631753.00	4175987.52	376.48794	(07030418)	631733.62	4175987.37	367.59588	(07102902)
631714.24	4175987.22	337.97426	(05042719)	631694.85	4175987.07	362.30849	(08091907)
631675.47	4175986.92	327.48572	(06110119)	631656.09	4175986.77	285.43356	(06110119)
631636.70	4175986.62	315.59813	(05081406)	631617.32	4175986.46	318.27077	(04082205)
631597.94	4175986.31	314.10821	(07082502)	631578.55	4175986.16	308.33158	(07082502)
631559.17	4175986.01	300.05279	(05122621)	631539.79	4175985.86	273.97265	(05122621)
631520.40	4175985.71	268.13428	(05122621)	631501.02	4175985.56	256.79945	(05122621)
631481.64	4175985.40	247.80574	(07120623)	631462.25	4175985.25	236.49668	(07120623)
631442.87	4175985.10	228.12151	(06033021)	631423.49	4175984.95	224.29176	(06033021)
631404.10	4175984.80	218.29896	(06033021)	631384.72	4175984.65	210.69316	(06033021)
631365.34	4175984.50	205.61913	(07071004)	631345.95	4175984.35	198.22118	(07071004)
631326.57	4175984.19	188.87679	(07071004)	631307.19	4175984.04	182.24640	(05030321)
631287.80	4175983.89	179.76959	(06011217)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	130.94163	(05110817)	632304.44	4174354.52	73.89790	(05011521)
632192.15	4174956.32	116.90020	(05102522)	632420.62	4175510.15	130.09271	(07012418)
632418.97	4175552.92	130.45695	(06121320)	631187.00	4175727.00	181.63158	(07010318)
631166.00	4175729.00	176.64789	(07010318)	631121.00	4175719.00	170.18464	(05122621)
631035.00	4174830.00	163.26894	(04012317)	631106.00	4174825.00	171.06216	(07121217)
631937.00	4174528.00	97.24895	(08071406)	631322.00	4174522.00	128.24562	(07111022)
629800.63	4173850.44	33.70377	(06121421)	630150.63	4173850.44	33.47335	(04012317)
630500.63	4173850.44	51.37957	(07011517)	630850.63	4173850.44	59.57183	(06011021)
631200.63	4173850.44	63.05413	(08022002)	631550.63	4173850.44	54.99881	(05021805)
631900.63	4173850.44	58.56342	(07020623)	632250.63	4173850.44	51.90380	(06020105)
632600.63	4173850.44	45.27479	(05011521)	632950.63	4173850.44	42.11526	(04022018)
633300.63	4173850.44	31.20583	(08030618)	629800.63	4174200.44	37.04624	(07020624)
630150.63	4174200.44	45.97712	(06121421)	630500.63	4174200.44	49.09930	(05122423)
630850.63	4174200.44	78.43167	(05012117)	631200.63	4174200.44	79.63561	(07111022)
631550.63	4174200.44	76.53181	(05021805)	631900.63	4174200.44	76.88753	(07011417)
632250.63	4174200.44	67.19336	(05020818)	632600.63	4174200.44	57.23225	(04022018)
632950.63	4174200.44	42.01045	(08030618)	633300.63	4174200.44	43.43621	(06011617)
629800.63	4174550.44	38.41731	(06121217)	630150.63	4174550.44	53.60851	(06120217)
630500.63	4174550.44	68.08460	(06121421)	630850.63	4174550.44	88.26575	(04121302)
631200.63	4174550.44	137.25893	(06102817)	631550.63	4174550.44	111.01905	(05021805)
631900.63	4174550.44	103.22192	(08071406)	632250.63	4174550.44	84.21424	(05011520)
632600.63	4174550.44	67.35080	(07021118)	632950.63	4174550.44	54.83039	(05020802)
633300.63	4174550.44	43.66783	(04022223)	629800.63	4174900.44	47.48431	(04022207)
630150.63	4174900.44	53.41771	(04022208)	630500.63	4174900.44	73.30274	(06121217)

630850.63	4174900.44	113.07186	(04101819)	631200.63	4174900.44	242.99704	(06011109)
631550.63	4174900.44	174.71875	(05021805)	631900.63	4174900.44	148.54028	(08031018)
632250.63	4174900.44	107.55000	(06011617)	632600.63	4174900.44	83.40756	(04022223)
632950.63	4174900.44	63.97557	(07010217)	633300.63	4174900.44	48.61796	(07010217)
629800.63	4175250.44	47.87549	(04121304)	630150.63	4175250.44	57.52708	(04121304)
630500.63	4175250.44	78.54909	(08012221)	630850.63	4175250.44	125.85199	(04022207)
631200.63	4175250.44	246.88705	(05112423)	631550.63	4175250.44	490.87897	(07030618)
631900.63	4175250.44	239.94663	(04021502)	632250.63	4175250.44	144.79980	(06011618)
632600.63	4175250.44	93.09643	(05122223)	632950.63	4175250.44	65.77476	(05121217)
633300.63	4175250.44	49.68140	(05121217)	629800.63	4175600.44	39.12571	(07042002)
630150.63	4175600.44	56.60391	(06011024)	630500.63	4175600.44	85.25238	(06011024)
630850.63	4175600.44	125.04942	(05040705)	631200.63	4175600.44	218.00782	(04022924)
631550.63	4175600.44	606.27043	(05112507)	631900.63	4175600.44	396.66366	(06102818)
632250.63	4175600.44	163.65429	(08010924)	632600.63	4175600.44	99.19194	(05012018)
632950.63	4175600.44	66.49597	(07012418)	633300.63	4175600.44	49.19678	(07012418)
629800.63	4175950.44	38.38380	(04041820)	630150.63	4175950.44	57.12916	(07120622)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	72.80332	(05030322)	630850.63	4175950.44	103.55313	(07102703)
631200.63	4175950.44	141.61344	(07090906)	631550.63	4175950.44	194.86686	(06111518)
631900.63	4175950.44	187.62167	(05121423)	632250.63	4175950.44	142.20628	(08121517)
632600.63	4175950.44	96.68773	(05020806)	632950.63	4175950.44	64.41450	(06121503)
633300.63	4175950.44	49.36725	(05122401)	629800.63	4176300.44	35.30757	(05030322)
630150.63	4176300.44	50.75399	(06122121)	630500.63	4176300.44	69.40235	(04021521)
630850.63	4176300.44	84.94734	(04120908)	631200.63	4176300.44	113.35558	(08091907)
631550.63	4176300.44	112.48505	(07121903)	631900.63	4176300.44	154.96798	(07091007)
632250.63	4176300.44	117.12117	(06062806)	632600.63	4176300.44	84.38052	(06122320)
632950.63	4176300.44	60.97600	(07120406)	633300.63	4176300.44	44.86410	(05020806)
629800.63	4176650.44	38.41507	(04021520)	630150.63	4176650.44	46.77039	(04021521)
630500.63	4176650.44	54.68369	(04120903)	630850.63	4176650.44	69.18670	(08122718)
631200.63	4176650.44	78.58187	(06013008)	631550.63	4176650.44	84.06646	(07121903)
631900.63	4176650.44	111.55665	(07091007)	632250.63	4176650.44	85.02673	(06120218)
632600.63	4176650.44	71.39504	(07022408)	632950.63	4176650.44	59.39225	(08021908)
633300.63	4176650.44	49.88399	(08021808)	629800.63	4177000.44	33.54124	(04021521)
630150.63	4177000.44	40.07492	(04120903)	630500.63	4177000.44	48.22184	(07122917)
630850.63	4177000.44	56.31753	(07012720)	631200.63	4177000.44	66.14275	(07021108)
631550.63	4177000.44	64.24762	(07121903)	631900.63	4177000.44	66.01824	(07021206)
632250.63	4177000.44	62.77604	(05022620)	632600.63	4177000.44	53.84279	(05121423)
632950.63	4177000.44	45.34065	(07022408)	633300.63	4177000.44	44.11118	(08021908)
629800.63	4177350.44	30.50564	(04120903)	630150.63	4177350.44	33.77048	(04120908)
630500.63	4177350.44	41.09103	(07021218)	630850.63	4177350.44	44.61973	(07012722)

631200.63	4177350.44	50.07743	(07021108)	631550.63	4177350.44	49.72467	(07121903)
631900.63	4177350.44	50.75481	(05122402)	632250.63	4177350.44	48.36463	(06012820)
632600.63	4177350.44	43.16561	(06120218)	632950.63	4177350.44	38.01337	(04121820)
633300.63	4177350.44	32.95487	(08122905)	631670.70	4175493.59	712.11842	(08081806)
631669.80	4175641.41	685.10558	(04101605)	631665.32	4175796.39	247.97772	(06102817)
631417.17	4175826.85	211.31973	(07020208)	631417.17	4175673.66	351.51633	(08091907)
631422.55	4175484.63	295.16311	(04101820)	631268.42	4175983.74	140.15665	(08091907)
631275.69	4175523.99	282.38087	(08081602)	631345.65	4175419.50	387.83655	(05071702)
631384.72	4175441.30	446.44573	(06121423)	631491.93	4175442.21	290.36524	(06110119)
631491.93	4175414.95	258.40766	(05122618)	631385.63	4175413.14	452.40062	(05071702)
631358.37	4175395.87	371.27519	(05030320)	631409.25	4175336.81	456.44156	(05112423)
631567.35	4175235.96	441.43818	(05110722)	631756.33	4175028.80	191.25396	(08090903)
631807.22	4175003.36	185.81354	(08031018)	631867.18	4174987.91	166.02886	(08031018)
631849.92	4175988.28	184.07950	(06010520)	631268.74	4175963.75	143.07507	(06102618)
631269.05	4175943.76	146.19446	(06102618)	631269.37	4175923.77	147.45358	(06102618)
631269.68	4175903.78	149.02238	(05122507)	631270.00	4175883.79	155.48630	(07090906)
631270.32	4175863.81	163.09423	(07090906)	631270.63	4175843.82	167.84362	(07090906)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	171.49454	(05112505)	631271.26	4175803.84	178.73793	(05112505)
631271.58	4175783.85	185.10609	(05081406)	631271.90	4175763.86	191.84502	(07012721)
631272.21	4175743.87	203.33478	(05081406)	631272.53	4175723.88	219.87347	(05122508)
631272.85	4175703.89	227.97117	(05122508)	631273.16	4175683.90	207.06870	(04022119)
631273.48	4175663.91	219.90188	(04022119)	631273.79	4175643.92	240.91691	(07010318)
631274.11	4175623.94	249.52001	(06020108)	631274.43	4175603.95	265.05712	(06020108)
631274.74	4175583.96	258.04566	(05122621)	631275.06	4175563.97	263.96890	(07120623)
631275.37	4175543.98	269.56185	(06033021)	631285.68	4175509.06	295.05839	(08081602)
631295.68	4175494.14	309.52087	(06011217)	631305.67	4175479.21	331.74268	(06011217)
631315.67	4175464.28	346.39717	(06011217)	631325.66	4175449.35	356.84779	(06121423)
631335.66	4175434.43	374.98361	(05071702)	631358.67	4175426.77	411.05014	(05071702)
631371.70	4175434.03	427.01908	(06121424)	631402.59	4175441.45	475.79673	(06121423)
631420.46	4175441.60	503.27579	(06121423)	631438.33	4175441.76	532.32352	(06121423)
631456.19	4175441.91	547.23694	(06121423)	631474.06	4175442.06	349.58292	(05081406)
631491.93	4175428.58	200.51308	(06101209)	631474.21	4175414.65	374.26714	(05122618)
631456.50	4175414.35	647.43751	(05071702)	631438.78	4175414.05	592.89809	(05071702)
631421.06	4175413.74	535.05287	(05071702)	631403.35	4175413.44	491.40370	(05071702)
631372.00	4175404.51	412.99682	(05030320)	631371.09	4175381.11	343.49136	(04121224)
631383.81	4175366.34	388.47188	(04022207)	631396.53	4175351.58	412.34732	(04022207)
631425.06	4175326.73	490.57452	(06120217)	631440.87	4175316.64	597.19559	(04101819)
631456.68	4175306.56	753.00341	(04012317)	631472.49	4175296.47	838.35889	(06011109)
631488.30	4175286.39	861.20813	(06011109)	631504.11	4175276.30	848.99105	(06102817)

631519.92	4175266.22	746.76566	(06102817)	631535.73	4175256.13	528.04563	(06102817)
631551.54	4175246.05	479.31088	(07030618)	631579.95	4175222.15	388.95555	(05110722)
631592.55	4175208.34	356.66025	(04102617)	631605.15	4175194.53	324.18594	(04102617)
631617.74	4175180.72	315.07014	(05011817)	631630.34	4175166.91	306.99891	(05011817)
631642.94	4175153.10	296.72121	(08071406)	631655.54	4175139.29	286.04312	(08071406)
631668.14	4175125.47	273.94333	(08071406)	631680.74	4175111.66	261.05877	(08071406)
631693.34	4175097.85	247.84345	(08071406)	631705.94	4175084.04	234.62879	(08071406)
631718.53	4175070.23	221.65081	(08071406)	631731.13	4175056.42	209.04844	(08071406)
631743.73	4175042.61	197.01344	(08090903)	631773.29	4175020.32	190.51454	(08031018)
631790.26	4175011.84	189.00281	(08031018)	631822.21	4174999.50	182.84317	(08031018)
631837.20	4174995.64	178.38518	(08031018)	631852.19	4174991.77	172.69603	(08031018)
631866.84	4175007.53	173.33417	(05011317)	631866.50	4175027.14	183.95804	(05011317)
631866.16	4175046.76	192.60129	(05011317)	631865.83	4175066.37	198.54392	(05011317)
631865.49	4175085.99	201.08510	(05011317)	631865.15	4175105.60	210.93194	(05011417)
631864.81	4175125.22	216.86855	(05011417)	631864.47	4175144.83	222.06019	(05110817)
631864.13	4175164.45	227.76973	(05110817)	631863.80	4175184.06	228.35404	(04012318)
631863.46	4175203.68	233.02513	(08022004)	631863.12	4175223.29	243.90576	(08021718)
631862.78	4175242.91	255.88959	(04022019)	631862.44	4175262.52	262.56379	(04022019)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK10 ***

INCLUDING SOURCE(S): STCK10 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	269.75741	(06121018)	631861.77	4175301.75	282.64465	(06111919)
631861.43	4175321.37	297.61492	(04101518)	631861.09	4175340.98	304.80294	(04030118)
631860.75	4175360.60	326.75666	(04030118)	631860.41	4175380.21	386.94623	(05020803)
631860.07	4175399.83	438.02640	(05020803)	631859.73	4175419.44	464.13534	(05012118)
631859.40	4175439.06	472.43268	(05071803)	631859.06	4175458.67	468.96604	(07102907)
631858.72	4175478.29	462.92288	(06081403)	631858.38	4175497.90	441.72520	(08010919)
631858.04	4175517.52	399.92373	(08010919)	631857.70	4175537.13	324.90632	(08010919)
631857.37	4175556.75	219.29337	(05072806)	631857.03	4175576.36	226.57998	(05072806)
631856.69	4175595.98	223.45652	(05072806)	631856.35	4175615.59	240.84525	(08021808)
631856.01	4175635.21	244.39366	(08021808)	631855.67	4175654.82	249.86141	(05083120)
631855.33	4175674.44	260.32536	(08021908)	631855.00	4175694.05	275.70822	(07091006)
631854.66	4175713.67	286.02490	(08051502)	631854.32	4175733.28	292.72214	(05101806)
631853.98	4175752.90	304.90786	(06062806)	631853.64	4175772.51	321.25428	(06062806)
631853.30	4175792.13	332.05328	(06062806)	631852.97	4175811.74	336.71307	(06062806)
631852.63	4175831.36	334.97500	(06062806)	631852.29	4175850.97	322.27211	(06052005)
631851.95	4175870.59	331.20681	(06010521)	631851.61	4175890.20	333.88823	(06081406)
631851.27	4175909.82	268.75781	(06072006)	631850.94	4175929.43	215.85867	(06072006)
631850.60	4175949.05	200.21177	(05121422)	631850.26	4175968.66	189.95547	(06010520)
631830.54	4175988.13	186.72022	(06122319)	631811.15	4175987.98	207.31821	(07091007)
631791.77	4175987.83	228.18053	(07091007)	631772.39	4175987.67	246.22264	(07091007)
631753.00	4175987.52	260.30291	(07091007)	631733.62	4175987.37	269.38317	(07091007)

631714.24	4175987.22	272.68966	(07091007)	631694.85	4175987.07	269.76547	(07091007)
631675.47	4175986.92	316.34591	(07091007)	631656.09	4175986.77	339.54322	(07091007)
631636.70	4175986.62	309.96530	(07091007)	631617.32	4175986.46	275.42789	(07091007)
631597.94	4175986.31	256.11355	(05122220)	631578.55	4175986.16	250.05742	(05122220)
631559.17	4175986.01	212.21067	(04111519)	631539.79	4175985.86	185.88086	(04111519)
631520.40	4175985.71	162.60959	(06080606)	631501.02	4175985.56	161.91322	(06080606)
631481.64	4175985.40	160.20748	(06111524)	631462.25	4175985.25	159.66383	(08112519)
631442.87	4175985.10	155.62558	(07092303)	631423.49	4175984.95	158.17719	(07092303)
631404.10	4175984.80	149.94253	(07092303)	631384.72	4175984.65	150.77521	(04083006)
631365.34	4175984.50	159.78337	(08091907)	631345.95	4175984.35	164.87756	(08091907)
631326.57	4175984.19	165.29354	(08091907)	631307.19	4175984.04	161.20493	(08091907)
631287.80	4175983.89	153.13224	(08091907)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	104.78927	(04022018)	632304.44	4174354.52	57.69062	(05020818)
632192.15	4174956.32	107.26481	(04022018)	632420.62	4175510.15	94.17473	(06011618)
632418.97	4175552.92	93.86863	(05122223)	631187.00	4175727.00	605.93627	(05083119)
631166.00	4175729.00	547.68546	(05083119)	631121.00	4175719.00	435.73816	(05122618)
631035.00	4174830.00	116.73328	(05012117)	631106.00	4174825.00	109.67583	(06011021)
631937.00	4174528.00	77.47202	(04022218)	631322.00	4174522.00	84.39774	(06121420)
629800.63	4173850.44	26.91157	(04012317)	630150.63	4173850.44	34.22578	(07011517)
630500.63	4173850.44	46.99302	(05012117)	630850.63	4173850.44	40.38561	(06121017)
631200.63	4173850.44	48.20979	(06121420)	631550.63	4173850.44	46.84419	(05021805)
631900.63	4173850.44	45.89022	(07020623)	632250.63	4173850.44	42.02932	(06020105)
632600.63	4173850.44	38.46122	(05020818)	632950.63	4173850.44	34.66695	(05011520)
633300.63	4173850.44	30.91780	(04022018)	629800.63	4174200.44	35.07398	(06121421)
630150.63	4174200.44	34.18205	(04012317)	630500.63	4174200.44	51.83039	(07011517)
630850.63	4174200.44	54.42797	(06011021)	631200.63	4174200.44	61.32863	(06121420)
631550.63	4174200.44	61.97350	(05021805)	631900.63	4174200.44	60.83195	(07011417)
632250.63	4174200.44	51.12215	(04122822)	632600.63	4174200.44	46.01944	(05011521)
632950.63	4174200.44	40.41813	(04022018)	633300.63	4174200.44	32.48991	(06011617)
629800.63	4174550.44	38.98759	(07020624)	630150.63	4174550.44	47.74397	(06121421)
630500.63	4174550.44	49.19613	(05122423)	630850.63	4174550.44	83.66826	(05012117)
631200.63	4174550.44	86.97611	(08022002)	631550.63	4174550.44	86.66463	(04122823)
631900.63	4174550.44	84.89571	(04022218)	632250.63	4174550.44	65.04335	(05011521)
632600.63	4174550.44	57.39089	(04022018)	632950.63	4174550.44	48.73929	(06011617)
633300.63	4174550.44	37.71094	(05020802)	629800.63	4174900.44	41.19222	(06121217)
630150.63	4174900.44	56.16442	(06120217)	630500.63	4174900.44	71.03617	(06121421)
630850.63	4174900.44	96.17700	(07121217)	631200.63	4174900.44	134.01753	(06102817)
631550.63	4174900.44	123.73672	(04122823)	631900.63	4174900.44	118.56550	(04122822)
632250.63	4174900.44	96.65624	(04022018)	632600.63	4174900.44	76.01843	(06011617)

632950.63	4174900.44	53.72413 (06120617)	633300.63	4174900.44	42.77747 (08010918)
629800.63	4175250.44	50.46894 (04022207)	630150.63	4175250.44	55.62932 (04022208)
630500.63	4175250.44	81.22125 (06121217)	630850.63	4175250.44	140.85299 (07020624)
631200.63	4175250.44	254.28154 (06011109)	631550.63	4175250.44	235.86691 (04102617)
631900.63	4175250.44	186.19575 (05011317)	632250.63	4175250.44	120.40353 (05020802)
632600.63	4175250.44	74.95841 (05021801)	632950.63	4175250.44	60.55864 (07010217)
633300.63	4175250.44	45.85864 (07020218)	629800.63	4175600.44	52.42612 (04121304)
630150.63	4175600.44	66.44736 (04121304)	630500.63	4175600.44	93.40191 (04121224)
630850.63	4175600.44	186.45509 (08012221)	631200.63	4175600.44	454.54005 (07101502)
631550.63	4175600.44	849.42558 (07102905)	631900.63	4175600.44	280.38700 (07020218)
632250.63	4175600.44	125.53654 (05122223)	632600.63	4175600.44	80.32251 (05121217)
632950.63	4175600.44	59.75264 (05011522)	633300.63	4175600.44	47.42498 (05011522)
629800.63	4175950.44	46.39913 (06011024)	630150.63	4175950.44	64.34951 (06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
630500.63	4175950.44	80.30581 (06011024)	630850.63	4175950.44	181.04124 (07120622)
631200.63	4175950.44	310.38207 (07080202)	631550.63	4175950.44	347.26457 (07102901)
631900.63	4175950.44	257.44685 (05011818)	632250.63	4175950.44	134.05080 (05122401)
632600.63	4175950.44	79.29453 (06012918)	632950.63	4175950.44	60.64271 (06121320)
633300.63	4175950.44	47.97768 (07012418)	629800.63	4176300.44	41.29821 (07120622)
630150.63	4176300.44	58.58687 (07120622)	630500.63	4176300.44	84.74999 (06122121)
630850.63	4176300.44	125.73897 (04021018)	631200.63	4176300.44	165.61103 (08091907)
631550.63	4176300.44	168.95349 (05072006)	631900.63	4176300.44	163.45543 (06062806)
632250.63	4176300.44	117.09343 (08121517)	632600.63	4176300.44	73.80538 (04121022)
632950.63	4176300.44	56.48057 (05020719)	633300.63	4176300.44	46.10778 (05122401)
629800.63	4176650.44	41.72126 (06122121)	630150.63	4176650.44	53.21166 (04021520)
630500.63	4176650.44	67.37246 (04010518)	630850.63	4176650.44	92.35404 (07122917)
631200.63	4176650.44	107.97997 (06013008)	631550.63	4176650.44	109.19701 (05122220)
631900.63	4176650.44	104.44110 (05022620)	632250.63	4176650.44	88.50846 (07022408)
632600.63	4176650.44	65.92367 (08021908)	632950.63	4176650.44	52.24763 (07120406)
633300.63	4176650.44	41.58778 (05020806)	629800.63	4177000.44	35.21951 (04021520)
630150.63	4177000.44	44.42612 (04010518)	630500.63	4177000.44	56.23631 (04120908)
630850.63	4177000.44	68.76297 (04022021)	631200.63	4177000.44	81.61960 (07021108)
631550.63	4177000.44	76.66917 (08122723)	631900.63	4177000.44	74.93826 (04020619)
632250.63	4177000.44	65.42030 (07010323)	632600.63	4177000.44	56.43081 (07022408)
632950.63	4177000.44	51.47514 (08021908)	633300.63	4177000.44	45.58941 (08021808)
629800.63	4177350.44	33.18476 (04010518)	630150.63	4177350.44	37.97290 (04120908)
630500.63	4177350.44	45.82870 (07122917)	630850.63	4177350.44	50.16832 (07012722)
631200.63	4177350.44	56.33734 (07021108)	631550.63	4177350.44	57.83725 (06013007)
631900.63	4177350.44	55.80394 (05021302)	632250.63	4177350.44	50.95260 (05121501)
632600.63	4177350.44	45.27336 (04121820)	632950.63	4177350.44	39.80180 (08122905)

633300.63	4177350.44	41.21558	(08021908)	631670.70	4175493.59	405.98278	(05011417)
631669.80	4175641.41	602.47876	(06121018)	631665.32	4175796.39	591.83663	(06111908)
631417.17	4175826.85	384.39258	(04101820)	631417.17	4175673.66	878.60447	(06111908)
631422.55	4175484.63	353.96813	(06102817)	631268.42	4175983.74	299.70468	(05051802)
631275.69	4175523.99	409.34165	(06120517)	631345.65	4175419.50	344.62412	(06011109)
631384.72	4175441.30	662.32481	(06102817)	631491.93	4175442.21	556.24301	(04102617)
631491.93	4175414.95	324.80382	(04102617)	631385.63	4175413.14	371.44938	(06102817)
631358.37	4175395.87	339.38862	(06102817)	631409.25	4175336.81	257.26100	(05021806)
631567.35	4175235.96	223.04036	(04102617)	631756.33	4175028.80	147.77068	(05011817)
631807.22	4175003.36	135.72097	(06051924)	631867.18	4174987.91	135.57591	(04122822)
631849.92	4175988.28	259.41881	(06052306)	631268.74	4175963.75	308.10197	(07092301)
631269.05	4175943.76	318.58955	(05122508)	631269.37	4175923.77	345.04678	(05051803)
631269.68	4175903.78	367.42919	(05051803)	631270.00	4175883.79	459.96143	(04082205)
631270.32	4175863.81	832.84682	(05081503)	631270.63	4175843.82	702.37628	(05081503)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	1152.42675	(05061703)	631271.26	4175803.84	876.65570	(06080604)
631271.58	4175783.85	818.68661	(05061703)	631271.90	4175763.86	943.44077	(08081602)
631272.21	4175743.87	1069.45247	(05111817)	631272.53	4175723.88	889.09906	(06011217)
631272.85	4175703.89	794.74804	(05083119)	631273.16	4175683.90	830.21806	(06072904)
631273.48	4175663.91	849.95604	(07110617)	631273.79	4175643.92	744.00334	(04041822)
631274.11	4175623.94	893.43674	(04041822)	631274.43	4175603.95	935.16996	(05030319)
631274.74	4175583.96	683.18105	(08081806)	631275.06	4175563.97	640.20707	(05111717)
631275.37	4175543.98	501.95552	(06041020)	631285.68	4175509.06	439.81690	(04012317)
631295.68	4175494.14	444.31273	(04012317)	631305.67	4175479.21	419.56763	(04012317)
631315.67	4175464.28	413.19608	(06011109)	631325.66	4175449.35	410.09354	(06011109)
631335.66	4175434.43	385.69872	(06011109)	631358.67	4175426.77	362.71689	(06102817)
631371.70	4175434.03	393.92895	(06102817)	631402.59	4175441.45	701.53081	(06102817)
631420.46	4175441.60	640.81174	(06102817)	631438.33	4175441.76	544.09552	(06102817)
631456.19	4175441.91	466.82923	(08081805)	631474.06	4175442.06	504.86025	(04102623)
631491.93	4175428.58	345.94514	(04102617)	631474.21	4175414.65	298.51519	(05110722)
631456.50	4175414.35	322.17558	(06102817)	631438.78	4175414.05	309.23967	(05021806)
631421.06	4175413.74	325.99726	(06102817)	631403.35	4175413.44	358.55455	(06102817)
631372.00	4175404.51	357.60045	(06102817)	631371.09	4175381.11	332.53681	(06102817)
631383.81	4175366.34	311.76277	(06102817)	631396.53	4175351.58	278.94829	(06102817)
631425.06	4175326.73	249.43920	(05021806)	631440.87	4175316.64	233.17535	(05050803)
631456.68	4175306.56	220.57142	(07030618)	631472.49	4175296.47	221.11901	(05110722)
631488.30	4175286.39	221.65915	(05110722)	631504.11	4175276.30	234.36376	(04102617)
631519.92	4175266.22	240.36498	(04102617)	631535.73	4175256.13	239.88841	(04102617)
631551.54	4175246.05	233.74670	(04102617)	631579.95	4175222.15	210.48976	(04102617)
631592.55	4175208.34	197.17920	(04102617)	631605.15	4175194.53	193.83997	(05112422)

631617.74	4175180.72	190.71489	(05112422)	631630.34	4175166.91	186.48356	(08071405)
631642.94	4175153.10	181.35336	(05011817)	631655.54	4175139.29	180.64728	(05011817)
631668.14	4175125.47	178.90519	(05011817)	631680.74	4175111.66	176.25573	(05011817)
631693.34	4175097.85	172.81402	(05011817)	631705.94	4175084.04	168.69957	(05011817)
631718.53	4175070.23	164.02973	(05011817)	631731.13	4175056.42	158.91588	(05011817)
631743.73	4175042.61	153.46351	(05011817)	631773.29	4175020.32	141.43371	(06020105)
631790.26	4175011.84	138.21548	(06051924)	631822.21	4174999.50	132.11356	(06051924)
631837.20	4174995.64	131.73818	(04122822)	631852.19	4174991.77	134.79051	(04122822)
631866.84	4175007.53	138.97624	(04122822)	631866.50	4175027.14	140.86091	(04122822)
631866.16	4175046.76	144.09524	(05020818)	631865.83	4175066.37	147.47410	(05020818)
631865.49	4175085.99	148.83346	(05020818)	631865.15	4175105.60	151.03252	(08031018)
631864.81	4175125.22	157.13660	(08031018)	631864.47	4175144.83	165.65949	(05011521)
631864.13	4175164.45	172.78374	(05011521)	631863.80	4175184.06	176.32673	(05011521)
631863.46	4175203.68	180.68604	(05011520)	631863.12	4175223.29	183.89738	(05011520)
631862.78	4175242.91	187.79315	(08081804)	631862.44	4175262.52	196.36514	(05011317)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK11 ***

INCLUDING SOURCE(S): STCK11 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	206.46475	(05011317)	631861.77	4175301.75	212.95315	(05011317)
631861.43	4175321.37	218.54611	(08090906)	631861.09	4175340.98	230.43298	(05011417)
631860.75	4175360.60	240.87315	(05011417)	631860.41	4175380.21	244.39430	(05011417)
631860.07	4175399.83	246.35857	(05110817)	631859.73	4175419.44	251.71496	(05110817)
631859.40	4175439.06	263.76112	(05102522)	631859.06	4175458.67	271.91749	(07110823)
631858.72	4175478.29	279.35287	(07062004)	631858.38	4175497.90	280.47575	(06120617)
631858.04	4175517.52	296.34571	(04022223)	631857.70	4175537.13	305.07956	(05021801)
631857.37	4175556.75	298.04561	(06112002)	631857.03	4175576.36	319.40175	(07010217)
631856.69	4175595.98	324.92300	(08092319)	631856.35	4175615.59	317.33977	(07020218)
631856.01	4175635.21	323.26694	(06011618)	631855.67	4175654.82	339.92187	(05122223)
631855.33	4175674.44	322.83438	(05121217)	631855.00	4175694.05	253.02127	(05121217)
631854.66	4175713.67	290.59462	(07012318)	631854.32	4175733.28	325.80732	(07012318)
631853.98	4175752.90	325.76373	(07012418)	631853.64	4175772.51	323.59550	(05012018)
631853.30	4175792.13	322.97288	(05072005)	631852.97	4175811.74	325.68408	(05122401)
631852.63	4175831.36	321.13234	(05122401)	631852.29	4175850.97	315.49109	(05020719)
631851.95	4175870.59	308.70196	(05011418)	631851.61	4175890.20	296.67943	(06112102)
631851.27	4175909.82	293.55718	(07071002)	631850.94	4175929.43	289.16480	(06092519)
631850.60	4175949.05	284.03857	(07031619)	631850.26	4175968.66	267.00062	(07031619)
631830.54	4175988.13	280.76172	(06052306)	631811.15	4175987.98	296.19978	(06052306)
631791.77	4175987.83	303.68524	(06052306)	631772.39	4175987.67	301.87869	(06052306)
631753.00	4175987.52	299.72917	(06062806)	631733.62	4175987.37	332.93162	(06062806)
631714.24	4175987.22	355.29339	(06062806)	631694.85	4175987.07	362.84864	(06062806)
631675.47	4175986.92	353.32852	(06062806)	631656.09	4175986.77	326.91923	(06062806)
631636.70	4175986.62	309.35867	(07010322)	631617.32	4175986.46	314.19934	(06081406)

631597.94	4175986.31	310.23336	(06081406)	631578.55	4175986.16	315.79991	(07102901)
631559.17	4175986.01	311.37556	(06012924)	631539.79	4175985.86	329.28644	(05072006)
631520.40	4175985.71	336.09510	(05072006)	631501.02	4175985.56	318.00967	(05072006)
631481.64	4175985.40	308.48500	(06052305)	631462.25	4175985.25	401.90042	(05112506)
631442.87	4175985.10	377.59964	(05112506)	631423.49	4175984.95	384.73176	(07090905)
631404.10	4175984.80	340.48329	(08091907)	631384.72	4175984.65	361.53004	(08091907)
631365.34	4175984.50	358.46029	(08091907)	631345.95	4175984.35	333.18601	(08091907)
631326.57	4175984.19	302.42571	(05122507)	631307.19	4175984.04	300.34171	(05122507)
631287.80	4175983.89	305.87333	(04081204)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	121.30191	(04022018)	632304.44	4174354.52	57.20995	(05020818)
632192.15	4174956.32	103.11444	(05021018)	632420.62	4175510.15	96.38804	(05121217)
632418.97	4175552.92	94.17490	(05011522)	631187.00	4175727.00	472.34562	(05081503)
631166.00	4175729.00	400.02298	(05030321)	631121.00	4175719.00	365.21641	(04041820)
631035.00	4174830.00	110.25910	(05012117)	631106.00	4174825.00	117.42926	(06011021)
631937.00	4174528.00	87.53539	(06020105)	631322.00	4174522.00	91.80892	(06121420)
629800.63	4173850.44	27.25143	(04012317)	630150.63	4173850.44	34.77621	(07121217)
630500.63	4173850.44	48.03871	(05012117)	630850.63	4173850.44	41.45814	(05010318)
631200.63	4173850.44	51.29674	(06121420)	631550.63	4173850.44	50.04321	(05021805)
631900.63	4173850.44	48.73813	(07020623)	632250.63	4173850.44	44.27175	(06020105)
632600.63	4173850.44	38.98891	(05020818)	632950.63	4173850.44	34.16032	(05011520)
633300.63	4173850.44	30.58364	(05021018)	629800.63	4174200.44	35.95142	(06121421)
630150.63	4174200.44	35.08125	(04012317)	630500.63	4174200.44	51.33217	(07011517)
630850.63	4174200.44	60.87505	(06011021)	631200.63	4174200.44	64.55455	(08022002)
631550.63	4174200.44	66.62894	(05021805)	631900.63	4174200.44	69.95820	(07011417)
632250.63	4174200.44	57.16407	(04122822)	632600.63	4174200.44	48.52977	(05011520)
632950.63	4174200.44	39.95168	(05021018)	633300.63	4174200.44	39.03036	(06011617)
629800.63	4174550.44	41.80665	(04011017)	630150.63	4174550.44	45.66383	(06121421)
630500.63	4174550.44	50.79012	(06011022)	630850.63	4174550.44	77.61174	(07011517)
631200.63	4174550.44	89.28712	(08022002)	631550.63	4174550.44	94.01524	(04122823)
631900.63	4174550.44	89.30822	(06020105)	632250.63	4174550.44	74.82438	(05011521)
632600.63	4174550.44	55.82742	(05021018)	632950.63	4174550.44	53.39065	(06011617)
633300.63	4174550.44	39.40513	(06121106)	629800.63	4174900.44	42.41019	(06121217)
630150.63	4174900.44	51.69943	(06120217)	630500.63	4174900.44	69.64551	(07020624)
630850.63	4174900.44	89.92439	(04012317)	631200.63	4174900.44	138.18938	(06102817)
631550.63	4174900.44	143.47612	(06040124)	631900.63	4174900.44	141.89957	(05020818)
632250.63	4174900.44	92.40059	(05021018)	632600.63	4174900.44	67.85858	(05020802)
632950.63	4174900.44	53.78159	(04022223)	633300.63	4174900.44	41.70793	(05021801)
629800.63	4175250.44	45.13727	(04022207)	630150.63	4175250.44	65.45079	(04022207)
630500.63	4175250.44	85.17556	(04022208)	630850.63	4175250.44	141.65610	(06120217)

631200.63	4175250.44	231.05665	(04012317)	631550.63	4175250.44	297.53751	(04102617)
631900.63	4175250.44	207.98804	(05102601)	632250.63	4175250.44	117.92261	(08010918)
632600.63	4175250.44	83.48507	(07010217)	632950.63	4175250.44	58.28243	(07020218)
633300.63	4175250.44	46.48967	(06011618)	629800.63	4175600.44	48.78972	(05122618)
630150.63	4175600.44	63.61828	(05122618)	630500.63	4175600.44	87.10195	(05122618)
630850.63	4175600.44	179.20335	(04010517)	631200.63	4175600.44	598.59649	(04101624)
631550.63	4175600.44	2427.14569	(05012118)	631900.63	4175600.44	216.45220	(07012318)
632250.63	4175600.44	110.66269	(06011619)	632600.63	4175600.44	80.08426	(06011619)
632950.63	4175600.44	60.68223	(06011619)	633300.63	4175600.44	47.78549	(06011619)
629800.63	4175950.44	49.10670	(06011024)	630150.63	4175950.44	54.69519	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	85.88445	(07120621)	630850.63	4175950.44	165.95338	(06122121)
631200.63	4175950.44	267.01928	(07092301)	631550.63	4175950.44	358.54346	(07091007)
631900.63	4175950.44	200.77202	(06052306)	632250.63	4175950.44	123.74657	(04011021)
632600.63	4175950.44	80.06384	(05122401)	632950.63	4175950.44	59.57514	(06012918)
633300.63	4175950.44	47.52202	(05012018)	629800.63	4176300.44	46.11064	(07120622)
630150.63	4176300.44	51.71308	(06122121)	630500.63	4176300.44	82.37788	(04021520)
630850.63	4176300.44	129.10542	(04120903)	631200.63	4176300.44	164.41495	(08091907)
631550.63	4176300.44	148.11230	(05092002)	631900.63	4176300.44	132.37846	(07010323)
632250.63	4176300.44	106.68792	(08021908)	632600.63	4176300.44	73.48010	(07120406)
632950.63	4176300.44	55.04514	(04121024)	633300.63	4176300.44	44.71391	(06121503)
629800.63	4176650.44	41.09437	(06122121)	630150.63	4176650.44	47.69680	(04021521)
630500.63	4176650.44	67.68132	(04120903)	630850.63	4176650.44	92.03700	(07122917)
631200.63	4176650.44	109.44392	(06013008)	631550.63	4176650.44	102.46787	(08122723)
631900.63	4176650.44	95.33288	(05021722)	632250.63	4176650.44	78.10507	(04121820)
632600.63	4176650.44	69.48407	(08021908)	632950.63	4176650.44	57.69234	(08021808)
633300.63	4176650.44	42.10900	(05011818)	629800.63	4177000.44	37.15724	(04021521)
630150.63	4177000.44	43.98138	(04010518)	630500.63	4177000.44	52.31953	(07012719)
630850.63	4177000.44	66.31957	(07012720)	631200.63	4177000.44	77.93604	(07021108)
631550.63	4177000.44	72.45983	(06013007)	631900.63	4177000.44	69.22455	(04021506)
632250.63	4177000.44	61.00522	(06120218)	632600.63	4177000.44	56.14190	(07022408)
632950.63	4177000.44	51.11813	(08021908)	633300.63	4177000.44	42.66923	(08021808)
629800.63	4177350.44	33.05215	(04010518)	630150.63	4177350.44	38.09592	(04120908)
630500.63	4177350.44	44.59483	(08122718)	630850.63	4177350.44	49.65145	(07012722)
631200.63	4177350.44	52.69654	(06021703)	631550.63	4177350.44	54.61145	(06013007)
631900.63	4177350.44	51.89512	(05021719)	632250.63	4177350.44	48.61822	(05022620)
632600.63	4177350.44	43.29166	(06010521)	632950.63	4177350.44	42.17460	(07022408)
633300.63	4177350.44	39.86635	(08021908)	631670.70	4175493.59	527.16972	(08021718)
631669.80	4175641.41	616.42268	(05080806)	631665.32	4175796.39	598.49170	(06062806)
631417.17	4175826.85	244.82168	(04083006)	631417.17	4175673.66	673.86954	(08090519)

631422.55	4175484.63	248.21241	(06011109)	631268.42	4175983.74	255.17086	(06102618)
631275.69	4175523.99	515.60123	(07110617)	631345.65	4175419.50	402.90317	(06011109)
631384.72	4175441.30	622.04208	(06011109)	631491.93	4175442.21	919.28099	(04102617)
631491.93	4175414.95	473.31138	(04102617)	631385.63	4175413.14	424.10107	(06011109)
631358.37	4175395.87	404.26292	(06011109)	631409.25	4175336.81	331.36782	(06102817)
631567.35	4175235.96	275.12398	(05112422)	631756.33	4175028.80	178.44609	(06051924)
631807.22	4175003.36	172.24823	(04122822)	631867.18	4174987.91	158.38858	(05020818)
631849.92	4175988.28	204.84595	(06062806)	631268.74	4175963.75	267.69603	(06041021)
631269.05	4175943.76	281.48505	(07090906)	631269.37	4175923.77	299.15889	(06041021)
631269.68	4175903.78	606.55367	(07090906)	631270.00	4175883.79	693.70039	(05051802)
631270.32	4175863.81	449.69311	(07092301)	631270.63	4175843.82	443.50978	(06110118)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	482.93667	(07082502)	631271.26	4175803.84	499.21203	(07082502)
631271.58	4175783.85	540.77742	(04082001)	631271.90	4175763.86	588.14294	(04082001)
631272.21	4175743.87	581.52779	(04082001)	631272.53	4175723.88	670.69603	(06033021)
631272.85	4175703.89	743.73655	(08081602)	631273.16	4175683.90	766.00814	(05072902)
631273.48	4175663.91	753.75632	(05111617)	631273.79	4175643.92	693.93228	(05111817)
631274.11	4175623.94	864.53373	(04101604)	631274.43	4175603.95	962.41817	(05071702)
631274.74	4175583.96	948.14100	(05071702)	631275.06	4175563.97	765.24955	(05030320)
631275.37	4175543.98	551.53994	(06121422)	631285.68	4175509.06	505.29210	(07110617)
631295.68	4175494.14	466.53003	(04022118)	631305.67	4175479.21	449.78059	(05072102)
631315.67	4175464.28	426.45429	(05122619)	631325.66	4175449.35	422.96359	(06120517)
631335.66	4175434.43	420.96704	(04012317)	631358.67	4175426.77	434.13966	(06011109)
631371.70	4175434.03	464.30581	(06011109)	631402.59	4175441.45	665.49217	(06011109)
631420.46	4175441.60	692.48412	(06102817)	631438.33	4175441.76	653.53742	(06102817)
631456.19	4175441.91	596.33607	(08081805)	631474.06	4175442.06	750.86460	(08102618)
631491.93	4175428.58	512.78788	(04102617)	631474.21	4175414.65	420.46018	(07030618)
631456.50	4175414.35	428.18286	(06102817)	631438.78	4175414.05	422.40254	(06102817)
631421.06	4175413.74	448.27126	(06102817)	631403.35	4175413.44	439.99299	(06102817)
631372.00	4175404.51	416.64161	(06011109)	631371.09	4175381.11	371.01254	(06011109)
631383.81	4175366.34	369.18211	(06102817)	631396.53	4175351.58	361.13296	(06102817)
631425.06	4175326.73	309.54739	(05021806)	631440.87	4175316.64	297.69176	(05021806)
631456.68	4175306.56	280.30321	(07030618)	631472.49	4175296.47	280.27435	(07030618)
631488.30	4175286.39	291.80943	(04102617)	631504.11	4175276.30	310.80679	(04102617)
631519.92	4175266.22	316.96273	(04102617)	631535.73	4175256.13	310.79943	(04102617)
631551.54	4175246.05	294.32048	(04102617)	631579.95	4175222.15	270.76306	(05112422)
631592.55	4175208.34	268.22703	(05011817)	631605.15	4175194.53	268.77511	(05011817)
631617.74	4175180.72	266.70692	(05011817)	631630.34	4175166.91	262.29816	(05011817)
631642.94	4175153.10	255.81340	(05011817)	631655.54	4175139.29	247.62787	(05011817)
631668.14	4175125.47	238.07973	(05011817)	631680.74	4175111.66	227.51911	(05011817)

631693.34	4175097.85	216.26704	(05011817)	631705.94	4175084.04	204.62458	(05011817)
631718.53	4175070.23	197.30380	(06051924)	631731.13	4175056.42	191.98512	(06051924)
631743.73	4175042.61	185.62333	(06051924)	631773.29	4175020.32	169.27851	(04122822)
631790.26	4175011.84	172.78570	(04122822)	631822.21	4174999.50	169.01231	(04122822)
631837.20	4174995.64	166.68048	(05020818)	631852.19	4174991.77	164.18484	(05020818)
631866.84	4175007.53	156.44147	(06072804)	631866.50	4175027.14	163.13029	(08031018)
631866.16	4175046.76	172.40725	(05011521)	631865.83	4175066.37	179.84495	(05011521)
631865.49	4175085.99	182.84373	(05011521)	631865.15	4175105.60	188.96832	(05011520)
631864.81	4175125.22	191.39558	(05011520)	631864.47	4175144.83	191.29404	(08090902)
631864.13	4175164.45	198.84007	(08090902)	631863.80	4175184.06	208.33886	(05011317)
631863.46	4175203.68	214.44982	(05011317)	631863.12	4175223.29	217.70300	(05021018)
631862.78	4175242.91	221.96422	(05021018)	631862.44	4175262.52	231.51478	(05011417)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK12 ***

INCLUDING SOURCE(S): STCK12 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	233.08892	(05102601)	631861.77	4175301.75	240.25333	(05110817)
631861.43	4175321.37	246.94327	(08062824)	631861.09	4175340.98	253.24505	(05102522)
631860.75	4175360.60	261.74124	(07110823)	631860.41	4175380.21	269.21698	(07062004)
631860.07	4175399.83	277.69426	(06120617)	631859.73	4175419.44	287.91098	(04022223)
631859.40	4175439.06	296.56949	(05021801)	631859.06	4175458.67	287.14955	(07010217)
631858.72	4175478.29	315.10272	(07010217)	631858.38	4175497.90	303.62479	(08092319)
631858.04	4175517.52	281.66145	(06011618)	631857.70	4175537.13	284.35570	(06011618)
631857.37	4175556.75	308.36083	(05122223)	631857.03	4175576.36	282.81564	(05121217)
631856.69	4175595.98	234.00817	(07012318)	631856.35	4175615.59	304.20066	(07012318)
631856.01	4175635.21	328.51653	(07012318)	631855.67	4175654.82	328.32066	(07012418)
631855.33	4175674.44	326.24582	(05012018)	631855.00	4175694.05	319.75888	(07120624)
631854.66	4175713.67	287.17682	(07120624)	631854.32	4175733.28	283.91874	(05080306)
631853.98	4175752.90	277.16860	(05101805)	631853.64	4175772.51	270.49308	(05011418)
631853.30	4175792.13	256.66554	(06112102)	631852.97	4175811.74	253.05723	(07071002)
631852.63	4175831.36	250.31062	(06092519)	631852.29	4175850.97	244.59628	(06092419)
631851.95	4175870.59	231.45552	(06092419)	631851.61	4175890.20	232.64099	(06052306)
631851.27	4175909.82	233.31066	(06052306)	631850.94	4175929.43	227.43342	(06052306)
631850.60	4175949.05	216.05097	(06052306)	631850.26	4175968.66	203.90457	(07110618)
631830.54	4175988.13	225.40709	(06062806)	631811.15	4175987.98	242.23081	(06062806)
631791.77	4175987.83	253.63807	(06062806)	631772.39	4175987.67	258.21824	(06062806)
631753.00	4175987.52	255.00596	(06062806)	631733.62	4175987.37	243.72006	(06062806)
631714.24	4175987.22	224.85735	(06062806)	631694.85	4175987.07	226.03434	(07010322)
631675.47	4175986.92	232.07715	(07091007)	631656.09	4175986.77	271.61711	(07091007)
631636.70	4175986.62	303.19353	(07091007)	631617.32	4175986.46	327.68831	(07091007)
631597.94	4175986.31	342.28017	(07091007)	631578.55	4175986.16	344.83342	(07091007)
631559.17	4175986.01	334.35945	(07091007)	631539.79	4175985.86	311.33207	(07091007)
631520.40	4175985.71	277.69785	(07091007)	631501.02	4175985.56	244.07821	(05020318)

631481.64	4175985.40	243.52693	(05112507)	631462.25	4175985.25	261.68521	(07110718)
631442.87	4175985.10	268.94273	(06110120)	631423.49	4175984.95	263.08035	(04111518)
631404.10	4175984.80	256.56089	(07042205)	631384.72	4175984.65	272.08111	(06033022)
631365.34	4175984.50	294.07860	(08091907)	631345.95	4175984.35	305.34675	(08091907)
631326.57	4175984.19	301.28968	(08091907)	631307.19	4175984.04	283.18870	(08091907)
631287.80	4175983.89	266.86359	(06102618)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	98.15231	(05021018)	632304.44	4174354.52	54.55736	(05011521)
632192.15	4174956.32	87.54012	(08030618)	632420.62	4175510.15	84.51629	(06011618)
632418.97	4175552.92	86.95935	(05122223)	631187.00	4175727.00	658.68506	(06011217)
631166.00	4175729.00	600.61930	(06111024)	631121.00	4175719.00	504.20310	(04101604)
631035.00	4174830.00	113.33919	(06102817)	631106.00	4174825.00	106.24347	(07111022)
631937.00	4174528.00	68.74835	(04122822)	631322.00	4174522.00	72.02688	(05010417)
629800.63	4173850.44	27.30786	(04012317)	630150.63	4173850.44	39.48822	(07011517)
630500.63	4173850.44	43.19178	(06011021)	630850.63	4173850.44	43.01106	(08022002)
631200.63	4173850.44	43.66655	(05122422)	631550.63	4173850.44	49.97492	(07012317)
631900.63	4173850.44	48.31991	(07011417)	632250.63	4173850.44	37.12408	(06020105)
632600.63	4173850.44	35.03057	(05011521)	632950.63	4173850.44	31.91557	(04022018)
633300.63	4173850.44	28.31236	(05021018)	629800.63	4174200.44	33.21200	(06121421)
630150.63	4174200.44	37.64049	(07121217)	630500.63	4174200.44	56.01948	(05012117)
630850.63	4174200.44	53.66321	(06121017)	631200.63	4174200.44	57.42244	(06121420)
631550.63	4174200.44	68.15412	(07012317)	631900.63	4174200.44	61.46939	(07011417)
632250.63	4174200.44	50.76826	(05020818)	632600.63	4174200.44	42.82766	(05011520)
632950.63	4174200.44	36.37714	(05021018)	633300.63	4174200.44	35.81931	(06011617)
629800.63	4174550.44	36.66571	(07020624)	630150.63	4174550.44	46.99284	(06121421)
630500.63	4174550.44	59.96456	(07121217)	630850.63	4174550.44	79.68712	(06011021)
631200.63	4174550.44	87.80233	(06121420)	631550.63	4174550.44	90.37727	(07012317)
631900.63	4174550.44	73.30188	(06020105)	632250.63	4174550.44	65.51348	(05011520)
632600.63	4174550.44	49.58693	(05021018)	632950.63	4174550.44	48.87727	(06011617)
633300.63	4174550.44	36.40725	(05020802)	629800.63	4174900.44	42.41806	(05022818)
630150.63	4174900.44	59.40490	(07020624)	630500.63	4174900.44	76.23440	(06121421)
630850.63	4174900.44	116.48475	(07011517)	631200.63	4174900.44	123.98512	(08022002)
631550.63	4174900.44	126.16313	(07020623)	631900.63	4174900.44	109.12173	(05011521)
632250.63	4174900.44	78.20759	(05021018)	632600.63	4174900.44	60.93562	(06011617)
632950.63	4174900.44	49.21958	(06120617)	633300.63	4174900.44	39.99278	(05021801)
629800.63	4175250.44	53.76052	(04022207)	630150.63	4175250.44	62.89727	(04022208)
630500.63	4175250.44	95.56918	(05022818)	630850.63	4175250.44	171.07168	(06121421)
631200.63	4175250.44	249.44545	(06102817)	631550.63	4175250.44	229.16020	(05011817)
631900.63	4175250.44	159.77779	(08030618)	632250.63	4175250.44	112.51738	(06120617)
632600.63	4175250.44	71.69946	(07010217)	632950.63	4175250.44	53.32450	(07010217)

633300.63	4175250.44	42.23635	(07020218)	629800.63	4175600.44	56.75320	(04121304)
630150.63	4175600.44	72.26701	(04121304)	630500.63	4175600.44	100.88648	(04121224)
630850.63	4175600.44	197.50648	(08012221)	631200.63	4175600.44	644.49644	(04012317)
631550.63	4175600.44	1069.94093	(06052002)	631900.63	4175600.44	248.58605	(06011618)
632250.63	4175600.44	112.81638	(05121217)	632600.63	4175600.44	71.91195	(05121217)
632950.63	4175600.44	55.07099	(05011522)	633300.63	4175600.44	44.03358	(05011522)
629800.63	4175950.44	52.17570	(06011024)	630150.63	4175950.44	70.56253	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	91.40054	(05040705)	630850.63	4175950.44	197.24051	(05030322)
631200.63	4175950.44	326.51937	(04022205)	631550.63	4175950.44	410.31124	(06062806)
631900.63	4175950.44	226.12461	(05011418)	632250.63	4175950.44	115.12320	(08010924)
632600.63	4175950.44	72.28387	(05012018)	632950.63	4175950.44	55.19893	(07012418)
633300.63	4175950.44	44.36095	(07012418)	629800.63	4176300.44	48.73550	(07120622)
630150.63	4176300.44	57.49563	(07120622)	630500.63	4176300.44	95.15633	(04021520)
630850.63	4176300.44	135.59991	(04120903)	631200.63	4176300.44	161.78842	(06033022)
631550.63	4176300.44	163.68929	(07042003)	631900.63	4176300.44	147.19753	(08122905)
632250.63	4176300.44	106.81122	(08021808)	632600.63	4176300.44	68.34148	(04121024)
632950.63	4176300.44	52.33658	(06121503)	633300.63	4176300.44	42.71314	(05122401)
629800.63	4176650.44	45.74522	(06122121)	630150.63	4176650.44	52.82780	(04021521)
630500.63	4176650.44	75.93790	(04120903)	630850.63	4176650.44	99.13182	(07021218)
631200.63	4176650.44	106.42537	(06020107)	631550.63	4176650.44	110.78666	(05122402)
631900.63	4176650.44	101.73049	(06010522)	632250.63	4176650.44	78.80880	(05010604)
632600.63	4176650.44	67.02950	(08021808)	632950.63	4176650.44	49.57235	(05011818)
633300.63	4176650.44	39.65594	(04121024)	629800.63	4177000.44	40.65769	(04021521)
630150.63	4177000.44	48.49424	(04120903)	630500.63	4177000.44	59.40383	(07122917)
630850.63	4177000.44	65.70433	(07012722)	631200.63	4177000.44	76.20149	(06020124)
631550.63	4177000.44	77.84727	(04121818)	631900.63	4177000.44	72.58964	(05021722)
632250.63	4177000.44	62.25726	(04121820)	632600.63	4177000.44	50.79657	(05021219)
632950.63	4177000.44	43.26214	(08121517)	633300.63	4177000.44	40.31609	(08021808)
629800.63	4177350.44	35.67406	(04010518)	630150.63	4177350.44	41.21674	(04120908)
630500.63	4177350.44	49.24372	(07021218)	630850.63	4177350.44	51.98524	(06013008)
631200.63	4177350.44	56.55656	(07021219)	631550.63	4177350.44	58.29123	(06020918)
631900.63	4177350.44	54.98800	(04020619)	632250.63	4177350.44	49.34774	(06120218)
632600.63	4177350.44	44.99144	(07022408)	632950.63	4177350.44	38.56792	(08021908)
633300.63	4177350.44	35.45986	(08021908)	631670.70	4175493.59	338.45061	(05112917)
631669.80	4175641.41	481.94517	(07062003)	631665.32	4175796.39	450.36257	(05080805)
631417.17	4175826.85	382.45472	(06062806)	631417.17	4175673.66	932.52860	(08081602)
631422.55	4175484.63	222.67501	(08071406)	631268.42	4175983.74	339.61948	(08091907)
631275.69	4175523.99	623.47710	(05091918)	631345.65	4175419.50	291.23529	(08081805)
631384.72	4175441.30	466.63722	(04102617)	631491.93	4175442.21	608.46751	(08090903)

631491.93	4175414.95	331.11634	(05011817)	631385.63	4175413.14	339.45269	(08102618)
631358.37	4175395.87	274.86644	(07030618)	631409.25	4175336.81	277.25893	(04102617)
631567.35	4175235.96	216.74070	(05011817)	631756.33	4175028.80	139.66687	(05020818)
631807.22	4175003.36	127.75150	(05020818)	631867.18	4174987.91	128.87028	(05011521)
631849.92	4175988.28	233.05437	(05011818)	631268.74	4175963.75	365.15938	(08091907)
631269.05	4175943.76	392.83781	(08091907)	631269.37	4175923.77	609.31034	(08091907)
631269.68	4175903.78	760.43184	(07090905)	631270.00	4175883.79	799.08872	(07090905)
631270.32	4175863.81	556.67603	(04101820)	631270.63	4175843.82	590.45095	(04101820)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	742.94606	(07082502)	631271.26	4175803.84	1002.69342	(04082001)
631271.58	4175783.85	1261.81504	(04082001)	631271.90	4175763.86	1355.87772	(04082001)
631272.21	4175743.87	1893.67719	(08081602)	631272.53	4175723.88	1915.64087	(05111817)
631272.85	4175703.89	1547.43616	(05111817)	631273.16	4175683.90	1883.11558	(04041821)
631273.48	4175663.91	1813.81162	(07110617)	631273.79	4175643.92	1639.70094	(05072102)
631274.11	4175623.94	1481.93139	(05072102)	631274.43	4175603.95	1156.22900	(05111717)
631274.74	4175583.96	977.10231	(05111717)	631275.06	4175563.97	749.65445	(08121017)
631275.37	4175543.98	679.50809	(08121017)	631285.68	4175509.06	581.13288	(05091918)
631295.68	4175494.14	780.14072	(06102817)	631305.67	4175479.21	714.37145	(06102817)
631315.67	4175464.28	558.35125	(07100818)	631325.66	4175449.35	525.69933	(07100818)
631335.66	4175434.43	320.67372	(08081805)	631358.67	4175426.77	348.41922	(04102623)
631371.70	4175434.03	404.68667	(04102617)	631402.59	4175441.45	514.62042	(04102617)
631420.46	4175441.60	531.45610	(04102617)	631438.33	4175441.76	554.82014	(05011817)
631456.19	4175441.91	593.61892	(05011817)	631474.06	4175442.06	604.50870	(08071406)
631491.93	4175428.58	343.77563	(05011817)	631474.21	4175414.65	350.87767	(05011817)
631456.50	4175414.35	350.34534	(05011817)	631438.78	4175414.05	362.42985	(05011817)
631421.06	4175413.74	402.50615	(05011817)	631403.35	4175413.44	393.99882	(08102618)
631372.00	4175404.51	293.38198	(05110722)	631371.09	4175381.11	274.58013	(05110722)
631383.81	4175366.34	273.55647	(04102617)	631396.53	4175351.58	278.14868	(04102617)
631425.06	4175326.73	274.85174	(04102617)	631440.87	4175316.64	265.32910	(04102617)
631456.68	4175306.56	250.13742	(04102617)	631472.49	4175296.47	233.33379	(05011817)
631488.30	4175286.39	240.32241	(05011817)	631504.11	4175276.30	242.78889	(05011817)
631519.92	4175266.22	241.10845	(05011817)	631535.73	4175256.13	235.80000	(05011817)
631551.54	4175246.05	227.47120	(05011817)	631579.95	4175222.15	206.28581	(05011817)
631592.55	4175208.34	196.80999	(08071406)	631605.15	4175194.53	189.14770	(06051924)
631617.74	4175180.72	182.01287	(06051924)	631630.34	4175166.91	174.37019	(06051924)
631642.94	4175153.10	166.61434	(04122822)	631655.54	4175139.29	165.01566	(04122822)
631668.14	4175125.47	162.82203	(04122822)	631680.74	4175111.66	160.11425	(04122822)
631693.34	4175097.85	156.96109	(04122822)	631705.94	4175084.04	153.43230	(04122822)
631718.53	4175070.23	149.59653	(04122822)	631731.13	4175056.42	145.51219	(04122822)
631743.73	4175042.61	142.18097	(05020818)	631773.29	4175020.32	137.29380	(05020818)

631790.26	4175011.84	133.22168	(05020818)	631822.21	4174999.50	123.65386	(05011521)
631837.20	4174995.64	126.97396	(05011521)	631852.19	4174991.77	128.71141	(05011521)
631866.84	4175007.53	132.14818	(05011521)	631866.50	4175027.14	133.42719	(05011521)
631866.16	4175046.76	137.61303	(05011520)	631865.83	4175066.37	140.01451	(05011520)
631865.49	4175085.99	139.79406	(05011520)	631865.15	4175105.60	136.79062	(05011520)
631864.81	4175125.22	144.38662	(04022018)	631864.47	4175144.83	151.73165	(04022018)
631864.13	4175164.45	155.62414	(04022018)	631863.80	4175184.06	159.44372	(06040119)
631863.46	4175203.68	167.58452	(05021018)	631863.12	4175223.29	171.56977	(05021018)
631862.78	4175242.91	175.70729	(08030618)	631862.44	4175262.52	178.18151	(08030618)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK13 ***

INCLUDING SOURCE(S): STCK13 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	174.83472	(05102601)	631861.77	4175301.75	183.62633	(07021118)
631861.43	4175321.37	191.86583	(07021118)	631861.09	4175340.98	195.45048	(06011617)
631860.75	4175360.60	199.94631	(05102522)	631860.41	4175380.21	208.32960	(05020802)
631860.07	4175399.83	218.89248	(05020802)	631859.73	4175419.44	221.20257	(06121106)
631859.40	4175439.06	229.16147	(06120617)	631859.06	4175458.67	242.72549	(04022223)
631858.72	4175478.29	249.11119	(08010918)	631858.38	4175497.90	251.75899	(05021801)
631858.04	4175517.52	250.01423	(07010217)	631857.70	4175537.13	267.56636	(07010217)
631857.37	4175556.75	261.39061	(04022224)	631857.03	4175576.36	275.48168	(07020218)
631856.69	4175595.98	276.50444	(06011618)	631856.35	4175615.59	276.55569	(06011618)
631856.01	4175635.21	288.61965	(05122223)	631855.67	4175654.82	289.52581	(05121217)
631855.33	4175674.44	265.90249	(07021102)	631855.00	4175694.05	266.67117	(05121018)
631854.66	4175713.67	260.13522	(06011619)	631854.32	4175733.28	286.02285	(07012318)
631853.98	4175752.90	285.96484	(07012318)	631853.64	4175772.51	288.99189	(07012418)
631853.30	4175792.13	286.68056	(05012018)	631852.97	4175811.74	283.27288	(06012918)
631852.63	4175831.36	276.81497	(07120624)	631852.29	4175850.97	271.30036	(05122401)
631851.95	4175870.59	267.36670	(05122401)	631851.61	4175890.20	263.94626	(06121503)
631851.27	4175909.82	257.41409	(05011418)	631850.94	4175929.43	252.43713	(05011418)
631850.60	4175949.05	239.28262	(04121024)	631850.26	4175968.66	237.75390	(04121022)
631830.54	4175988.13	239.87372	(06092519)	631811.15	4175987.98	249.30838	(06092519)
631791.77	4175987.83	259.31459	(06092419)	631772.39	4175987.67	267.34702	(06092419)
631753.00	4175987.52	267.08195	(06092419)	631733.62	4175987.37	269.56132	(05111618)
631714.24	4175987.22	280.10380	(06052306)	631694.85	4175987.07	294.77412	(06052306)
631675.47	4175986.92	303.10285	(06052306)	631656.09	4175986.77	303.94594	(07110618)
631636.70	4175986.62	303.37182	(07110618)	631617.32	4175986.46	318.56700	(06062806)
631597.94	4175986.31	343.93744	(06062806)	631578.55	4175986.16	357.89714	(06062806)
631559.17	4175986.01	357.59368	(06062806)	631539.79	4175985.86	341.81178	(06062806)
631520.40	4175985.71	311.30837	(06062806)	631501.02	4175985.56	311.12934	(06081406)
631481.64	4175985.40	310.54682	(06081406)	631462.25	4175985.25	312.43386	(07102901)
631442.87	4175985.10	312.36313	(06012924)	631423.49	4175984.95	392.27057	(06081406)
631404.10	4175984.80	394.07261	(07102901)	631384.72	4175984.65	400.21444	(04020106)

631365.34 4175984.50 309.89017 (05122221) 631345.95 4175984.35 321.64263 (07030418)
631326.57 4175984.19 321.08620 (07030418) 631307.19 4175984.04 311.19429 (07080306)
631287.80 4175983.89 317.75649 (08091907)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***
INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	90.56340	(08030618)	632304.44	4174354.52	57.27821	(05011520)
632192.15	4174956.32	95.87238	(06011617)	632420.62	4175510.15	86.01704	(05121217)
632418.97	4175552.92	84.31023	(05011522)	631187.00	4175727.00	586.79918	(05081503)
631166.00	4175729.00	554.10443	(05081503)	631121.00	4175719.00	376.41041	(05110619)
631035.00	4174830.00	128.59974	(06011021)	631106.00	4174825.00	136.71379	(06102817)
631937.00	4174528.00	78.72432	(04122822)	631322.00	4174522.00	78.01881	(05010417)
629800.63	4173850.44	28.88903	(04012317)	630150.63	4173850.44	39.76583	(07011517)
630500.63	4173850.44	48.43125	(05012117)	630850.63	4173850.44	43.01248	(08022002)
631200.63	4173850.44	46.54882	(05122422)	631550.63	4173850.44	54.03397	(07012317)
631900.63	4173850.44	52.55879	(07011417)	632250.63	4173850.44	41.34615	(04122822)
632600.63	4173850.44	38.90633	(05011521)	632950.63	4173850.44	35.66741	(04022018)
633300.63	4173850.44	27.73371	(05021018)	629800.63	4174200.44	38.17751	(06121421)
630150.63	4174200.44	36.84321	(04012317)	630500.63	4174200.44	55.84451	(07011517)
630850.63	4174200.44	57.16053	(05010318)	631200.63	4174200.44	63.79842	(06121420)
631550.63	4174200.44	72.55447	(07012317)	631900.63	4174200.44	61.12956	(04022218)
632250.63	4174200.44	52.06076	(05020818)	632600.63	4174200.44	46.47431	(04022018)
632950.63	4174200.44	34.98152	(08030618)	633300.63	4174200.44	38.60664	(06011617)
629800.63	4174550.44	43.48398	(07020624)	630150.63	4174550.44	53.19331	(06121421)
630500.63	4174550.44	56.98835	(07121217)	630850.63	4174550.44	90.21778	(05012117)
631200.63	4174550.44	98.55227	(06121420)	631550.63	4174550.44	91.57712	(07012317)
631900.63	4174550.44	79.15202	(04122822)	632250.63	4174550.44	63.97218	(04022018)
632600.63	4174550.44	48.20826	(07021118)	632950.63	4174550.44	45.92348	(06011617)
633300.63	4174550.44	38.75651	(06120617)	629800.63	4174900.44	46.56367	(06121217)
630150.63	4174900.44	62.37822	(06120217)	630500.63	4174900.44	82.00467	(06121421)
630850.63	4174900.44	126.50217	(07121217)	631200.63	4174900.44	146.83737	(08022002)
631550.63	4174900.44	133.29487	(04122824)	631900.63	4174900.44	113.06820	(05011520)
632250.63	4174900.44	86.64715	(06011617)	632600.63	4174900.44	63.84217	(06120617)
632950.63	4174900.44	50.05322	(08010918)	633300.63	4174900.44	41.81893	(07010217)
629800.63	4175250.44	51.98330	(04022207)	630150.63	4175250.44	70.72269	(04022207)
630500.63	4175250.44	98.28960	(05122617)	630850.63	4175250.44	179.71812	(07020624)
631200.63	4175250.44	305.75674	(06102817)	631550.63	4175250.44	226.38156	(08071406)
631900.63	4175250.44	154.99597	(05020802)	632250.63	4175250.44	100.20400	(05021801)
632600.63	4175250.44	71.33821	(07010217)	632950.63	4175250.44	52.66358	(06011618)
633300.63	4175250.44	42.92020	(06011618)	629800.63	4175600.44	53.18947	(05122618)
630150.63	4175600.44	70.39350	(05122618)	630500.63	4175600.44	98.01244	(05122618)
630850.63	4175600.44	170.01458	(04010517)	631200.63	4175600.44	602.05200	(05030320)

631550.63	4175600.44	1484.86232	(08041119)	631900.63	4175600.44	232.66420	(04122902)
632250.63	4175600.44	100.05255	(06011619)	632600.63	4175600.44	72.47003	(06011619)
632950.63	4175600.44	55.68583	(06011619)	633300.63	4175600.44	44.36191	(06011619)
629800.63	4175950.44	51.98728	(06011024)	630150.63	4175950.44	59.16305	(05030324)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	100.40754	(07120622)	630850.63	4175950.44	166.49407	(04021520)
631200.63	4175950.44	260.89579	(08091907)	631550.63	4175950.44	298.70837	(06072006)
631900.63	4175950.44	218.96310	(07120406)	632250.63	4175950.44	113.35059	(06121503)
632600.63	4175950.44	71.70947	(08010924)	632950.63	4175950.44	54.74641	(06012918)
633300.63	4175950.44	44.19452	(06121320)	629800.63	4176300.44	48.86593	(07120622)
630150.63	4176300.44	62.10979	(06122121)	630500.63	4176300.44	85.03179	(04021521)
630850.63	4176300.44	117.95238	(04120908)	631200.63	4176300.44	143.04078	(07021108)
631550.63	4176300.44	194.18146	(07091007)	631900.63	4176300.44	153.68991	(06062806)
632250.63	4176300.44	105.56689	(08121517)	632600.63	4176300.44	67.31147	(05011818)
632950.63	4176300.44	51.04390	(05011418)	633300.63	4176300.44	41.09568	(06121503)
629800.63	4176650.44	44.40972	(04021520)	630150.63	4176650.44	55.32214	(04021521)
630500.63	4176650.44	65.94891	(04121223)	630850.63	4176650.44	87.07223	(04022021)
631200.63	4176650.44	98.94139	(06020124)	631550.63	4176650.44	107.08071	(06013005)
631900.63	4176650.44	101.00522	(06010520)	632250.63	4176650.44	80.30070	(07022408)
632600.63	4176650.44	59.72020	(08021908)	632950.63	4176650.44	49.75046	(08021808)
633300.63	4176650.44	38.49301	(04121022)	629800.63	4177000.44	39.43559	(04021521)
630150.63	4177000.44	45.83110	(04120903)	630500.63	4177000.44	57.12927	(07122917)
630850.63	4177000.44	64.92218	(07012722)	631200.63	4177000.44	69.94569	(06020124)
631550.63	4177000.44	75.20501	(06020918)	631900.63	4177000.44	69.29804	(05021722)
632250.63	4177000.44	59.97770	(06010521)	632600.63	4177000.44	49.26155	(08122905)
632950.63	4177000.44	47.12203	(08021908)	633300.63	4177000.44	42.39457	(08021808)
629800.63	4177350.44	34.74671	(04120903)	630150.63	4177350.44	38.74985	(07012719)
630500.63	4177350.44	45.34319	(04022021)	630850.63	4177350.44	52.95788	(08011009)
631200.63	4177350.44	53.25290	(07021219)	631550.63	4177350.44	55.36257	(05122220)
631900.63	4177350.44	52.27378	(04021506)	632250.63	4177350.44	47.35230	(06010520)
632600.63	4177350.44	41.97779	(04121820)	632950.63	4177350.44	36.72029	(08122905)
633300.63	4177350.44	38.24407	(08021908)	631670.70	4175493.59	360.12176	(06111919)
631669.80	4175641.41	515.93440	(05071803)	631665.32	4175796.39	387.64886	(06092519)
631417.17	4175826.85	251.27397	(06032303)	631417.17	4175673.66	948.05755	(04012317)
631422.55	4175484.63	190.50292	(07030618)	631268.42	4175983.74	238.48551	(07020208)
631275.69	4175523.99	985.05531	(06011109)	631345.65	4175419.50	442.30993	(08081805)
631384.72	4175441.30	570.67924	(04102617)	631491.93	4175442.21	541.18306	(05051824)
631491.93	4175414.95	385.55981	(08031018)	631385.63	4175413.14	435.70189	(08102618)
631358.37	4175395.87	381.86094	(07030618)	631409.25	4175336.81	335.29401	(04102617)
631567.35	4175235.96	219.43007	(08031018)	631756.33	4175028.80	138.59711	(05011521)

631807.22	4175003.36	131.95092	(05011521)	631867.18	4174987.91	122.27902	(05011520)
631849.92	4175988.28	218.50041	(08121517)	631268.74	4175963.75	253.80491	(08091907)
631269.05	4175943.76	277.00128	(08091907)	631269.37	4175923.77	397.42745	(08091907)
631269.68	4175903.78	435.00456	(08091907)	631270.00	4175883.79	393.29259	(07090905)
631270.32	4175863.81	359.66750	(05042719)	631270.63	4175843.82	325.29542	(05042719)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	390.60772	(05112506)	631271.26	4175803.84	392.08898	(05112506)
631271.58	4175783.85	419.57368	(05022619)	631271.90	4175763.86	446.80927	(06011108)
631272.21	4175743.87	509.69256	(08091907)	631272.53	4175723.88	506.87639	(06110119)
631272.85	4175703.89	458.71906	(06110119)	631273.16	4175683.90	392.09919	(06033021)
631273.48	4175663.91	524.45172	(06033021)	631273.79	4175643.92	820.77127	(06121423)
631274.11	4175623.94	1325.22183	(05071702)	631274.43	4175603.95	1770.18135	(05071702)
631274.74	4175583.96	1402.73099	(05071702)	631275.06	4175563.97	909.48598	(06041020)
631275.37	4175543.98	1275.85341	(06041020)	631285.68	4175509.06	1253.23022	(06011109)
631295.68	4175494.14	1262.18440	(06102817)	631305.67	4175479.21	1421.92530	(06102817)
631315.67	4175464.28	1139.18283	(06102817)	631325.66	4175449.35	824.14150	(07100818)
631335.66	4175434.43	493.39946	(06102817)	631358.67	4175426.77	435.77465	(04102623)
631371.70	4175434.03	508.90648	(04102617)	631402.59	4175441.45	583.48010	(04102617)
631420.46	4175441.60	569.14983	(05011817)	631438.33	4175441.76	570.66345	(08071406)
631456.19	4175441.91	548.83950	(08031018)	631474.06	4175442.06	555.05787	(08031018)
631491.93	4175428.58	402.74685	(05011317)	631474.21	4175414.65	393.69324	(08031018)
631456.50	4175414.35	436.94650	(06052001)	631438.78	4175414.05	432.38152	(08071406)
631421.06	4175413.74	487.83030	(08102618)	631403.35	4175413.44	492.68945	(08102618)
631372.00	4175404.51	399.33492	(07030618)	631371.09	4175381.11	365.35289	(07030618)
631383.81	4175366.34	353.07899	(04102617)	631396.53	4175351.58	347.91679	(04102617)
631425.06	4175326.73	317.82595	(04102617)	631440.87	4175316.64	292.33357	(05011817)
631456.68	4175306.56	297.07808	(05011817)	631472.49	4175296.47	294.61659	(05011817)
631488.30	4175286.39	286.24205	(05011817)	631504.11	4175276.30	275.51320	(08071406)
631519.92	4175266.22	261.10580	(08071406)	631535.73	4175256.13	244.13203	(08071406)
631551.54	4175246.05	225.58660	(08071406)	631579.95	4175222.15	213.65781	(08031018)
631592.55	4175208.34	207.76103	(08031018)	631605.15	4175194.53	201.80110	(08031018)
631617.74	4175180.72	195.82448	(08031018)	631630.34	4175166.91	189.87291	(08031018)
631642.94	4175153.10	183.97367	(08031018)	631655.54	4175139.29	178.15003	(08031018)
631668.14	4175125.47	172.41624	(08031018)	631680.74	4175111.66	166.79483	(08031018)
631693.34	4175097.85	161.29254	(08031018)	631705.94	4175084.04	155.91798	(08031018)
631718.53	4175070.23	150.67893	(08031018)	631731.13	4175056.42	145.57812	(08031018)
631743.73	4175042.61	140.94755	(05011521)	631773.29	4175020.32	137.67718	(05011521)
631790.26	4175011.84	135.39784	(05011521)	631822.21	4174999.50	130.64485	(05011520)
631837.20	4174995.64	129.02315	(05011520)	631852.19	4174991.77	126.17813	(05011520)
631866.84	4175007.53	120.68139	(04022018)	631866.50	4175027.14	127.67616	(04022018)

631866.16	4175046.76	132.67594	(04022018)	631865.83	4175066.37	135.17375	(04022018)
631865.49	4175085.99	135.07310	(06122122)	631865.15	4175105.60	139.96400	(05021018)
631864.81	4175125.22	142.19176	(05021018)	631864.47	4175144.83	145.32886	(08030618)
631864.13	4175164.45	146.55497	(08030618)	631863.80	4175184.06	146.82128	(05102601)
631863.46	4175203.68	153.63053	(07021118)	631863.12	4175223.29	158.46620	(07021118)
631862.78	4175242.91	160.50907	(05102522)	631862.44	4175262.52	164.34389	(05112917)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK14 ***

INCLUDING SOURCE(S): STCK14 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	170.14214	(05020802)	631861.77	4175301.75	176.01975	(05020802)
631861.43	4175321.37	179.79722	(06120617)	631861.09	4175340.98	186.35425	(04022223)
631860.75	4175360.60	199.90053	(04022223)	631860.41	4175380.21	203.60554	(08010918)
631860.07	4175399.83	205.12604	(05021801)	631859.73	4175419.44	209.18271	(07010217)
631859.40	4175439.06	219.51864	(07010217)	631859.06	4175458.67	231.36335	(07020218)
631858.72	4175478.29	243.75672	(07020218)	631858.38	4175497.90	245.93199	(06011618)
631858.04	4175517.52	243.17023	(06011618)	631857.70	4175537.13	256.07369	(05122223)
631857.37	4175556.75	262.76385	(05020819)	631857.03	4175576.36	264.02866	(07021102)
631856.69	4175595.98	264.20456	(05121018)	631856.35	4175615.59	262.56992	(07012318)
631856.01	4175635.21	295.60210	(07012318)	631855.67	4175654.82	292.07690	(07012318)
631855.33	4175674.44	296.28583	(07012418)	631855.00	4175694.05	294.91404	(05012018)
631854.66	4175713.67	291.21880	(06012918)	631854.32	4175733.28	284.79668	(08010924)
631853.98	4175752.90	283.51497	(05122401)	631853.64	4175772.51	277.34348	(05122401)
631853.30	4175792.13	275.28205	(06121503)	631852.97	4175811.74	269.26889	(05011418)
631852.63	4175831.36	262.60719	(05011418)	631852.29	4175850.97	250.62291	(04121024)
631851.95	4175870.59	249.83701	(04121022)	631851.61	4175890.20	249.72887	(05011818)
631851.27	4175909.82	245.68031	(07120406)	631850.94	4175929.43	238.81658	(07031619)
631850.60	4175949.05	232.73807	(08021808)	631850.26	4175968.66	227.53857	(08021808)
631830.54	4175988.13	223.14546	(05083120)	631811.15	4175987.98	227.88609	(06122320)
631791.77	4175987.83	236.61294	(08021908)	631772.39	4175987.67	244.38190	(08021908)
631753.00	4175987.52	249.23759	(07110618)	631733.62	4175987.37	248.26520	(08051502)
631714.24	4175987.22	256.44645	(06062806)	631694.85	4175987.07	277.73647	(06062806)
631675.47	4175986.92	292.58854	(06062806)	631656.09	4175986.77	299.23942	(06062806)
631636.70	4175986.62	296.47557	(06062806)	631617.32	4175986.46	284.72494	(06062806)
631597.94	4175986.31	265.38417	(06062806)	631578.55	4175986.16	270.17700	(05102804)
631559.17	4175986.01	262.98922	(06013003)	631539.79	4175985.86	273.77887	(07091007)
631520.40	4175985.71	308.45799	(07091007)	631501.02	4175985.56	335.92147	(07091007)
631481.64	4175985.40	352.96190	(07091007)	631462.25	4175985.25	357.08574	(07091007)
631442.87	4175985.10	347.07363	(07091007)	631423.49	4175984.95	323.33868	(07091007)
631404.10	4175984.80	334.23392	(07091007)	631384.72	4175984.65	334.05512	(07091007)
631365.34	4175984.50	278.54410	(07091007)	631345.95	4175984.35	245.93699	(05122221)
631326.57	4175984.19	243.50035	(07030418)	631307.19	4175984.04	240.06892	(07080306)
631287.80	4175983.89	236.91169	(07010319)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***
INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	134.20244	(08071406)	632304.44	4174354.52	73.60710	(04022218)
632192.15	4174956.32	114.62285	(08071406)	632420.62	4175510.15	162.90645	(08010918)
632418.97	4175552.92	161.69828	(05021801)	631187.00	4175727.00	258.52195	(06051906)
631166.00	4175729.00	246.21584	(06032819)	631121.00	4175719.00	223.18887	(06051906)
631035.00	4174830.00	109.35476	(07121217)	631106.00	4174825.00	136.89039	(06011109)
631937.00	4174528.00	98.98967	(07012317)	631322.00	4174522.00	94.78559	(06102817)
629800.63	4173850.44	20.24052	(06121421)	630150.63	4173850.44	23.69149	(04121302)
630500.63	4173850.44	45.55492	(06011109)	630850.63	4173850.44	44.43738	(05012117)
631200.63	4173850.44	43.29261	(06121017)	631550.63	4173850.44	46.70608	(06121420)
631900.63	4173850.44	41.76329	(04122823)	632250.63	4173850.44	45.93428	(04122824)
632600.63	4173850.44	40.87985	(06020105)	632950.63	4173850.44	35.71336	(05020818)
633300.63	4173850.44	30.94479	(05011520)	629800.63	4174200.44	26.19744	(06121421)
630150.63	4174200.44	27.74767	(06121421)	630500.63	4174200.44	36.76865	(06011109)
630850.63	4174200.44	69.78434	(06011109)	631200.63	4174200.44	61.50439	(05010318)
631550.63	4174200.44	72.42411	(06121420)	631900.63	4174200.44	58.18391	(07012317)
632250.63	4174200.44	66.99745	(07011417)	632600.63	4174200.44	51.00230	(04122822)
632950.63	4174200.44	44.33042	(05011521)	633300.63	4174200.44	38.57997	(04022018)
629800.63	4174550.44	32.35042	(04011017)	630150.63	4174550.44	33.01285	(06121421)
630500.63	4174550.44	43.45592	(06121421)	630850.63	4174550.44	76.69744	(06011109)
631200.63	4174550.44	99.83538	(06011021)	631550.63	4174550.44	99.61831	(06121420)
631900.63	4174550.44	91.12961	(07012317)	632250.63	4174550.44	85.54874	(04022218)
632600.63	4174550.44	65.74708	(05020818)	632950.63	4174550.44	58.96062	(04022018)
633300.63	4174550.44	42.07970	(06011617)	629800.63	4174900.44	33.42285	(06121217)
630150.63	4174900.44	44.00475	(06120217)	630500.63	4174900.44	59.89824	(07020624)
630850.63	4174900.44	84.07168	(04012317)	631200.63	4174900.44	165.35247	(06011109)
631550.63	4174900.44	139.44279	(07111022)	631900.63	4174900.44	136.91559	(04102617)
632250.63	4174900.44	109.57135	(04122822)	632600.63	4174900.44	93.56715	(04022018)
632950.63	4174900.44	74.72444	(06011617)	633300.63	4174900.44	49.43985	(07012703)
629800.63	4175250.44	40.03356	(04022207)	630150.63	4175250.44	50.27572	(06020109)
630500.63	4175250.44	71.25039	(06121217)	630850.63	4175250.44	136.94994	(06120217)
631200.63	4175250.44	184.81793	(05110618)	631550.63	4175250.44	256.65349	(06102817)
631900.63	4175250.44	195.05426	(04102617)	632250.63	4175250.44	161.38430	(05011317)
632600.63	4175250.44	112.14293	(06011617)	632950.63	4175250.44	77.63802	(04022223)
633300.63	4175250.44	57.75684	(07010217)	629800.63	4175600.44	37.67412	(04121304)
630150.63	4175600.44	46.90606	(04121224)	630500.63	4175600.44	76.25801	(08012221)
630850.63	4175600.44	136.07607	(04022207)	631200.63	4175600.44	387.06394	(06020109)
631550.63	4175600.44	809.95249	(06052306)	631900.63	4175600.44	461.34628	(08071406)
632250.63	4175600.44	205.82205	(06092719)	632600.63	4175600.44	136.21780	(07020218)
632950.63	4175600.44	82.63566	(08011001)	633300.63	4175600.44	58.83975	(05122223)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	64.24495	(07020701)	630850.63	4175950.44	122.23498	(06011024)
631200.63	4175950.44	214.14723	(05030324)	631550.63	4175950.44	386.07236	(04082001)
631900.63	4175950.44	740.81954	(06062806)	632250.63	4175950.44	280.34961	(05122401)
632600.63	4175950.44	143.87168	(06121320)	632950.63	4175950.44	86.07355	(07012418)
633300.63	4175950.44	59.78641	(07012318)	629800.63	4176300.44	33.53899	(06011024)
630150.63	4176300.44	40.47366	(07120621)	630500.63	4176300.44	68.20600	(07120622)
630850.63	4176300.44	95.03585	(06122121)	631200.63	4176300.44	137.61725	(04021521)
631550.63	4176300.44	201.98916	(08091907)	631900.63	4176300.44	224.14152	(06032303)
632250.63	4176300.44	223.30676	(05010604)	632600.63	4176300.44	148.00454	(05011818)
632950.63	4176300.44	82.61563	(04011021)	633300.63	4176300.44	57.68660	(05122401)
629800.63	4176650.44	35.41726	(07120622)	630150.63	4176650.44	39.05827	(06122121)
630500.63	4176650.44	59.91050	(04021520)	630850.63	4176650.44	81.33167	(04021521)
631200.63	4176650.44	101.72681	(07012719)	631550.63	4176650.44	122.45194	(08011009)
631900.63	4176650.44	134.10591	(08021903)	632250.63	4176650.44	148.04256	(06120218)
632600.63	4176650.44	111.77417	(05021219)	632950.63	4176650.44	92.49417	(08021808)
633300.63	4176650.44	52.29259	(05011818)	629800.63	4177000.44	32.18817	(06122121)
630150.63	4177000.44	38.89679	(04021520)	630500.63	4177000.44	47.96514	(04021521)
630850.63	4177000.44	64.37656	(04120908)	631200.63	4177000.44	78.84690	(04022021)
631550.63	4177000.44	93.03326	(07021108)	631900.63	4177000.44	95.34913	(05122220)
632250.63	4177000.44	95.12794	(05021722)	632600.63	4177000.44	81.18548	(07121908)
632950.63	4177000.44	63.23099	(08021908)	633300.63	4177000.44	51.69242	(08021808)
629800.63	4177350.44	25.96599	(04021521)	630150.63	4177350.44	31.79770	(04010518)
630500.63	4177350.44	38.88430	(04121223)	630850.63	4177350.44	51.23687	(07122917)
631200.63	4177350.44	57.82440	(07012722)	631550.63	4177350.44	64.09305	(06020124)
631900.63	4177350.44	65.59507	(05122220)	632250.63	4177350.44	67.01901	(04021506)
632600.63	4177350.44	58.19334	(06013003)	632950.63	4177350.44	51.75891	(07022408)
633300.63	4177350.44	43.32285	(08021908)	631670.70	4175493.59	365.17615	(06081406)
631669.80	4175641.41	1095.11837	(06062806)	631665.32	4175796.39	206.60980	(06072903)
631417.17	4175826.85	410.94267	(06101118)	631417.17	4175673.66	784.00762	(06020109)
631422.55	4175484.63	461.07864	(06121421)	631268.42	4175983.74	213.85836	(06011217)
631275.69	4175523.99	278.40959	(06020109)	631345.65	4175419.50	262.72763	(06121421)
631384.72	4175441.30	539.47170	(04012317)	631491.93	4175442.21	408.08391	(04110819)
631491.93	4175414.95	441.88432	(07121217)	631385.63	4175413.14	288.87424	(04012317)
631358.37	4175395.87	252.71170	(05110618)	631409.25	4175336.81	234.35852	(04012317)
631567.35	4175235.96	261.28202	(06102817)	631756.33	4175028.80	130.90656	(05010417)
631807.22	4175003.36	134.22052	(05021805)	631867.18	4174987.91	147.72571	(04102617)
631849.92	4175988.28	583.82788	(06081406)	631268.74	4175963.75	227.17406	(06011217)
631269.05	4175943.76	243.25119	(05030324)	631269.37	4175923.77	241.67218	(05030324)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631269.68	4175903.78	250.03804	(06011024)	631270.00	4175883.79	245.77357	(07042002)
631270.32	4175863.81	253.78345	(06101118)	631270.63	4175843.82	279.62125	(05122618)
631270.95	4175823.83	308.42914	(05122618)	631271.26	4175803.84	300.72608	(05122618)
631271.58	4175783.85	305.54002	(04121304)	631271.90	4175763.86	314.15990	(06032819)
631272.21	4175743.87	308.90893	(06032819)	631272.53	4175723.88	310.35012	(06051906)
631272.85	4175703.89	300.14858	(06020109)	631273.16	4175683.90	352.38911	(06020109)
631273.48	4175663.91	395.11716	(06020109)	631273.79	4175643.92	423.81139	(06020109)
631274.11	4175623.94	435.62715	(06020109)	631274.43	4175603.95	429.77630	(06020109)
631274.74	4175583.96	407.58355	(06020109)	631275.06	4175563.97	372.12991	(06020109)
631275.37	4175543.98	327.57415	(06020109)	631285.68	4175509.06	271.27879	(06120217)
631295.68	4175494.14	271.22519	(04011017)	631305.67	4175479.21	265.35755	(07020624)
631315.67	4175464.28	240.98428	(04101819)	631325.66	4175449.35	256.19370	(04101819)
631335.66	4175434.43	254.25978	(06121421)	631358.67	4175426.77	275.40137	(06121421)
631371.70	4175434.03	420.11551	(04012317)	631402.59	4175441.45	428.58316	(07082819)
631420.46	4175441.60	673.43466	(05110618)	631438.33	4175441.76	448.83817	(07082819)
631456.19	4175441.91	440.01033	(04110819)	631474.06	4175442.06	436.15998	(04110819)
631491.93	4175428.58	421.15379	(07121217)	631474.21	4175414.65	422.63639	(07121217)
631456.50	4175414.35	457.51182	(04110819)	631438.78	4175414.05	470.71522	(04110819)
631421.06	4175413.74	465.50335	(08121017)	631403.35	4175413.44	633.13274	(04012317)
631372.00	4175404.51	266.50664	(04012317)	631371.09	4175381.11	244.30109	(04012317)
631383.81	4175366.34	250.87861	(04012317)	631396.53	4175351.58	247.38235	(04012317)
631425.06	4175326.73	261.53342	(06011109)	631440.87	4175316.64	285.52398	(06011109)
631456.68	4175306.56	299.41089	(06011109)	631472.49	4175296.47	301.58149	(06011109)
631488.30	4175286.39	291.80556	(06011109)	631504.11	4175276.30	271.21506	(06011109)
631519.92	4175266.22	248.83698	(05012117)	631535.73	4175256.13	240.79857	(06102817)
631551.54	4175246.05	255.58309	(06102817)	631579.95	4175222.15	254.96100	(06102817)
631592.55	4175208.34	242.10981	(06102817)	631605.15	4175194.53	212.07571	(06102817)
631617.74	4175180.72	202.36719	(07111022)	631630.34	4175166.91	190.44731	(04112917)
631642.94	4175153.10	187.28257	(05071804)	631655.54	4175139.29	187.33053	(05071804)
631668.14	4175125.47	183.91206	(04102621)	631680.74	4175111.66	180.43785	(04102621)
631693.34	4175097.85	179.22572	(05050803)	631705.94	4175084.04	173.73563	(05050803)
631718.53	4175070.23	162.22805	(05050803)	631731.13	4175056.42	146.30712	(05050803)
631743.73	4175042.61	136.89233	(05122422)	631773.29	4175020.32	126.94397	(05021805)
631790.26	4175011.84	132.04862	(05021805)	631822.21	4174999.50	135.79505	(06040124)
631837.20	4174995.64	141.04227	(06040124)	631852.19	4174991.77	143.21576	(04102617)
631866.84	4175007.53	151.83687	(04102617)	631866.50	4175027.14	156.04759	(04102617)
631866.16	4175046.76	160.36564	(04102617)	631865.83	4175066.37	164.79277	(04102617)
631865.49	4175085.99	169.33176	(04102617)	631865.15	4175105.60	173.98448	(04102617)
631864.81	4175125.22	178.75791	(04102617)	631864.47	4175144.83	183.62575	(04102617)

631864.13	4175164.45	188.61715	(04102617)	631863.80	4175184.06	193.73038	(04102617)
631863.46	4175203.68	198.96749	(04102617)	631863.12	4175223.29	204.31723	(04102617)
631862.78	4175242.91	212.79764	(04102617)	631862.44	4175262.52	220.73457	(04102617)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK15 ***

INCLUDING SOURCE(S): STCK15 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	256.66545	(04102617)	631861.77	4175301.75	265.00150	(04102617)
631861.43	4175321.37	244.11082	(04102623)	631861.09	4175340.98	304.41792	(04102617)
631860.75	4175360.60	316.10438	(04102617)	631860.41	4175380.21	328.62035	(04102617)
631860.07	4175399.83	341.97476	(04102617)	631859.73	4175419.44	356.12625	(04102617)
631859.40	4175439.06	349.80235	(04102617)	631859.06	4175458.67	367.03994	(04102617)
631858.72	4175478.29	384.61019	(04102617)	631858.38	4175497.90	402.26677	(04102617)
631858.04	4175517.52	419.59913	(04102617)	631857.70	4175537.13	436.27865	(04122824)
631857.37	4175556.75	455.80524	(04122824)	631857.03	4175576.36	463.75242	(04122824)
631856.69	4175595.98	470.14555	(04102617)	631856.35	4175615.59	545.94731	(08102618)
631856.01	4175635.21	561.41401	(08102618)	631855.67	4175654.82	566.77186	(05110117)
631855.33	4175674.44	772.82375	(05011817)	631855.00	4175694.05	774.10302	(08071406)
631854.66	4175713.67	675.02659	(08071406)	631854.32	4175733.28	498.81176	(08071406)
631853.98	4175752.90	564.41667	(08090903)	631853.64	4175772.51	308.27201	(08031018)
631853.30	4175792.13	850.79082	(07020602)	631852.97	4175811.74	1385.01626	(07121418)
631852.63	4175831.36	1785.43077	(04121018)	631852.29	4175850.97	1842.26680	(06052306)
631851.95	4175870.59	1960.47008	(06062806)	631851.61	4175890.20	1648.78708	(08103007)
631851.27	4175909.82	1403.65266	(06112624)	631850.94	4175929.43	831.52887	(06080603)
631850.60	4175949.05	725.32140	(06081406)	631850.26	4175968.66	658.20081	(06081406)
631830.54	4175988.13	546.56556	(06080603)	631811.15	4175987.98	636.11538	(07020803)
631791.77	4175987.83	711.07268	(08011008)	631772.39	4175987.67	705.02756	(08122724)
631753.00	4175987.52	629.97845	(08122907)	631733.62	4175987.37	435.46142	(07102902)
631714.24	4175987.22	399.10524	(05042719)	631694.85	4175987.07	426.52716	(08091907)
631675.47	4175986.92	383.08371	(06110119)	631656.09	4175986.77	328.62879	(06110119)
631636.70	4175986.62	368.93311	(05081406)	631617.32	4175986.46	372.91572	(04082205)
631597.94	4175986.31	366.13419	(07082502)	631578.55	4175986.16	359.96370	(07082502)
631559.17	4175986.01	351.03933	(04082001)	631539.79	4175985.86	324.48197	(04082001)
631520.40	4175985.71	317.68267	(04082001)	631501.02	4175985.56	303.56889	(04082001)
631481.64	4175985.40	288.80326	(07120623)	631462.25	4175985.25	279.29394	(07102702)
631442.87	4175985.10	277.88839	(06033021)	631423.49	4175984.95	274.19955	(06033021)
631404.10	4175984.80	267.26475	(06033021)	631384.72	4175984.65	257.83923	(06033021)
631365.34	4175984.50	246.56110	(06033021)	631345.95	4175984.35	234.92866	(08081602)
631326.57	4175984.19	225.08919	(05072902)	631307.19	4175984.04	217.33149	(06011217)
631287.80	4175983.89	216.23587	(06011217)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	140.20374	(08071406)	632304.44	4174354.52	70.85555	(04022218)
632192.15	4174956.32	126.53952	(04122822)	632420.62	4175510.15	196.31165	(07020218)
632418.97	4175552.92	218.96117	(07020218)	631187.00	4175727.00	301.32212	(05122618)
631166.00	4175729.00	285.39193	(05122618)	631121.00	4175719.00	255.86138	(05122618)
631035.00	4174830.00	113.47234	(04012317)	631106.00	4174825.00	117.56969	(07121217)
631937.00	4174528.00	102.24473	(07012317)	631322.00	4174522.00	97.39098	(06102817)
629800.63	4173850.44	23.84441	(06121421)	630150.63	4173850.44	24.92570	(05122423)
630500.63	4173850.44	44.36198	(06011109)	630850.63	4173850.44	50.91006	(05012117)
631200.63	4173850.44	46.47185	(06121017)	631550.63	4173850.44	50.15949	(06121420)
631900.63	4173850.44	44.92088	(04122823)	632250.63	4173850.44	48.17585	(04122824)
632600.63	4173850.44	42.29508	(06020105)	632950.63	4173850.44	36.45112	(05020818)
633300.63	4173850.44	31.37661	(05011520)	629800.63	4174200.44	23.27821	(06121421)
630150.63	4174200.44	33.24000	(06121421)	630500.63	4174200.44	37.41971	(05122423)
630850.63	4174200.44	74.72351	(06011109)	631200.63	4174200.44	62.90757	(05010318)
631550.63	4174200.44	74.58280	(06121420)	631900.63	4174200.44	64.36919	(07012317)
632250.63	4174200.44	72.54815	(07011417)	632600.63	4174200.44	56.64393	(04122822)
632950.63	4174200.44	46.65527	(05011520)	633300.63	4174200.44	37.32053	(06122122)
629800.63	4174550.44	32.68501	(06120217)	630150.63	4174550.44	37.35275	(07020624)
630500.63	4174550.44	55.01739	(06121421)	630850.63	4174550.44	66.54965	(04121302)
631200.63	4174550.44	106.57204	(05012117)	631550.63	4174550.44	98.36286	(08022002)
631900.63	4174550.44	98.01235	(07012317)	632250.63	4174550.44	87.70058	(06020105)
632600.63	4174550.44	73.93251	(05011521)	632950.63	4174550.44	56.92331	(06122122)
633300.63	4174550.44	51.67510	(06011617)	629800.63	4174900.44	40.11543	(06020109)
630150.63	4174900.44	44.76468	(05022818)	630500.63	4174900.44	73.65456	(04011017)
630850.63	4174900.44	109.29589	(06121421)	631200.63	4174900.44	147.74645	(06011109)
631550.63	4174900.44	154.27175	(06102817)	631900.63	4174900.44	150.52340	(04102617)
632250.63	4174900.44	116.93626	(05020818)	632600.63	4174900.44	101.13693	(05112916)
632950.63	4174900.44	78.27990	(06011617)	633300.63	4174900.44	54.04214	(06120617)
629800.63	4175250.44	38.28946	(04022207)	630150.63	4175250.44	54.99341	(04022207)
630500.63	4175250.44	77.66738	(06020109)	630850.63	4175250.44	126.50462	(06121217)
631200.63	4175250.44	198.79810	(04101819)	631550.63	4175250.44	280.02387	(06011109)
631900.63	4175250.44	208.74222	(05011817)	632250.63	4175250.44	188.96488	(05112916)
632600.63	4175250.44	127.48495	(06120617)	632950.63	4175250.44	80.19999	(07010217)
633300.63	4175250.44	60.93551	(07010217)	629800.63	4175600.44	41.76121	(04121304)
630150.63	4175600.44	54.11532	(04121304)	630500.63	4175600.44	81.34748	(04121224)
630850.63	4175600.44	147.26479	(04121224)	631200.63	4175600.44	288.79377	(04110818)
631550.63	4175600.44	615.93682	(07110617)	631900.63	4175600.44	531.51196	(06052002)
632250.63	4175600.44	308.55703	(06011618)	632600.63	4175600.44	160.88832	(05122223)
632950.63	4175600.44	88.60886	(05121217)	633300.63	4175600.44	58.20840	(08011019)
629800.63	4175950.44	33.25867	(07020701)	630150.63	4175950.44	48.44079	(06011024)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	76.19246	(06011024)	630850.63	4175950.44	111.50034	(05030324)
631200.63	4175950.44	215.87035	(07120622)	631550.63	4175950.44	435.39640	(07082502)
631900.63	4175950.44	389.48103	(06081406)	632250.63	4175950.44	267.38305	(05020806)
632600.63	4175950.44	164.21587	(05122401)	632950.63	4175950.44	85.37957	(06012918)
633300.63	4175950.44	59.19645	(06121320)	629800.63	4176300.44	29.82584	(07120621)
630150.63	4176300.44	44.45912	(07120622)	630500.63	4176300.44	65.98980	(07120622)
630850.63	4176300.44	100.88294	(06122121)	631200.63	4176300.44	130.23480	(04010518)
631550.63	4176300.44	192.82679	(08091907)	631900.63	4176300.44	216.23651	(07091007)
632250.63	4176300.44	226.60119	(06062806)	632600.63	4176300.44	148.38216	(08021808)
632950.63	4176300.44	81.72813	(05020806)	633300.63	4176300.44	55.59609	(05020719)
629800.63	4176650.44	31.52805	(07120622)	630150.63	4176650.44	43.84851	(06122121)
630500.63	4176650.44	57.95509	(04021520)	630850.63	4176650.44	79.86156	(04010518)
631200.63	4176650.44	99.70117	(07122917)	631550.63	4176650.44	114.44733	(08011009)
631900.63	4176650.44	116.14154	(08122906)	632250.63	4176650.44	118.59872	(06122319)
632600.63	4176650.44	100.39393	(06062806)	632950.63	4176650.44	72.38457	(08121517)
633300.63	4176650.44	52.60584	(04121101)	629800.63	4177000.44	30.49120	(04021520)
630150.63	4177000.44	36.23356	(04021521)	630500.63	4177000.44	48.92941	(04010518)
630850.63	4177000.44	60.48906	(04120908)	631200.63	4177000.44	75.09657	(07012720)
631550.63	4177000.44	82.85750	(07021108)	631900.63	4177000.44	84.53911	(05122220)
632250.63	4177000.44	81.58690	(06012820)	632600.63	4177000.44	71.72148	(06010521)
632950.63	4177000.44	57.29093	(08122905)	633300.63	4177000.44	49.38424	(08021908)
629800.63	4177350.44	27.90281	(04021521)	630150.63	4177350.44	33.06414	(04010518)
630500.63	4177350.44	39.96414	(04120908)	630850.63	4177350.44	49.50387	(08122718)
631200.63	4177350.44	56.23617	(07012722)	631550.63	4177350.44	60.01541	(06020124)
631900.63	4177350.44	59.11111	(05122220)	632250.63	4177350.44	60.56768	(07091007)
632600.63	4177350.44	53.40134	(06122319)	632950.63	4177350.44	45.75973	(07121908)
633300.63	4177350.44	37.88891	(08122905)	631670.70	4175493.59	299.80078	(06062806)
631669.80	4175641.41	1336.81134	(06102818)	631665.32	4175796.39	257.31346	(06033021)
631417.17	4175826.85	347.14378	(05030324)	631417.17	4175673.66	650.52769	(04041821)
631422.55	4175484.63	694.16932	(04011017)	631268.42	4175983.74	199.34971	(05030120)
631275.69	4175523.99	431.76337	(06020109)	631345.65	4175419.50	294.21961	(07020624)
631384.72	4175441.30	313.67110	(04011017)	631491.93	4175442.21	548.88670	(05111717)
631491.93	4175414.95	561.39377	(05110618)	631385.63	4175413.14	276.32733	(07020624)
631358.37	4175395.87	266.82857	(07020624)	631409.25	4175336.81	270.23367	(05110618)
631567.35	4175235.96	250.96510	(06102817)	631756.33	4175028.80	158.09160	(05010417)
631807.22	4175003.36	159.17833	(05021805)	631867.18	4174987.91	166.97595	(04102617)
631849.92	4175988.28	416.54360	(07091007)	631268.74	4175963.75	215.47788	(05110619)
631269.05	4175943.76	230.36911	(05110619)	631269.37	4175923.77	236.56089	(07120622)
631269.68	4175903.78	241.85063	(05030321)	631270.00	4175883.79	240.81649	(06011217)
631270.32	4175863.81	274.68242	(05030324)	631270.63	4175843.82	303.32225	(05030324)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	301.44215	(05030324)	631271.26	4175803.84	311.42952	(06011024)
631271.58	4175783.85	304.60184	(07042002)	631271.90	4175763.86	309.90507	(07042002)
631272.21	4175743.87	327.80637	(05122618)	631272.53	4175723.88	367.85759	(05122618)
631272.85	4175703.89	357.34591	(05122618)	631273.16	4175683.90	364.40108	(04121304)
631273.48	4175663.91	365.60531	(06032819)	631273.79	4175643.92	359.05101	(06032819)
631274.11	4175623.94	355.90789	(06051906)	631274.43	4175603.95	333.23436	(04110818)
631274.74	4175583.96	349.94805	(06020109)	631275.06	4175563.97	392.35043	(06020109)
631275.37	4175543.98	420.58239	(06020109)	631285.68	4175509.06	432.94931	(06020109)
631295.68	4175494.14	418.87526	(06020109)	631305.67	4175479.21	390.64014	(06020109)
631315.67	4175464.28	350.87751	(06020109)	631325.66	4175449.35	303.29804	(06020109)
631335.66	4175434.43	297.65467	(06120217)	631358.67	4175426.77	300.19439	(07020624)
631371.70	4175434.03	306.25154	(07020624)	631402.59	4175441.45	318.35400	(07020624)
631420.46	4175441.60	559.15954	(08081806)	631438.33	4175441.76	574.21604	(04101819)
631456.19	4175441.91	572.35238	(04101819)	631474.06	4175442.06	555.34530	(05111717)
631491.93	4175428.58	555.17417	(05111717)	631474.21	4175414.65	580.63876	(05111717)
631456.50	4175414.35	582.97508	(05111717)	631438.78	4175414.05	571.40362	(05111717)
631421.06	4175413.74	344.95148	(06041020)	631403.35	4175413.44	408.47077	(04012317)
631372.00	4175404.51	271.54584	(07020624)	631371.09	4175381.11	271.50108	(04101819)
631383.81	4175366.34	270.62761	(06121421)	631396.53	4175351.58	271.55152	(08062901)
631425.06	4175326.73	278.23988	(04012317)	631440.87	4175316.64	282.68747	(04012317)
631456.68	4175306.56	275.11154	(04012317)	631472.49	4175296.47	275.38852	(04012317)
631488.30	4175286.39	298.17465	(06011109)	631504.11	4175276.30	312.33188	(06011109)
631519.92	4175266.22	312.45544	(06011109)	631535.73	4175256.13	298.52358	(06011109)
631551.54	4175246.05	272.42028	(06011109)	631579.95	4175222.15	263.96623	(06102817)
631592.55	4175208.34	267.91531	(06102817)	631605.15	4175194.53	262.74942	(06102817)
631617.74	4175180.72	240.29375	(06102817)	631630.34	4175166.91	222.69388	(06102817)
631642.94	4175153.10	200.40846	(06102817)	631655.54	4175139.29	183.28437	(05021806)
631668.14	4175125.47	184.61061	(05071804)	631680.74	4175111.66	181.66164	(05021806)
631693.34	4175097.85	177.97043	(04102621)	631705.94	4175084.04	180.61079	(05122422)
631718.53	4175070.23	181.74666	(05122422)	631731.13	4175056.42	177.22309	(05122422)
631743.73	4175042.61	167.89881	(05122422)	631773.29	4175020.32	150.89268	(05021805)
631790.26	4175011.84	157.16627	(05021805)	631822.21	4174999.50	158.45586	(05021805)
631837.20	4174995.64	158.15514	(04102617)	631852.19	4174991.77	163.71968	(04102617)
631866.84	4175007.53	171.79655	(04102617)	631866.50	4175027.14	176.74078	(04102617)
631866.16	4175046.76	181.81703	(04102617)	631865.83	4175066.37	187.02493	(04102617)
631865.49	4175085.99	192.37052	(04102617)	631865.15	4175105.60	197.85228	(04102617)
631864.81	4175125.22	203.47550	(04102617)	631864.47	4175144.83	209.21041	(04102617)
631864.13	4175164.45	215.08163	(04102617)	631863.80	4175184.06	221.07597	(04102617)
631863.46	4175203.68	227.19177	(04102617)	631863.12	4175223.29	233.40400	(04102617)
631862.78	4175242.91	242.89237	(04102617)	631862.44	4175262.52	252.33704	(04102617)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK16 ***

INCLUDING SOURCE(S): STCK16 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	299.76451	(04102617)	631861.77	4175301.75	307.83339	(04102617)
631861.43	4175321.37	310.20960	(08102618)	631861.09	4175340.98	284.09398	(04102623)
631860.75	4175360.60	349.88337	(04102617)	631860.41	4175380.21	361.35769	(04102617)
631860.07	4175399.83	373.12124	(04102617)	631859.73	4175419.44	384.84455	(04102617)
631859.40	4175439.06	396.14266	(04102617)	631859.06	4175458.67	380.62252	(04102617)
631858.72	4175478.29	391.08851	(04102617)	631858.38	4175497.90	398.05774	(04102617)
631858.04	4175517.52	399.59498	(04102617)	631857.70	4175537.13	393.02685	(04102617)
631857.37	4175556.75	374.57620	(04102617)	631857.03	4175576.36	339.68298	(04102617)
631856.69	4175595.98	287.01183	(06052002)	631856.35	4175615.59	445.28685	(06052002)
631856.01	4175635.21	721.96799	(04110905)	631855.67	4175654.82	1484.55925	(04110905)
631855.33	4175674.44	2084.17374	(04101518)	631855.00	4175694.05	2148.98413	(04030118)
631854.66	4175713.67	2494.48322	(08112619)	631854.32	4175733.28	2691.70471	(06111908)
631853.98	4175752.90	2051.87153	(06111908)	631853.64	4175772.51	1647.94888	(07092306)
631853.30	4175792.13	1406.42305	(06110304)	631852.97	4175811.74	1186.16803	(06110304)
631852.63	4175831.36	1057.10507	(06062806)	631852.29	4175850.97	914.43208	(06062806)
631851.95	4175870.59	736.64594	(06062806)	631851.61	4175890.20	693.05153	(06081406)
631851.27	4175909.82	779.28892	(07102901)	631850.94	4175929.43	547.20515	(07091007)
631850.60	4175949.05	463.76473	(07091007)	631850.26	4175968.66	440.03840	(07091007)
631830.54	4175988.13	405.93952	(07020803)	631811.15	4175987.98	479.82948	(07020803)
631791.77	4175987.83	486.87135	(06010202)	631772.39	4175987.67	480.74424	(05122403)
631753.00	4175987.52	469.83025	(08122907)	631733.62	4175987.37	389.77367	(08122907)
631714.24	4175987.22	359.35531	(07080306)	631694.85	4175987.07	387.46786	(05112506)
631675.47	4175986.92	405.13177	(08091907)	631656.09	4175986.77	401.39856	(08091907)
631636.70	4175986.62	390.52325	(07090905)	631617.32	4175986.46	375.76838	(04083005)
631597.94	4175986.31	389.47988	(04101820)	631578.55	4175986.16	392.62514	(04101820)
631559.17	4175986.01	270.15470	(04022205)	631539.79	4175985.86	263.74547	(04082205)
631520.40	4175985.71	261.64113	(05122508)	631501.02	4175985.56	253.26160	(05122508)
631481.64	4175985.40	255.44076	(04022119)	631462.25	4175985.25	250.96068	(04022119)
631442.87	4175985.10	243.74666	(07010318)	631423.49	4175984.95	241.15870	(05122621)
631404.10	4175984.80	242.21082	(05122621)	631384.72	4175984.65	238.92975	(05122621)
631365.34	4175984.50	231.97592	(05122621)	631345.95	4175984.35	222.34947	(07120623)
631326.57	4175984.19	217.00418	(07120623)	631307.19	4175984.04	209.37817	(07120623)
631287.80	4175983.89	204.55645	(07070904)				

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	142.89548	(04122822)	632304.44	4174354.52	77.95101	(06020105)
632192.15	4174956.32	154.20746	(08031018)	632420.62	4175510.15	236.49966	(05122223)
632418.97	4175552.92	231.93756	(05121217)	631187.00	4175727.00	289.05867	(06011024)
631166.00	4175729.00	280.28936	(06011024)	631121.00	4175719.00	259.54362	(06011024)
631035.00	4174830.00	113.29314	(04012317)	631106.00	4174825.00	124.38286	(04012317)
631937.00	4174528.00	106.31749	(07012317)	631322.00	4174522.00	94.40778	(06102817)
629800.63	4173850.44	26.20276	(06121421)	630150.63	4173850.44	25.46710	(06011022)
630500.63	4173850.44	41.54158	(06011109)	630850.63	4173850.44	54.00242	(05012117)
631200.63	4173850.44	47.82721	(06121017)	631550.63	4173850.44	53.76969	(06121420)
631900.63	4173850.44	48.45012	(04122823)	632250.63	4173850.44	50.36376	(05021804)
632600.63	4173850.44	42.46454	(06020105)	632950.63	4173850.44	36.62004	(05011521)
633300.63	4173850.44	33.17889	(04022018)	629800.63	4174200.44	27.54340	(07020624)
630150.63	4174200.44	35.79293	(06121421)	630500.63	4174200.44	38.22655	(06011022)
630850.63	4174200.44	73.84181	(06011109)	631200.63	4174200.44	64.40229	(06011021)
631550.63	4174200.44	76.76214	(06121420)	631900.63	4174200.44	71.19934	(07012317)
632250.63	4174200.44	77.15163	(07011417)	632600.63	4174200.44	59.96349	(05020818)
632950.63	4174200.44	47.28061	(05011520)	633300.63	4174200.44	37.31298	(05021018)
629800.63	4174550.44	30.52158	(05022818)	630150.63	4174550.44	43.03146	(04011017)
630500.63	4174550.44	54.60098	(06121421)	630850.63	4174550.44	70.11962	(04012317)
631200.63	4174550.44	114.36026	(06011109)	631550.63	4174550.44	104.29565	(08022002)
631900.63	4174550.44	105.86037	(07012317)	632250.63	4174550.44	93.17589	(06020105)
632600.63	4174550.44	82.48299	(05011520)	632950.63	4174550.44	58.20302	(05112916)
633300.63	4174550.44	54.23060	(06011617)	629800.63	4174900.44	42.39129	(06020109)
630150.63	4174900.44	44.92045	(06121217)	630500.63	4174900.44	66.18482	(06120217)
630850.63	4174900.44	86.48351	(04101819)	631200.63	4174900.44	143.64272	(04012317)
631550.63	4174900.44	176.57183	(06102817)	631900.63	4174900.44	166.94732	(04102617)
632250.63	4174900.44	138.06751	(08031018)	632600.63	4174900.44	108.98690	(05112916)
632950.63	4174900.44	77.64242	(07012703)	633300.63	4174900.44	52.81435	(04022223)
629800.63	4175250.44	37.11085	(08012221)	630150.63	4175250.44	49.67375	(04022207)
630500.63	4175250.44	86.17699	(04022207)	630850.63	4175250.44	159.18738	(06020109)
631200.63	4175250.44	220.37625	(06120217)	631550.63	4175250.44	319.67863	(06011109)
631900.63	4175250.44	288.21744	(05011817)	632250.63	4175250.44	223.29188	(05110817)
632600.63	4175250.44	150.08579	(05021801)	632950.63	4175250.44	96.06047	(07010217)
633300.63	4175250.44	56.43038	(07020218)	629800.63	4175600.44	37.97122	(05122618)
630150.63	4175600.44	49.68157	(05122618)	630500.63	4175600.44	69.77065	(05122618)
630850.63	4175600.44	127.10677	(04010517)	631200.63	4175600.44	295.74174	(05122618)
631550.63	4175600.44	1278.51528	(06072903)	631900.63	4175600.44	1808.07540	(08112619)
632250.63	4175600.44	284.60241	(06011619)	632600.63	4175600.44	139.62358	(06011619)
632950.63	4175600.44	84.67869	(06011619)	633300.63	4175600.44	59.64201	(06011619)
629800.63	4175950.44	38.43542	(06011024)	630150.63	4175950.44	50.02544	(06011024)

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*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	62.61716	(05040705)	630850.63	4175950.44	130.45191	(07120622)
631200.63	4175950.44	213.86694	(06122121)	631550.63	4175950.44	520.51759	(04101820)
631900.63	4175950.44	378.71067	(07091007)	632250.63	4175950.44	215.22223	(06052306)
632600.63	4175950.44	149.19882	(05011418)	632950.63	4175950.44	88.97879	(05122401)
633300.63	4175950.44	58.48368	(06012918)	629800.63	4176300.44	31.58720	(07120621)
630150.63	4176300.44	48.09787	(07120622)	630500.63	4176300.44	67.41233	(06122121)
630850.63	4176300.44	105.83890	(04021520)	631200.63	4176300.44	130.35309	(04121223)
631550.63	4176300.44	172.58590	(08091907)	631900.63	4176300.44	187.46504	(07091007)
632250.63	4176300.44	156.95050	(06062806)	632600.63	4176300.44	116.61568	(08021908)
632950.63	4176300.44	83.16230	(05011818)	633300.63	4176300.44	55.45586	(04011021)
629800.63	4176650.44	29.90321	(06122121)	630150.63	4176650.44	41.22629	(06122121)
630500.63	4176650.44	59.07918	(04021521)	630850.63	4176650.44	82.10027	(04120903)
631200.63	4176650.44	99.83265	(08122718)	631550.63	4176650.44	111.43027	(07021108)
631900.63	4176650.44	107.10117	(06020918)	632250.63	4176650.44	99.71580	(05022620)
632600.63	4176650.44	96.14433	(06062806)	632950.63	4176650.44	77.54950	(08021908)
633300.63	4176650.44	58.97355	(08021808)	629800.63	4177000.44	30.77957	(04021520)
630150.63	4177000.44	38.29148	(04021521)	630500.63	4177000.44	48.76261	(04120903)
630850.63	4177000.44	60.71593	(07122917)	631200.63	4177000.44	70.29228	(07012720)
631550.63	4177000.44	77.63974	(06021703)	631900.63	4177000.44	77.87663	(05122220)
632250.63	4177000.44	75.83488	(07091007)	632600.63	4177000.44	64.77134	(06010522)
632950.63	4177000.44	59.82550	(07022408)	633300.63	4177000.44	52.07894	(08021908)
629800.63	4177350.44	27.49568	(04021521)	630150.63	4177350.44	32.06528	(04120903)
630500.63	4177350.44	38.60665	(04120908)	630850.63	4177350.44	49.06832	(07021218)
631200.63	4177350.44	53.76187	(07012722)	631550.63	4177350.44	56.75725	(06020124)
631900.63	4177350.44	54.48841	(05122220)	632250.63	4177350.44	58.56759	(07091007)
632600.63	4177350.44	49.34591	(05121501)	632950.63	4177350.44	42.00522	(07121908)
633300.63	4177350.44	39.53735	(07022408)	631670.70	4175493.59	407.83350	(07092306)
631669.80	4175641.41	1229.10027	(04110905)	631665.32	4175796.39	219.19598	(04101820)
631417.17	4175826.85	300.02779	(04082206)	631417.17	4175673.66	450.15750	(06072906)
631422.55	4175484.63	524.68579	(06020109)	631268.42	4175983.74	215.09446	(04021520)
631275.69	4175523.99	345.66351	(06051906)	631345.65	4175419.50	451.89321	(06020109)
631384.72	4175441.30	489.73132	(06020109)	631491.93	4175442.21	945.92972	(07110617)
631491.93	4175414.95	681.13687	(07110617)	631385.63	4175413.14	436.23597	(06020109)
631358.37	4175395.87	403.11470	(06020109)	631409.25	4175336.81	274.14622	(07020624)
631567.35	4175235.96	315.27954	(06011109)	631756.33	4175028.80	195.81293	(05010417)
631807.22	4175003.36	192.60963	(05021805)	631867.18	4174987.91	191.46505	(04102617)
631849.92	4175988.28	334.62872	(07091007)	631268.74	4175963.75	227.61442	(04021520)
631269.05	4175943.76	227.37388	(04021520)	631269.37	4175923.77	231.53319	(06041301)
631269.68	4175903.78	236.50958	(06122121)	631270.00	4175883.79	239.81951	(05030120)
631270.32	4175863.81	244.65292	(05110619)	631270.63	4175843.82	264.25497	(05110619)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	278.54015	(07120622)	631271.26	4175803.84	280.47470	(05030321)
631271.58	4175783.85	273.28923	(04041820)	631271.90	4175763.86	295.90243	(05030324)
631272.21	4175743.87	330.06096	(05030324)	631272.53	4175723.88	328.51541	(05030324)
631272.85	4175703.89	339.78787	(06011024)	631273.16	4175683.90	332.29615	(07042002)
631273.48	4175663.91	339.00414	(07042002)	631273.79	4175643.92	329.88619	(04101604)
631274.11	4175623.94	370.47298	(05122618)	631274.43	4175603.95	360.11457	(05122618)
631274.74	4175583.96	366.99972	(04121304)	631275.06	4175563.97	366.54986	(04121304)
631275.37	4175543.98	347.41113	(06032819)	631285.68	4175509.06	337.27146	(04110818)
631295.68	4175494.14	343.79312	(06020109)	631305.67	4175479.21	391.12658	(06020109)
631315.67	4175464.28	429.23160	(06020109)	631325.66	4175449.35	453.84383	(06020109)
631335.66	4175434.43	461.86315	(06020109)	631358.67	4175426.77	464.58078	(06020109)
631371.70	4175434.03	477.20137	(06020109)	631402.59	4175441.45	493.70908	(06020109)
631420.46	4175441.60	494.03971	(06020109)	631438.33	4175441.76	490.32491	(06020109)
631456.19	4175441.91	887.15829	(04041822)	631474.06	4175442.06	672.22120	(06020109)
631491.93	4175428.58	816.34027	(07110617)	631474.21	4175414.65	885.13832	(06051905)
631456.50	4175414.35	408.30623	(06020109)	631438.78	4175414.05	402.59842	(06020109)
631421.06	4175413.74	417.50816	(06020109)	631403.35	4175413.44	428.69002	(06020109)
631372.00	4175404.51	419.56464	(06020109)	631371.09	4175381.11	354.22968	(06020109)
631383.81	4175366.34	296.40060	(06020109)	631396.53	4175351.58	288.03056	(07020624)
631425.06	4175326.73	267.07941	(05122619)	631440.87	4175316.64	267.00460	(06120517)
631456.68	4175306.56	274.68174	(06120517)	631472.49	4175296.47	290.99863	(04012317)
631488.30	4175286.39	314.15049	(04012317)	631504.11	4175276.30	318.49652	(04012317)
631519.92	4175266.22	303.01108	(04012317)	631535.73	4175256.13	303.82867	(06011109)
631551.54	4175246.05	318.11442	(06011109)	631579.95	4175222.15	293.34424	(06011109)
631592.55	4175208.34	260.28156	(06011109)	631605.15	4175194.53	264.08999	(06102817)
631617.74	4175180.72	267.08011	(06102817)	631630.34	4175166.91	264.24472	(06102817)
631642.94	4175153.10	251.91669	(06102817)	631655.54	4175139.29	232.01119	(06102817)
631668.14	4175125.47	206.91110	(06102817)	631680.74	4175111.66	206.53855	(05021806)
631693.34	4175097.85	203.82834	(05021806)	631705.94	4175084.04	212.63417	(05122422)
631718.53	4175070.23	221.00340	(05122422)	631731.13	4175056.42	220.12361	(05122422)
631743.73	4175042.61	210.98206	(05122422)	631773.29	4175020.32	184.23657	(05010417)
631790.26	4175011.84	191.20525	(05021805)	631822.21	4174999.50	191.03818	(04122823)
631837.20	4174995.64	186.97243	(04122823)	631852.19	4174991.77	190.37446	(04102617)
631866.84	4175007.53	197.20278	(04102617)	631866.50	4175027.14	203.08383	(04102617)
631866.16	4175046.76	209.11414	(04102617)	631865.83	4175066.37	215.28435	(04102617)
631865.49	4175085.99	221.59897	(04102617)	631865.15	4175105.60	228.04330	(04102617)
631864.81	4175125.22	234.60917	(04102617)	631864.47	4175144.83	241.24886	(04102617)
631864.13	4175164.45	247.96202	(04102617)	631863.80	4175184.06	254.69405	(04102617)
631863.46	4175203.68	261.40811	(04102617)	631863.12	4175223.29	268.01048	(04102617)
631862.78	4175242.91	277.17797	(04102617)	631862.44	4175262.52	287.37984	(04102617)

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22

*** AERMET - VERSION 18081 *** *** *** 12:14:02

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK17 ***

INCLUDING SOURCE(S): STCK17 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	350.41692	(04102617)	631861.77	4175301.75	444.03801	(05011817)
631861.43	4175321.37	483.81565	(08102618)	631861.09	4175340.98	310.35690	(04102623)
631860.75	4175360.60	375.23532	(04102617)	631860.41	4175380.21	379.46719	(04102617)
631860.07	4175399.83	381.14451	(04102617)	631859.73	4175419.44	378.72612	(04102617)
631859.40	4175439.06	399.42076	(05051824)	631859.06	4175458.67	498.75731	(05051824)
631858.72	4175478.29	617.71854	(07102905)	631858.38	4175497.90	830.74333	(07102905)
631858.04	4175517.52	1011.55544	(06052002)	631857.70	4175537.13	1473.75187	(06052002)
631857.37	4175556.75	1735.36648	(06052002)	631857.03	4175576.36	1913.85028	(04101518)
631856.69	4175595.98	2800.14303	(04030118)	631856.35	4175615.59	1894.42177	(04030118)
631856.01	4175635.21	1943.34839	(06111908)	631855.67	4175654.82	1698.54371	(06102818)
631855.33	4175674.44	1170.98087	(06102818)	631855.00	4175694.05	866.34259	(07092306)
631854.66	4175713.67	632.05794	(07092306)	631854.32	4175733.28	509.14239	(06110304)
631853.98	4175752.90	403.29974	(06110304)	631853.64	4175772.51	366.57763	(08112318)
631853.30	4175792.13	351.45088	(04111519)	631852.97	4175811.74	352.58752	(04111519)
631852.63	4175831.36	259.67277	(08011006)	631852.29	4175850.97	276.36391	(08011006)
631851.95	4175870.59	287.09819	(08011006)	631851.61	4175890.20	381.43221	(06081406)
631851.27	4175909.82	548.10484	(07091007)	631850.94	4175929.43	398.71379	(07091007)
631850.60	4175949.05	375.49252	(07091007)	631850.26	4175968.66	354.57299	(07091007)
631830.54	4175988.13	331.97760	(07020803)	631811.15	4175987.98	348.43885	(07020803)
631791.77	4175987.83	350.21718	(06010202)	631772.39	4175987.67	348.08145	(05122403)
631753.00	4175987.52	342.85455	(08122907)	631733.62	4175987.37	352.25949	(07030418)
631714.24	4175987.22	365.86869	(05112506)	631694.85	4175987.07	395.08556	(05112506)
631675.47	4175986.92	403.64727	(05112506)	631656.09	4175986.77	430.88693	(08091907)
631636.70	4175986.62	446.69417	(08091907)	631617.32	4175986.46	438.97658	(07090905)
631597.94	4175986.31	442.86518	(07090905)	631578.55	4175986.16	291.42668	(05112504)
631559.17	4175986.01	234.17259	(05122507)	631539.79	4175985.86	231.02853	(07012721)
631520.40	4175985.71	230.62338	(04022205)	631501.02	4175985.56	229.95200	(04022205)
631481.64	4175985.40	222.32614	(04022205)	631462.25	4175985.25	213.51372	(04082205)
631442.87	4175985.10	216.61279	(05122508)	631423.49	4175984.95	214.91485	(05122508)
631404.10	4175984.80	222.07623	(05051803)	631384.72	4175984.65	223.44742	(05051803)
631365.34	4175984.50	217.76644	(07111102)	631345.95	4175984.35	214.43670	(07080202)
631326.57	4175984.19	209.17260	(07080202)	631307.19	4175984.04	206.36455	(04081205)
631287.80	4175983.89	205.24595	(04021520)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	204.52958	(08031018)	632304.44	4174354.52	83.44176	(06020105)
632192.15	4174956.32	186.11110	(05011520)	632420.62	4175510.15	198.87329	(06011619)
632418.97	4175552.92	224.24159	(07012318)	631187.00	4175727.00	248.26512	(05030321)
631166.00	4175729.00	234.99494	(05030321)	631121.00	4175719.00	228.00992	(04041820)
631035.00	4174830.00	112.97854	(06121421)	631106.00	4174825.00	116.61299	(04012317)
631937.00	4174528.00	113.77453	(07012317)	631322.00	4174522.00	101.18371	(06011021)
629800.63	4173850.44	26.64136	(06121421)	630150.63	4173850.44	24.42284	(06121421)
630500.63	4173850.44	37.61760	(06011109)	630850.63	4173850.44	55.40318	(06011109)
631200.63	4173850.44	47.95609	(06121017)	631550.63	4173850.44	58.01750	(06121420)
631900.63	4173850.44	52.68159	(07012317)	632250.63	4173850.44	58.52369	(07011417)
632600.63	4173850.44	44.71974	(04122822)	632950.63	4173850.44	41.82480	(05011521)
633300.63	4173850.44	37.10687	(04022018)	629800.63	4174200.44	30.87434	(04011017)
630150.63	4174200.44	34.29799	(06121421)	630500.63	4174200.44	35.50047	(06121421)
630850.63	4174200.44	68.65873	(06011109)	631200.63	4174200.44	72.99217	(06011021)
631550.63	4174200.44	79.93259	(06121420)	631900.63	4174200.44	79.65522	(07012317)
632250.63	4174200.44	80.40159	(07011417)	632600.63	4174200.44	65.13055	(05020818)
632950.63	4174200.44	55.55125	(04022018)	633300.63	4174200.44	35.53733	(06011617)
629800.63	4174550.44	32.00077	(06121217)	630150.63	4174550.44	43.43492	(06120217)
630500.63	4174550.44	47.68315	(07020624)	630850.63	4174550.44	67.69385	(04012317)
631200.63	4174550.44	125.46026	(06011109)	631550.63	4174550.44	110.17681	(08022002)
631900.63	4174550.44	117.49475	(07012317)	632250.63	4174550.44	101.92290	(04122822)
632600.63	4174550.44	88.85371	(04022018)	632950.63	4174550.44	65.83441	(06011617)
633300.63	4174550.44	47.69515	(07012703)	629800.63	4174900.44	38.26923	(06020109)
630150.63	4174900.44	48.98303	(06020109)	630500.63	4174900.44	63.99517	(06121217)
630850.63	4174900.44	104.89840	(04011017)	631200.63	4174900.44	143.30030	(04012317)
631550.63	4174900.44	190.18037	(06102817)	631900.63	4174900.44	189.21932	(04102617)
632250.63	4174900.44	171.22760	(05011520)	632600.63	4174900.44	138.69468	(06011617)
632950.63	4174900.44	85.14116	(06120617)	633300.63	4174900.44	53.17294	(05021801)
629800.63	4175250.44	34.27751	(04121224)	630150.63	4175250.44	48.34285	(08012221)
630500.63	4175250.44	73.71553	(08012221)	630850.63	4175250.44	135.69919	(04022207)
631200.63	4175250.44	311.75256	(06020109)	631550.63	4175250.44	328.15726	(04012317)
631900.63	4175250.44	373.82105	(08071406)	632250.63	4175250.44	257.61571	(04022219)
632600.63	4175250.44	170.74115	(07010217)	632950.63	4175250.44	83.78370	(08011001)
633300.63	4175250.44	56.30783	(08011001)	629800.63	4175600.44	39.44856	(05122618)
630150.63	4175600.44	50.50871	(05122618)	630500.63	4175600.44	67.98269	(05122618)
630850.63	4175600.44	126.23315	(07020701)	631200.63	4175600.44	299.82514	(06011024)
631550.63	4175600.44	588.78444	(08110218)	631900.63	4175600.44	743.83471	(06102818)
632250.63	4175600.44	302.18501	(05012018)	632600.63	4175600.44	154.37661	(07012418)
632950.63	4175600.44	88.77503	(07012318)	633300.63	4175600.44	59.38598	(07012318)
629800.63	4175950.44	36.84100	(06011024)	630150.63	4175950.44	39.56720	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	72.78113	(07120621)	630850.63	4175950.44	122.43804	(07120404)
631200.63	4175950.44	192.42909	(07102703)	631550.63	4175950.44	501.25366	(06102618)
631900.63	4175950.44	354.02932	(07091007)	632250.63	4175950.44	184.73640	(06052306)
632600.63	4175950.44	126.60459	(04121022)	632950.63	4175950.44	83.55633	(06121503)
633300.63	4175950.44	57.30668	(05122401)	629800.63	4176300.44	35.60548	(07120622)
630150.63	4176300.44	43.68873	(07120404)	630500.63	4176300.44	71.30434	(06122121)
630850.63	4176300.44	114.13945	(04021521)	631200.63	4176300.44	144.31315	(04120908)
631550.63	4176300.44	148.77062	(06033022)	631900.63	4176300.44	161.02095	(07091007)
632250.63	4176300.44	121.98994	(06010522)	632600.63	4176300.44	110.06993	(08021908)
632950.63	4176300.44	84.07381	(08021808)	633300.63	4176300.44	52.43356	(05020806)
629800.63	4176650.44	32.79302	(06122121)	630150.63	4176650.44	42.59767	(04021520)
630500.63	4176650.44	60.15894	(04021521)	630850.63	4176650.44	79.12188	(04121223)
631200.63	4176650.44	101.11220	(07021218)	631550.63	4176650.44	110.83037	(07021108)
631900.63	4176650.44	102.82366	(05122220)	632250.63	4176650.44	93.55114	(05021722)
632600.63	4176650.44	81.83114	(06062806)	632950.63	4176650.44	70.15444	(08021908)
633300.63	4176650.44	56.49926	(08021808)	629800.63	4177000.44	27.87036	(04021520)
630150.63	4177000.44	35.53044	(04021521)	630500.63	4177000.44	45.87517	(04120903)
630850.63	4177000.44	63.78964	(07122917)	631200.63	4177000.44	65.90189	(07012722)
631550.63	4177000.44	76.03571	(06020124)	631900.63	4177000.44	73.34916	(05122220)
632250.63	4177000.44	77.94537	(07091007)	632600.63	4177000.44	60.63346	(06120218)
632950.63	4177000.44	55.84822	(07022408)	633300.63	4177000.44	47.48308	(08021908)
629800.63	4177350.44	24.97182	(04021521)	630150.63	4177350.44	31.27402	(04120903)
630500.63	4177350.44	36.97475	(07012719)	630850.63	4177350.44	46.31046	(07021218)
631200.63	4177350.44	50.09373	(07012722)	631550.63	4177350.44	54.12289	(06020124)
631900.63	4177350.44	50.77247	(05122220)	632250.63	4177350.44	56.10364	(07091007)
632600.63	4177350.44	47.14512	(05022620)	632950.63	4177350.44	40.69865	(06010521)
633300.63	4177350.44	40.32551	(07022408)	631670.70	4175493.59	1091.76523	(04030118)
631669.80	4175641.41	564.04266	(05051824)	631665.32	4175796.39	218.04250	(07102801)
631417.17	4175826.85	361.51411	(04110906)	631417.17	4175673.66	535.40343	(05061703)
631422.55	4175484.63	508.90549	(04101624)	631268.42	4175983.74	202.14753	(04021018)
631275.69	4175523.99	364.35311	(05122618)	631345.65	4175419.50	343.37620	(04110818)
631384.72	4175441.30	383.58932	(06051906)	631491.93	4175442.21	725.59254	(04041821)
631491.93	4175414.95	840.64508	(06020109)	631385.63	4175413.14	409.72186	(06020109)
631358.37	4175395.87	414.17554	(06020109)	631409.25	4175336.81	476.06765	(06020109)
631567.35	4175235.96	318.57929	(04012317)	631756.33	4175028.80	254.80981	(05122422)
631807.22	4175003.36	238.77852	(05021805)	631867.18	4174987.91	225.02924	(04102617)
631849.92	4175988.28	266.09558	(07091007)	631268.74	4175963.75	209.63968	(04021521)
631269.05	4175943.76	217.13127	(04021521)	631269.37	4175923.77	214.37536	(04021521)
631269.68	4175903.78	215.99311	(07102703)	631270.00	4175883.79	228.46943	(04021520)
631270.32	4175863.81	243.69547	(04021520)	631270.63	4175843.82	244.12250	(04021520)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP:

STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	245.68526	(06041301)	631271.26	4175803.84	252.90809	(06122121)
631271.58	4175783.85	254.31262	(05030120)	631271.90	4175763.86	256.55112	(05030322)
631272.21	4175743.87	275.93748	(05110619)	631272.53	4175723.88	288.91159	(07120622)
631272.85	4175703.89	292.28164	(05030321)	631273.16	4175683.90	282.87688	(04041820)
631273.48	4175663.91	299.05611	(04041820)	631273.79	4175643.92	329.00232	(05030324)
631274.11	4175623.94	328.13637	(05030324)	631274.43	4175603.95	344.22228	(06011024)
631274.74	4175583.96	335.43158	(06011024)	631275.06	4175563.97	338.30879	(07042002)
631275.37	4175543.98	330.24905	(04101604)	631285.68	4175509.06	369.95630	(05122618)
631295.68	4175494.14	356.51500	(04121304)	631305.67	4175479.21	388.23029	(04121304)
631315.67	4175464.28	385.31994	(04121304)	631325.66	4175449.35	361.97237	(06072904)
631335.66	4175434.43	348.66986	(06051906)	631358.67	4175426.77	359.47995	(04110818)
631371.70	4175434.03	372.98992	(04110818)	631402.59	4175441.45	398.26332	(04110818)
631420.46	4175441.60	412.64284	(04110818)	631438.33	4175441.76	426.14270	(04110818)
631456.19	4175441.91	448.64004	(06020109)	631474.06	4175442.06	553.91045	(06020109)
631491.93	4175428.58	790.73472	(06020109)	631474.21	4175414.65	577.82693	(06020109)
631456.50	4175414.35	535.69080	(06020109)	631438.78	4175414.05	490.70517	(06020109)
631421.06	4175413.74	463.25551	(06020109)	631403.35	4175413.44	436.18086	(06020109)
631372.00	4175404.51	412.87349	(06020109)	631371.09	4175381.11	459.15796	(06020109)
631383.81	4175366.34	487.17764	(06020109)	631396.53	4175351.58	493.50320	(06020109)
631425.06	4175326.73	448.32397	(06020109)	631440.87	4175316.64	405.72630	(06020109)
631456.68	4175306.56	351.58393	(06020109)	631472.49	4175296.47	306.71040	(05072102)
631488.30	4175286.39	301.56900	(05072102)	631504.11	4175276.30	295.68564	(04041824)
631519.92	4175266.22	302.36492	(04041824)	631535.73	4175256.13	313.10546	(04012317)
631551.54	4175246.05	326.00252	(04012317)	631579.95	4175222.15	311.80467	(06011109)
631592.55	4175208.34	322.88360	(06011109)	631605.15	4175194.53	314.72262	(06011109)
631617.74	4175180.72	289.50099	(06011109)	631630.34	4175166.91	277.09157	(06102817)
631642.94	4175153.10	286.98742	(06102817)	631655.54	4175139.29	283.78082	(06102817)
631668.14	4175125.47	268.94731	(06102817)	631680.74	4175111.66	245.18805	(06102817)
631693.34	4175097.85	238.27086	(08081805)	631705.94	4175084.04	243.84012	(05122422)
631718.53	4175070.23	268.74473	(05122422)	631731.13	4175056.42	278.31313	(05122422)
631743.73	4175042.61	272.82309	(05122422)	631773.29	4175020.32	236.54232	(05010417)
631790.26	4175011.84	239.07174	(05021805)	631822.21	4174999.50	235.34192	(04122823)
631837.20	4174995.64	225.68215	(04122823)	631852.19	4174991.77	227.47952	(04102617)
631866.84	4175007.53	231.79460	(04102617)	631866.50	4175027.14	238.65333	(04102617)
631866.16	4175046.76	245.59037	(04102617)	631865.83	4175066.37	252.56292	(04102617)
631865.49	4175085.99	259.54930	(04102617)	631865.15	4175105.60	266.48425	(04102617)
631864.81	4175125.22	273.29989	(04102617)	631864.47	4175144.83	279.87330	(04102617)
631864.13	4175164.45	286.10455	(04102617)	631863.80	4175184.06	308.47240	(05011817)
631863.46	4175203.68	333.43801	(05011817)	631863.12	4175223.29	359.34131	(05011817)
631862.78	4175242.91	385.75647	(05011817)	631862.44	4175262.52	411.97167	(05011817)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK18 ***

INCLUDING SOURCE(S): STCK18 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	449.28553	(05011817)	631861.77	4175301.75	818.41968	(08071406)
631861.43	4175321.37	837.86126	(08071406)	631861.09	4175340.98	931.78907	(06052001)
631860.75	4175360.60	1148.91074	(05051824)	631860.41	4175380.21	1096.17635	(05051824)
631860.07	4175399.83	1465.46651	(07102905)	631859.73	4175419.44	1459.84840	(07102905)
631859.40	4175439.06	1797.05748	(06052002)	631859.06	4175458.67	2955.08296	(06052002)
631858.72	4175478.29	2304.70361	(05071701)	631858.38	4175497.90	2373.30753	(05020803)
631858.04	4175517.52	2645.48416	(07102907)	631857.70	4175537.13	2094.10944	(08010919)
631857.37	4175556.75	1056.05926	(08010919)	631857.03	4175576.36	387.41221	(06102818)
631856.69	4175595.98	364.70050	(06021018)	631856.35	4175615.59	439.79678	(06021018)
631856.01	4175635.21	499.82508	(06021018)	631855.67	4175654.82	518.09139	(06021018)
631855.33	4175674.44	513.90216	(08112520)	631855.00	4175694.05	470.59420	(05072006)
631854.66	4175713.67	465.82844	(05072006)	631854.32	4175733.28	456.23662	(05072006)
631853.98	4175752.90	406.00425	(07080305)	631853.64	4175772.51	362.43763	(06013006)
631853.30	4175792.13	345.81070	(08112318)	631852.97	4175811.74	336.32699	(08112318)
631852.63	4175831.36	312.92187	(04111519)	631852.29	4175850.97	304.39644	(04111519)
631851.95	4175870.59	296.09539	(04111519)	631851.61	4175890.20	427.79445	(07091007)
631851.27	4175909.82	407.60804	(07091007)	631850.94	4175929.43	320.00742	(05072006)
631850.60	4175949.05	299.00770	(07091007)	631850.26	4175968.66	282.07711	(07091007)
631830.54	4175988.13	263.15233	(07020803)	631811.15	4175987.98	265.53998	(08011008)
631791.77	4175987.83	266.44480	(07020802)	631772.39	4175987.67	274.12504	(07030418)
631753.00	4175987.52	308.97785	(07030418)	631733.62	4175987.37	332.19600	(07030418)
631714.24	4175987.22	327.37452	(05112506)	631694.85	4175987.07	368.14014	(05112506)
631675.47	4175986.92	395.36602	(05112506)	631656.09	4175986.77	408.44826	(05112506)
631636.70	4175986.62	435.64145	(08091907)	631617.32	4175986.46	394.81518	(08091907)
631597.94	4175986.31	326.88683	(07090905)	631578.55	4175986.16	276.23947	(08091907)
631559.17	4175986.01	255.98242	(08091907)	631539.79	4175985.86	228.40762	(08091907)
631520.40	4175985.71	224.19757	(07021218)	631501.02	4175985.56	215.52783	(08122718)
631481.64	4175985.40	216.98962	(07122917)	631462.25	4175985.25	215.69598	(04081204)
631442.87	4175985.10	220.04827	(04081204)	631423.49	4175984.95	220.57606	(04120908)
631404.10	4175984.80	216.66461	(04120908)	631384.72	4175984.65	206.13039	(04121223)
631365.34	4175984.50	206.61779	(04120903)	631345.95	4175984.35	209.03251	(04120903)
631326.57	4175984.19	202.06913	(04120903)	631307.19	4175984.04	202.84823	(04021018)
631287.80	4175983.89	206.34551	(04021018)				

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	273.16598	(08031018)	632304.44	4174354.52	98.58106	(04122822)
632192.15	4174956.32	265.47112	(05011317)	632420.62	4175510.15	188.10942	(06121320)
632418.97	4175552.92	185.58171	(06012918)	631187.00	4175727.00	210.14069	(05030120)
631166.00	4175729.00	204.62341	(05030322)	631121.00	4175719.00	186.12128	(05110619)
631035.00	4174830.00	101.58570	(04101819)	631106.00	4174825.00	122.61552	(06121421)
631937.00	4174528.00	131.01801	(04102617)	631322.00	4174522.00	119.22831	(06011109)
629800.63	4173850.44	24.87738	(06121421)	630150.63	4173850.44	30.19177	(06121421)
630500.63	4173850.44	32.92724	(07121217)	630850.63	4173850.44	60.70936	(06011109)
631200.63	4173850.44	51.90100	(05010318)	631550.63	4173850.44	63.16121	(06121420)
631900.63	4173850.44	60.03124	(07012317)	632250.63	4173850.44	70.28357	(07011417)
632600.63	4173850.44	53.88209	(04122822)	632950.63	4173850.44	44.36517	(05011520)
633300.63	4173850.44	37.80539	(04022018)	629800.63	4174200.44	32.28278	(04011017)
630150.63	4174200.44	33.06680	(07020624)	630500.63	4174200.44	45.28180	(06121421)
630850.63	4174200.44	61.44714	(06011109)	631200.63	4174200.44	80.52282	(05012117)
631550.63	4174200.44	84.43370	(06121420)	631900.63	4174200.44	93.25912	(07012317)
632250.63	4174200.44	86.58764	(04022218)	632600.63	4174200.44	71.82008	(05011521)
632950.63	4174200.44	59.51143	(04022018)	633300.63	4174200.44	47.10623	(06011617)
629800.63	4174550.44	36.85475	(06020109)	630150.63	4174550.44	40.95598	(05022818)
630500.63	4174550.44	58.81748	(04011017)	630850.63	4174550.44	78.23945	(06121421)
631200.63	4174550.44	126.21222	(06011109)	631550.63	4174550.44	116.62783	(06102817)
631900.63	4174550.44	139.85163	(07012317)	632250.63	4174550.44	145.72506	(04122822)
632600.63	4174550.44	110.30464	(04022018)	632950.63	4174550.44	83.96179	(06011617)
633300.63	4174550.44	51.18634	(06120617)	629800.63	4174900.44	39.88089	(04022207)
630150.63	4174900.44	49.56084	(04022207)	630500.63	4174900.44	65.04942	(05122617)
630850.63	4174900.44	96.04380	(06120217)	631200.63	4174900.44	140.45711	(06121421)
631550.63	4174900.44	194.65316	(06102817)	631900.63	4174900.44	242.21624	(05112422)
632250.63	4174900.44	226.45825	(05011317)	632600.63	4174900.44	126.59421	(05020802)
632950.63	4174900.44	78.75755	(05021801)	633300.63	4174900.44	60.75183	(07010217)
629800.63	4175250.44	40.74343	(04121304)	630150.63	4175250.44	51.04191	(04121304)
630500.63	4175250.44	69.99478	(04121224)	630850.63	4175250.44	119.79232	(08012221)
631200.63	4175250.44	285.83031	(06020109)	631550.63	4175250.44	425.55281	(06020109)
631900.63	4175250.44	699.41995	(08031018)	632250.63	4175250.44	255.83390	(07010217)
632600.63	4175250.44	141.42905	(06011618)	632950.63	4175250.44	85.74897	(05122223)
633300.63	4175250.44	59.68999	(05121217)	629800.63	4175600.44	33.19475	(05122618)
630150.63	4175600.44	44.27175	(07020701)	630500.63	4175600.44	73.31993	(06011024)
630850.63	4175600.44	136.14656	(06011024)	631200.63	4175600.44	233.22833	(04041820)
631550.63	4175600.44	518.10333	(06051904)	631900.63	4175600.44	455.19934	(05082502)
632250.63	4175600.44	224.27560	(06111908)	632600.63	4175600.44	138.12074	(07120624)
632950.63	4175600.44	85.63660	(06121320)	633300.63	4175600.44	59.65820	(07012418)
629800.63	4175950.44	29.73172	(05030324)	630150.63	4175950.44	44.56792	(07120621)

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22

*** AERMET - VERSION 18081 *** *** *** 12:14:02

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	76.61714	(07120622)	630850.63	4175950.44	129.30807	(06122121)
631200.63	4175950.44	176.04796	(04021018)	631550.63	4175950.44	458.79352	(07012720)
631900.63	4175950.44	308.24437	(07091007)	632250.63	4175950.44	187.85099	(06062806)
632600.63	4175950.44	119.84606	(08021808)	632950.63	4175950.44	82.10789	(04011021)
633300.63	4175950.44	55.63528	(06121503)	629800.63	4176300.44	34.17731	(07120622)
630150.63	4176300.44	44.48168	(06122121)	630500.63	4176300.44	69.02696	(04021520)
630850.63	4176300.44	99.24022	(04010518)	631200.63	4176300.44	142.88615	(07122917)
631550.63	4176300.44	156.97432	(06013008)	631900.63	4176300.44	135.15334	(08122906)
632250.63	4176300.44	117.49361	(06010520)	632600.63	4176300.44	96.47865	(08122905)
632950.63	4176300.44	80.61355	(08021808)	633300.63	4176300.44	53.63007	(05011818)
629800.63	4176650.44	31.34780	(06122121)	630150.63	4176650.44	38.85512	(07120403)
630500.63	4176650.44	56.61238	(04010518)	630850.63	4176650.44	81.68573	(04120908)
631200.63	4176650.44	104.69275	(04022021)	631550.63	4176650.44	107.84136	(07021108)
631900.63	4176650.44	100.67221	(05122220)	632250.63	4176650.44	97.53143	(07091007)
632600.63	4176650.44	75.41934	(06121107)	632950.63	4176650.44	59.23933	(05010604)
633300.63	4176650.44	46.13078	(07021220)	629800.63	4177000.44	27.58537	(04021521)
630150.63	4177000.44	34.88661	(04010518)	630500.63	4177000.44	44.27657	(04120908)
630850.63	4177000.44	60.14376	(08122718)	631200.63	4177000.44	70.96159	(07012722)
631550.63	4177000.44	75.71241	(06020124)	631900.63	4177000.44	69.51345	(05122220)
632250.63	4177000.44	78.24989	(07091007)	632600.63	4177000.44	57.99015	(06013003)
632950.63	4177000.44	48.07513	(07121908)	633300.63	4177000.44	39.02157	(05010604)
629800.63	4177350.44	24.90452	(04010518)	630150.63	4177350.44	28.05534	(04120903)
630500.63	4177350.44	37.68117	(07122917)	630850.63	4177350.44	45.58468	(04022021)
631200.63	4177350.44	50.84429	(06013008)	631550.63	4177350.44	51.61641	(06020124)
631900.63	4177350.44	47.44003	(05122220)	632250.63	4177350.44	53.02364	(07091007)
632600.63	4177350.44	45.10081	(06013004)	632950.63	4177350.44	38.96314	(07010323)
633300.63	4177350.44	38.01276	(07022408)	631670.70	4175493.59	984.20914	(05011317)
631669.80	4175641.41	599.49752	(08090903)	631665.32	4175796.39	279.63612	(08102618)
631417.17	4175826.85	499.08545	(04041819)	631417.17	4175673.66	285.23089	(05110620)
631422.55	4175484.63	371.80406	(05030324)	631268.42	4175983.74	190.49905	(04120903)
631275.69	4175523.99	282.68129	(05030324)	631345.65	4175419.50	342.29036	(05122618)
631384.72	4175441.30	363.78621	(04101604)	631491.93	4175442.21	436.22729	(06101118)
631491.93	4175414.95	460.22177	(05122618)	631385.63	4175413.14	369.95372	(05122618)
631358.37	4175395.87	334.81948	(04101624)	631409.25	4175336.81	363.82248	(06020109)
631567.35	4175235.96	358.34297	(05072102)	631756.33	4175028.80	347.01575	(05122422)
631807.22	4175003.36	305.32474	(04122823)	631867.18	4174987.91	282.48838	(04102617)
631849.92	4175988.28	206.08520	(07091007)	631268.74	4175963.75	195.15657	(04120903)
631269.05	4175943.76	195.72639	(04010518)	631269.37	4175923.77	200.31240	(04010518)
631269.68	4175903.78	196.76216	(04010518)	631270.00	4175883.79	198.93178	(05051803)
631270.32	4175863.81	204.71540	(04021521)	631270.63	4175843.82	213.25011	(04021521)

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22

*** AERMET - VERSION 18081 *** *** *** 12:14:02

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	210.71803	(04021521)	631271.26	4175803.84	214.44057	(07102703)
631271.58	4175783.85	218.53098	(05110620)	631271.90	4175763.86	228.86793	(04021520)
631272.21	4175743.87	229.88584	(04021520)	631272.53	4175723.88	232.01382	(06041301)
631272.85	4175703.89	238.28418	(06122121)	631273.16	4175683.90	239.93477	(05030120)
631273.48	4175663.91	242.30026	(05030322)	631273.79	4175643.92	252.90306	(05110619)
631274.11	4175623.94	259.55839	(07071004)	631274.43	4175603.95	263.31068	(05030321)
631274.74	4175583.96	253.12531	(04041820)	631275.06	4175563.97	269.19579	(04041820)
631275.37	4175543.98	282.78370	(05030324)	631285.68	4175509.06	288.93524	(06011024)
631295.68	4175494.14	302.21934	(06011024)	631305.67	4175479.21	301.06235	(07042002)
631315.67	4175464.28	315.45364	(07042002)	631325.66	4175449.35	323.04199	(04101604)
631335.66	4175434.43	320.50354	(04101604)	631358.67	4175426.77	342.45577	(05122618)
631371.70	4175434.03	348.49344	(04101604)	631402.59	4175441.45	376.65742	(04101604)
631420.46	4175441.60	389.00344	(04101604)	631438.33	4175441.76	524.85654	(05071702)
631456.19	4175441.91	562.97491	(05071702)	631474.06	4175442.06	426.29897	(06101118)
631491.93	4175428.58	473.10538	(06101118)	631474.21	4175414.65	438.49656	(05122618)
631456.50	4175414.35	540.74661	(05030320)	631438.78	4175414.05	520.53367	(05030320)
631421.06	4175413.74	394.91518	(05122618)	631403.35	4175413.44	382.29140	(05122618)
631372.00	4175404.51	353.40636	(05122618)	631371.09	4175381.11	355.47379	(04121304)
631383.81	4175366.34	362.25753	(06072904)	631396.53	4175351.58	340.16340	(06072904)
631425.06	4175326.73	423.77646	(06020109)	631440.87	4175316.64	480.25547	(06020109)
631456.68	4175306.56	527.72364	(06020109)	631472.49	4175296.47	560.22048	(06020109)
631488.30	4175286.39	572.12044	(06020109)	631504.11	4175276.30	559.38528	(06020109)
631519.92	4175266.22	523.70866	(06020109)	631535.73	4175256.13	462.30719	(06020109)
631551.54	4175246.05	398.47186	(06020109)	631579.95	4175222.15	351.58503	(04041824)
631592.55	4175208.34	353.33280	(04012317)	631605.15	4175194.53	354.33808	(04012317)
631617.74	4175180.72	343.73004	(06011109)	631630.34	4175166.91	358.02314	(06011109)
631642.94	4175153.10	345.93024	(06011109)	631655.54	4175139.29	323.99364	(05030118)
631668.14	4175125.47	327.64447	(06102817)	631680.74	4175111.66	324.97114	(06102817)
631693.34	4175097.85	306.22157	(06102817)	631705.94	4175084.04	286.06867	(08081805)
631718.53	4175070.23	314.64540	(05122422)	631731.13	4175056.42	353.36598	(05122422)
631743.73	4175042.61	363.49820	(05122422)	631773.29	4175020.32	318.34023	(05010417)
631790.26	4175011.84	309.25883	(05021805)	631822.21	4174999.50	295.65956	(04122823)
631837.20	4174995.64	297.60819	(04102617)	631852.19	4174991.77	294.25223	(04102617)
631866.84	4175007.53	290.27471	(04102617)	631866.50	4175027.14	302.12704	(05112422)
631866.16	4175046.76	318.11635	(05112422)	631865.83	4175066.37	346.73401	(05011817)
631865.49	4175085.99	381.24450	(05011817)	631865.15	4175105.60	417.40390	(05011817)
631864.81	4175125.22	454.39621	(05011817)	631864.47	4175144.83	490.98381	(05011817)
631864.13	4175164.45	532.62045	(08071406)	631863.80	4175184.06	572.30469	(08071406)
631863.46	4175203.68	606.83515	(08071406)	631863.12	4175223.29	633.00541	(08071406)
631862.78	4175242.91	707.44820	(08031018)	631862.44	4175262.52	803.31176	(08031018)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK19 ***

INCLUDING SOURCE(S): STCK19 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	870.72111	(08031018)	631861.77	4175301.75	1136.12992	(08071406)
631861.43	4175321.37	1479.97900	(08031018)	631861.09	4175340.98	1487.80623	(05011317)
631860.75	4175360.60	1957.54720	(05111917)	631860.41	4175380.21	1067.60594	(07111901)
631860.07	4175399.83	893.30983	(06011619)	631859.73	4175419.44	894.81436	(08040222)
631859.40	4175439.06	720.36285	(08040222)	631859.06	4175458.67	457.23245	(08010919)
631858.72	4175478.29	598.59348	(06112624)	631858.38	4175497.90	675.00625	(05082502)
631858.04	4175517.52	651.86722	(07102901)	631857.70	4175537.13	561.63609	(04020106)
631857.37	4175556.75	554.84227	(06021018)	631857.03	4175576.36	558.64011	(06021018)
631856.69	4175595.98	560.51758	(06021018)	631856.35	4175615.59	548.48420	(04070706)
631856.01	4175635.21	518.58234	(06021018)	631855.67	4175654.82	494.07791	(08112520)
631855.33	4175674.44	468.33407	(05072006)	631855.00	4175694.05	450.03884	(05072006)
631854.66	4175713.67	431.17560	(05072006)	631854.32	4175733.28	412.39473	(05072006)
631853.98	4175752.90	360.15668	(07080305)	631853.64	4175772.51	325.64551	(06013006)
631853.30	4175792.13	313.17873	(06013006)	631852.97	4175811.74	301.26731	(06013006)
631852.63	4175831.36	286.45574	(08112318)	631852.29	4175850.97	276.92769	(08112318)
631851.95	4175870.59	262.78772	(04111519)	631851.61	4175890.20	313.61396	(07091007)
631851.27	4175909.82	298.40234	(07091007)	631850.94	4175929.43	260.99335	(05072006)
631850.60	4175949.05	231.28114	(07091007)	631850.26	4175968.66	218.30520	(07091007)
631830.54	4175988.13	210.49846	(07020803)	631811.15	4175987.98	211.28208	(08122707)
631791.77	4175987.83	216.02815	(07030418)	631772.39	4175987.67	260.21858	(06110120)
631753.00	4175987.52	310.78813	(06110120)	631733.62	4175987.37	320.60329	(06110120)
631714.24	4175987.22	300.12979	(06111524)	631694.85	4175987.07	296.40158	(05112506)
631675.47	4175986.92	334.59620	(05112506)	631656.09	4175986.77	412.67471	(06013008)
631636.70	4175986.62	439.44049	(06013008)	631617.32	4175986.46	342.01263	(08091907)
631597.94	4175986.31	248.99139	(04083006)	631578.55	4175986.16	257.43916	(08091907)
631559.17	4175986.01	258.26280	(08091907)	631539.79	4175985.86	250.29666	(08091907)
631520.40	4175985.71	234.49753	(08091907)	631501.02	4175985.56	230.80188	(04022021)
631481.64	4175985.40	223.79068	(07021218)	631462.25	4175985.25	221.08246	(07021218)
631442.87	4175985.10	212.89148	(08122718)	631423.49	4175984.95	215.67118	(07122917)
631404.10	4175984.80	207.81268	(07122917)	631384.72	4175984.65	203.85113	(07012719)
631365.34	4175984.50	200.56159	(06041524)	631345.95	4175984.35	203.24418	(04120908)
631326.57	4175984.19	198.42251	(04120908)	631307.19	4175984.04	191.71799	(04121223)
631287.80	4175983.89	183.54913	(04120903)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***
INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC

(YYMMDDHH)

632121.21	4174952.36	119.09580	(08071406)	632304.44	4174354.52	64.23506	(04022218)
632192.15	4174956.32	107.54737	(04122822)	632420.62	4175510.15	160.69357	(07010217)
632418.97	4175552.92	176.33697	(07020218)	631187.00	4175727.00	223.67446	(05122618)
631166.00	4175729.00	212.79205	(05122618)	631121.00	4175719.00	192.64268	(05122618)
631035.00	4174830.00	95.69858	(04012317)	631106.00	4174825.00	100.95543	(07121217)
631937.00	4174528.00	84.75397	(07012317)	631322.00	4174522.00	85.24796	(06102817)
629800.63	4173850.44	26.34472	(06121421)	630150.63	4173850.44	27.71820	(04012317)
630500.63	4173850.44	38.99199	(07011517)	630850.63	4173850.44	48.95955	(05012117)
631200.63	4173850.44	43.62795	(06121017)	631550.63	4173850.44	48.49298	(06121420)
631900.63	4173850.44	46.43595	(04122823)	632250.63	4173850.44	47.57534	(04122824)
632600.63	4173850.44	42.71715	(06020105)	632950.63	4173850.44	37.95597	(05020818)
633300.63	4173850.44	33.59508	(05011520)	629800.63	4174200.44	25.28791	(06121421)
630150.63	4174200.44	35.45043	(06121421)	630500.63	4174200.44	37.82782	(04012317)
630850.63	4174200.44	57.50927	(07011517)	631200.63	4174200.44	59.03789	(06102817)
631550.63	4174200.44	66.92717	(06121420)	631900.63	4174200.44	58.63313	(04122823)
632250.63	4174200.44	65.28681	(07011417)	632600.63	4174200.44	54.54634	(04122822)
632950.63	4174200.44	47.07174	(05011520)	633300.63	4174200.44	38.83352	(06122122)
629800.63	4174550.44	35.15826	(06120217)	630150.63	4174550.44	39.21811	(07020624)
630500.63	4174550.44	53.82339	(06121421)	630850.63	4174550.44	60.00821	(07121217)
631200.63	4174550.44	88.82345	(05012117)	631550.63	4174550.44	83.96087	(08022002)
631900.63	4174550.44	82.03612	(07012317)	632250.63	4174550.44	77.12118	(06020105)
632600.63	4174550.44	68.27272	(05011521)	632950.63	4174550.44	54.84908	(06122122)
633300.63	4174550.44	50.84283	(06011617)	629800.63	4174900.44	34.13790	(06121217)
630150.63	4174900.44	43.07073	(05022818)	630500.63	4174900.44	67.90579	(04011017)
630850.63	4174900.44	94.66676	(06121421)	631200.63	4174900.44	120.29653	(07121217)
631550.63	4174900.44	127.61518	(06102817)	631900.63	4174900.44	123.01987	(04102617)
632250.63	4174900.44	100.10764	(05020818)	632600.63	4174900.44	84.39245	(05021018)
632950.63	4174900.44	70.53283	(06011617)	633300.63	4174900.44	53.93135	(06120617)
629800.63	4175250.44	39.76427	(04022207)	630150.63	4175250.44	54.24826	(04022207)
630500.63	4175250.44	69.04226	(04022208)	630850.63	4175250.44	107.88896	(07111023)
631200.63	4175250.44	167.74752	(04101819)	631550.63	4175250.44	236.00621	(06011109)
631900.63	4175250.44	178.54303	(05011817)	632250.63	4175250.44	154.75991	(05011417)
632600.63	4175250.44	110.23863	(06120617)	632950.63	4175250.44	73.84642	(05021801)
633300.63	4175250.44	59.38512	(07010217)	629800.63	4175600.44	43.47239	(04121304)
630150.63	4175600.44	54.19178	(04121304)	630500.63	4175600.44	73.17902	(04121224)
630850.63	4175600.44	122.04558	(04121224)	631200.63	4175600.44	235.70360	(04110818)
631550.63	4175600.44	497.46643	(07110617)	631900.63	4175600.44	450.50184	(06052002)
632250.63	4175600.44	248.62443	(06011618)	632600.63	4175600.44	135.02864	(05122223)
632950.63	4175600.44	80.76882	(05121217)	633300.63	4175600.44	57.74112	(05011522)
629800.63	4175950.44	34.38966	(06011024)	630150.63	4175950.44	49.06569	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	71.64939	(06011024)	630850.63	4175950.44	100.65858	(05030324)
631200.63	4175950.44	177.83195	(07071004)	631550.63	4175950.44	373.49316	(07082502)
631900.63	4175950.44	328.07289	(06081406)	632250.63	4175950.44	249.48420	(07071002)
632600.63	4175950.44	140.76559	(05122401)	632950.63	4175950.44	77.55098	(05012018)
633300.63	4175950.44	58.46261	(06121320)	629800.63	4176300.44	32.61833	(04041820)
630150.63	4176300.44	45.19934	(07120622)	630500.63	4176300.44	62.90078	(07120622)
630850.63	4176300.44	88.43373	(06122121)	631200.63	4176300.44	111.73523	(04041920)
631550.63	4176300.44	160.23034	(08091907)	631900.63	4176300.44	161.61079	(05072006)
632250.63	4176300.44	180.48361	(06062806)	632600.63	4176300.44	124.33354	(08021808)
632950.63	4176300.44	77.90770	(04121024)	633300.63	4176300.44	55.39891	(05020719)
629800.63	4176650.44	33.63491	(07120622)	630150.63	4176650.44	44.88502	(06122121)
630500.63	4176650.44	56.32050	(04021520)	630850.63	4176650.44	72.35385	(04010518)
631200.63	4176650.44	86.71188	(07122917)	631550.63	4176650.44	95.36383	(07021108)
631900.63	4176650.44	101.52914	(06020918)	632250.63	4176650.44	103.82996	(06122319)
632600.63	4176650.44	88.78347	(07122918)	632950.63	4176650.44	68.25820	(08121517)
633300.63	4176650.44	52.91591	(07120406)	629800.63	4177000.44	32.77604	(04021520)
630150.63	4177000.44	37.77805	(04021521)	630500.63	4177000.44	48.74773	(04010518)
630850.63	4177000.44	57.71784	(04120908)	631200.63	4177000.44	68.58827	(07012720)
631550.63	4177000.44	73.34977	(07021108)	631900.63	4177000.44	76.85779	(05122220)
632250.63	4177000.44	74.78313	(06012820)	632600.63	4177000.44	67.74056	(06010521)
632950.63	4177000.44	56.15214	(08122905)	633300.63	4177000.44	48.18620	(08021908)
629800.63	4177350.44	30.36311	(04021521)	630150.63	4177350.44	35.21666	(04010518)
630500.63	4177350.44	41.27190	(04120908)	630850.63	4177350.44	48.73518	(08122718)
631200.63	4177350.44	54.25063	(07012722)	631550.63	4177350.44	57.46541	(06020124)
631900.63	4177350.44	56.78531	(05122220)	632250.63	4177350.44	57.71326	(04121819)
632600.63	4177350.44	52.72250	(06010520)	632950.63	4177350.44	46.41535	(04121820)
633300.63	4177350.44	39.49911	(08122905)	631670.70	4175493.59	256.26620	(06062806)
631669.80	4175641.41	979.86434	(05072806)	631665.32	4175796.39	216.56468	(06033021)
631417.17	4175826.85	292.30958	(05030324)	631417.17	4175673.66	544.33642	(04041821)
631422.55	4175484.63	565.81691	(04011017)	631268.42	4175983.74	173.02328	(08100321)
631275.69	4175523.99	250.68747	(07101502)	631345.65	4175419.50	245.17786	(07020624)
631384.72	4175441.30	265.91843	(06041020)	631491.93	4175442.21	448.37902	(05111717)
631491.93	4175414.95	451.97174	(05111717)	631385.63	4175413.14	234.67807	(07020624)
631358.37	4175395.87	225.64711	(07020624)	631409.25	4175336.81	229.19619	(05110618)
631567.35	4175235.96	206.88242	(06102817)	631756.33	4175028.80	122.75821	(05010417)
631807.22	4175003.36	119.20444	(04102617)	631867.18	4174987.91	136.19884	(04102617)
631849.92	4175988.28	282.02033	(05072006)	631268.74	4175963.75	186.38407	(05110619)
631269.05	4175943.76	197.67741	(05110619)	631269.37	4175923.77	202.46571	(07071004)
631269.68	4175903.78	203.30261	(05030321)	631270.00	4175883.79	200.33816	(04041820)
631270.32	4175863.81	226.47263	(05030324)	631270.63	4175843.82	246.53383	(05030324)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	245.70081	(05030324)	631271.26	4175803.84	252.79997	(06072906)
631271.58	4175783.85	249.10826	(07042002)	631271.90	4175763.86	254.56896	(04101623)
631272.21	4175743.87	254.73362	(04101604)	631272.53	4175723.88	270.52408	(05122618)
631272.85	4175703.89	264.75262	(05122618)	631273.16	4175683.90	270.62420	(04121304)
631273.48	4175663.91	291.55987	(06032819)	631273.79	4175643.92	287.11329	(06032819)
631274.11	4175623.94	285.47225	(06051906)	631274.43	4175603.95	272.12355	(04110818)
631274.74	4175583.96	243.66075	(04022207)	631275.06	4175563.97	253.02789	(04022207)
631275.37	4175543.98	259.86356	(06041224)	631285.68	4175509.06	246.08861	(06092518)
631295.68	4175494.14	255.11722	(06100918)	631305.67	4175479.21	247.30762	(06121217)
631315.67	4175464.28	242.95904	(07111023)	631325.66	4175449.35	236.55176	(06120217)
631335.66	4175434.43	247.83075	(06120217)	631358.67	4175426.77	250.54321	(07020624)
631371.70	4175434.03	256.01115	(07020624)	631402.59	4175441.45	267.74514	(07020624)
631420.46	4175441.60	457.96037	(08081806)	631438.33	4175441.76	467.52222	(08081806)
631456.19	4175441.91	464.60427	(08081806)	631474.06	4175442.06	454.27684	(05111717)
631491.93	4175428.58	453.79485	(05111717)	631474.21	4175414.65	474.51646	(05111717)
631456.50	4175414.35	476.28923	(05111717)	631438.78	4175414.05	467.72031	(05111717)
631421.06	4175413.74	292.18561	(04101819)	631403.35	4175413.44	354.39121	(04012317)
631372.00	4175404.51	230.12572	(07020624)	631371.09	4175381.11	229.76252	(04101819)
631383.81	4175366.34	225.42951	(06121421)	631396.53	4175351.58	229.96741	(08062901)
631425.06	4175326.73	223.27018	(04012317)	631440.87	4175316.64	226.41882	(04012317)
631456.68	4175306.56	221.50372	(04012317)	631472.49	4175296.47	229.55724	(06011109)
631488.30	4175286.39	249.59709	(06011109)	631504.11	4175276.30	260.29103	(06011109)
631519.92	4175266.22	260.36710	(06011109)	631535.73	4175256.13	249.81228	(06011109)
631551.54	4175246.05	229.92854	(06011109)	631579.95	4175222.15	214.93546	(06102817)
631592.55	4175208.34	216.82032	(06102817)	631605.15	4175194.53	205.11629	(06102817)
631617.74	4175180.72	195.01429	(06102817)	631630.34	4175166.91	182.70742	(06102817)
631642.94	4175153.10	167.05491	(06102817)	631655.54	4175139.29	158.07244	(05071804)
631668.14	4175125.47	158.87572	(05071804)	631680.74	4175111.66	154.24319	(04102621)
631693.34	4175097.85	151.34446	(04102621)	631705.94	4175084.04	150.04706	(05050803)
631718.53	4175070.23	144.83456	(05050803)	631731.13	4175056.42	135.73974	(05050803)
631743.73	4175042.61	127.87304	(05122422)	631773.29	4175020.32	115.53699	(05010417)
631790.26	4175011.84	115.45310	(05021805)	631822.21	4174999.50	125.71518	(04102617)
631837.20	4174995.64	130.78487	(04102617)	631852.19	4174991.77	134.29553	(04102617)
631866.84	4175007.53	139.91415	(04102617)	631866.50	4175027.14	143.74467	(04102617)
631866.16	4175046.76	147.69858	(04102617)	631865.83	4175066.37	151.77657	(04102617)
631865.49	4175085.99	155.98522	(04102617)	631865.15	4175105.60	160.32446	(04102617)
631864.81	4175125.22	164.80012	(04102617)	631864.47	4175144.83	169.39756	(04102617)
631864.13	4175164.45	174.13165	(04102617)	631863.80	4175184.06	178.99394	(04102617)
631863.46	4175203.68	183.98557	(04102617)	631863.12	4175223.29	189.09003	(04102617)
631862.78	4175242.91	197.10461	(04102617)	631862.44	4175262.52	205.00243	(04102617)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK2 ***

INCLUDING SOURCE(S): STCK2 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	247.34197	(04102617)	631861.77	4175301.75	258.42237	(08102618)
631861.43	4175321.37	265.83235	(08102618)	631861.09	4175340.98	243.73555	(04102623)
631860.75	4175360.60	295.34424	(04102617)	631860.41	4175380.21	304.14467	(04102617)
631860.07	4175399.83	313.09117	(04102617)	631859.73	4175419.44	321.90630	(04102617)
631859.40	4175439.06	330.22703	(04102617)	631859.06	4175458.67	313.75397	(04102617)
631858.72	4175478.29	321.23983	(04102617)	631858.38	4175497.90	325.66216	(04102617)
631858.04	4175517.52	325.47912	(04102617)	631857.70	4175537.13	318.57622	(04102617)
631857.37	4175556.75	302.00952	(04102617)	631857.03	4175576.36	272.32565	(04102617)
631856.69	4175595.98	256.48241	(06052002)	631856.35	4175615.59	381.08113	(06052002)
631856.01	4175635.21	576.72357	(04110905)	631855.67	4175654.82	1113.12920	(04101518)
631855.33	4175674.44	1560.69016	(04101518)	631855.00	4175694.05	1592.11497	(04030118)
631854.66	4175713.67	1817.51794	(04030118)	631854.32	4175733.28	1891.31800	(06111908)
631853.98	4175752.90	1690.24858	(05072806)	631853.64	4175772.51	1393.37784	(07092306)
631853.30	4175792.13	1150.41628	(06110304)	631852.97	4175811.74	985.24277	(06110304)
631852.63	4175831.36	887.17819	(06062806)	631852.29	4175850.97	777.08380	(06062806)
631851.95	4175870.59	637.13540	(06062806)	631851.61	4175890.20	577.46006	(06081406)
631851.27	4175909.82	660.28082	(07102901)	631850.94	4175929.43	443.15525	(08112520)
631850.60	4175949.05	325.78858	(05072006)	631850.26	4175968.66	294.90324	(06080603)
631830.54	4175988.13	294.53735	(05072006)	631811.15	4175987.98	286.97418	(05072006)
631791.77	4175987.83	271.93096	(04111519)	631772.39	4175987.67	293.75895	(07030418)
631753.00	4175987.52	316.92242	(07030418)	631733.62	4175987.37	320.61319	(07030418)
631714.24	4175987.22	309.12684	(07080306)	631694.85	4175987.07	331.91470	(05112506)
631675.47	4175986.92	347.02295	(08091907)	631656.09	4175986.77	345.42071	(08091907)
631636.70	4175986.62	334.16988	(07090905)	631617.32	4175986.46	325.03972	(05122507)
631597.94	4175986.31	333.72283	(04101820)	631578.55	4175986.16	334.91867	(04101820)
631559.17	4175986.01	229.64146	(04022205)	631539.79	4175985.86	224.13206	(05122508)
631520.40	4175985.71	223.26930	(05122508)	631501.02	4175985.56	216.74430	(04022119)
631481.64	4175985.40	217.49882	(04022119)	631462.25	4175985.25	213.60394	(07010318)
631442.87	4175985.10	207.71347	(07010318)	631423.49	4175984.95	205.37188	(05122621)
631404.10	4175984.80	205.24527	(05122621)	631384.72	4175984.65	202.04559	(05122621)
631365.34	4175984.50	196.26966	(05122621)	631345.95	4175984.35	190.78875	(04082102)
631326.57	4175984.19	185.88016	(04082206)	631307.19	4175984.04	181.20109	(06080704)
631287.80	4175983.89	177.40890	(05071703)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	134.46793	(05011521)	632304.44	4174354.52	71.29847	(04122822)

632192.15	4174956.32	140.05905	(05011520)	632420.62	4175510.15	172.91047	(07010217)
632418.97	4175552.92	163.59590	(04022224)	631187.00	4175727.00	384.84863	(06020109)
631166.00	4175729.00	346.67493	(06020109)	631121.00	4175719.00	308.63704	(06020109)
631035.00	4174830.00	119.11725	(06011109)	631106.00	4174825.00	111.54532	(06011021)
631937.00	4174528.00	107.55095	(07011417)	631322.00	4174522.00	90.78134	(06121420)
629800.63	4173850.44	22.49409	(06011022)	630150.63	4173850.44	36.93974	(06011109)
630500.63	4173850.44	45.30774	(05012117)	630850.63	4173850.44	39.26298	(05010318)
631200.63	4173850.44	47.71705	(06121420)	631550.63	4173850.44	40.64988	(05021805)
631900.63	4173850.44	52.21948	(07012317)	632250.63	4173850.44	50.16311	(07011417)
632600.63	4173850.44	40.13589	(04122822)	632950.63	4173850.44	33.75042	(05011521)
633300.63	4173850.44	29.67398	(04022018)	629800.63	4174200.44	29.77354	(06121421)
630150.63	4174200.44	31.06801	(05122423)	630500.63	4174200.44	60.19120	(06011109)
630850.63	4174200.44	57.84601	(06011021)	631200.63	4174200.44	67.08670	(08022002)
631550.63	4174200.44	56.81710	(05021805)	631900.63	4174200.44	69.28268	(07020623)
632250.63	4174200.44	63.29830	(06020105)	632600.63	4174200.44	48.24845	(05020818)
632950.63	4174200.44	42.13008	(04022018)	633300.63	4174200.44	30.82049	(05021018)
629800.63	4174550.44	32.15063	(07020624)	630150.63	4174550.44	43.47686	(06121421)
630500.63	4174550.44	47.68891	(05122423)	630850.63	4174550.44	90.98495	(06011109)
631200.63	4174550.44	81.22652	(07122217)	631550.63	4174550.44	81.32742	(05021805)
631900.63	4174550.44	105.75245	(05021804)	632250.63	4174550.44	94.13345	(04122822)
632600.63	4174550.44	66.53923	(05011520)	632950.63	4174550.44	48.19319	(05112916)
633300.63	4174550.44	47.32292	(06011617)	629800.63	4174900.44	37.10928	(05022818)
630150.63	4174900.44	53.01752	(04011017)	630500.63	4174900.44	72.37113	(06121421)
630850.63	4174900.44	95.09071	(06011109)	631200.63	4174900.44	135.73604	(06102817)
631550.63	4174900.44	116.26273	(05021805)	631900.63	4174900.44	140.75467	(05011817)
632250.63	4174900.44	130.14247	(05011520)	632600.63	4174900.44	89.08798	(05112916)
632950.63	4174900.44	60.58132	(06011617)	633300.63	4174900.44	46.21220	(06120617)
629800.63	4175250.44	43.33404	(04022207)	630150.63	4175250.44	55.09961	(05122617)
630500.63	4175250.44	78.32897	(06120217)	630850.63	4175250.44	116.55128	(04101819)
631200.63	4175250.44	212.29846	(06011109)	631550.63	4175250.44	250.02089	(06040124)
631900.63	4175250.44	208.36543	(05061704)	632250.63	4175250.44	166.16558	(07021118)
632600.63	4175250.44	120.48756	(06120617)	632950.63	4175250.44	66.23331	(05021801)
633300.63	4175250.44	52.79032	(07010217)	629800.63	4175600.44	42.62611	(04121224)
630150.63	4175600.44	57.45601	(08012221)	630500.63	4175600.44	89.90452	(08012221)
630850.63	4175600.44	188.70145	(06020109)	631200.63	4175600.44	329.93198	(06020109)
631550.63	4175600.44	732.55625	(07030618)	631900.63	4175600.44	540.46307	(06052002)
632250.63	4175600.44	209.14908	(04022224)	632600.63	4175600.44	117.87190	(08011001)
632950.63	4175600.44	69.15527	(05122223)	633300.63	4175600.44	49.51768	(05121217)
629800.63	4175950.44	42.59042	(05122618)	630150.63	4175950.44	53.16755	(05122618)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)

630500.63	4175950.44	88.64372	(06011024)	630850.63	4175950.44	168.43248	(06011024)
631200.63	4175950.44	332.87442	(07071004)	631550.63	4175950.44	809.43033	(07030418)
631900.63	4175950.44	319.96926	(06111908)	632250.63	4175950.44	190.89073	(05012018)
632600.63	4175950.44	109.94952	(07012418)	632950.63	4175950.44	67.84611	(07012318)
633300.63	4175950.44	49.81795	(07012318)	629800.63	4176300.44	34.92004	(05030324)
630150.63	4176300.44	53.08863	(07120622)	630500.63	4176300.44	82.80407	(07120622)
630850.63	4176300.44	153.79003	(04021520)	631200.63	4176300.44	221.18100	(06041524)
631550.63	4176300.44	201.79778	(05122221)	631900.63	4176300.44	201.97481	(06062806)
632250.63	4176300.44	138.01047	(08021808)	632600.63	4176300.44	95.26696	(08121018)
632950.63	4176300.44	64.28563	(05011322)	633300.63	4176300.44	47.36697	(08010924)
629800.63	4176650.44	36.73404	(07120622)	630150.63	4176650.44	53.81060	(06122121)
630500.63	4176650.44	75.66377	(04021521)	630850.63	4176650.44	109.46954	(04121223)
631200.63	4176650.44	153.10366	(08091907)	631550.63	4176650.44	127.15738	(07121903)
631900.63	4176650.44	116.36735	(05021722)	632250.63	4176650.44	115.26621	(06062806)
632600.63	4176650.44	80.29630	(08121517)	632950.63	4176650.44	60.31350	(05011818)
633300.63	4176650.44	43.96412	(08121018)	629800.63	4177000.44	36.80650	(04021520)
630150.63	4177000.44	47.17015	(04021521)	630500.63	4177000.44	62.37985	(04120903)
630850.63	4177000.44	83.00951	(08122718)	631200.63	4177000.44	97.42935	(06013008)
631550.63	4177000.44	91.35499	(07121903)	631900.63	4177000.44	91.31060	(07091007)
632250.63	4177000.44	76.77060	(06010522)	632600.63	4177000.44	66.08576	(07022408)
632950.63	4177000.44	55.81519	(08021908)	633300.63	4177000.44	47.14241	(08021808)
629800.63	4177350.44	32.53403	(04021521)	630150.63	4177350.44	39.40106	(04120903)
630500.63	4177350.44	47.96479	(07012719)	630850.63	4177350.44	60.85393	(04022021)
631200.63	4177350.44	72.18609	(08011009)	631550.63	4177350.44	65.91746	(07121903)
631900.63	4177350.44	63.91733	(07021206)	632250.63	4177350.44	58.37721	(05022620)
632600.63	4177350.44	49.98413	(07121908)	632950.63	4177350.44	42.19873	(08122905)
633300.63	4177350.44	41.91939	(08021908)	631670.70	4175493.59	391.76511	(07090905)
631669.80	4175641.41	804.07807	(04101820)	631665.32	4175796.39	243.73819	(05061703)
631417.17	4175826.85	760.20820	(06011217)	631417.17	4175673.66	323.60764	(06020109)
631422.55	4175484.63	279.39955	(07100818)	631268.42	4175983.74	390.41377	(06020108)
631275.69	4175523.99	323.57099	(04012317)	631345.65	4175419.50	318.68585	(06011109)
631384.72	4175441.30	187.17593	(05050802)	631491.93	4175442.21	229.29063	(05122422)
631491.93	4175414.95	219.85829	(05122422)	631385.63	4175413.14	204.46693	(05091918)
631358.37	4175395.87	278.87428	(06011109)	631409.25	4175336.81	299.94789	(06102817)
631567.35	4175235.96	293.68094	(06040124)	631756.33	4175028.80	171.02213	(05021804)
631807.22	4175003.36	171.50618	(07011417)	631867.18	4174987.91	157.18234	(05011817)
631849.92	4175988.28	301.49712	(07112517)	631268.74	4175963.75	400.16540	(04022924)
631269.05	4175943.76	399.54747	(06080604)	631269.37	4175923.77	403.65304	(07071004)
631269.68	4175903.78	405.61013	(06011217)	631270.00	4175883.79	444.17386	(06011217)
631270.32	4175863.81	433.18620	(06011217)	631270.63	4175843.82	405.94894	(07042002)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK20 ***

INCLUDING SOURCE(S): STCK20 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)

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(YYMMDDHH)

631862.10	4175282.14	249.53431	(05020818)	631861.77	4175301.75	290.18804	(06072804)
631861.43	4175321.37	381.53982	(06072804)	631861.09	4175340.98	381.40338	(07111021)
631860.75	4175360.60	398.41749	(06112217)	631860.41	4175380.21	393.68879	(06112217)
631860.07	4175399.83	381.64271	(05011520)	631859.73	4175419.44	372.56934	(08081804)
631859.40	4175439.06	362.03308	(08090902)	631859.06	4175458.67	353.41756	(07062005)
631858.72	4175478.29	345.06053	(04022018)	631858.38	4175497.90	331.82679	(06040119)
631858.04	4175517.52	325.75269	(08030618)	631857.70	4175537.13	316.15490	(05110817)
631857.37	4175556.75	315.70963	(05110817)	631857.03	4175576.36	309.07045	(05081503)
631856.69	4175595.98	312.59603	(05081503)	631856.35	4175615.59	275.37559	(05020802)
631856.01	4175635.21	291.04615	(06052002)	631855.67	4175654.82	401.62146	(04110905)
631855.33	4175674.44	515.73937	(04110905)	631855.00	4175694.05	613.11786	(04110905)
631854.66	4175713.67	685.88239	(04101518)	631854.32	4175733.28	714.41976	(04101518)
631853.98	4175752.90	414.22882	(07102822)	631853.64	4175772.51	505.39269	(07102822)
631853.30	4175792.13	512.23600	(06111521)	631852.97	4175811.74	512.83901	(08040223)
631852.63	4175831.36	500.62819	(04081403)	631852.29	4175850.97	400.91370	(08021518)
631851.95	4175870.59	397.12556	(08040222)	631851.61	4175890.20	376.32835	(08010919)
631851.27	4175909.82	370.17758	(06111908)	631850.94	4175929.43	359.94127	(06111908)
631850.60	4175949.05	327.66619	(06111908)	631850.26	4175968.66	315.26198	(05072806)
631830.54	4175988.13	310.31774	(07112517)	631811.15	4175987.98	320.01321	(07092306)
631791.77	4175987.83	331.93991	(06052306)	631772.39	4175987.67	352.03603	(06052306)
631753.00	4175987.52	361.93650	(06052306)	631733.62	4175987.37	375.07218	(06052306)
631714.24	4175987.22	404.72068	(06062806)	631694.85	4175987.07	428.87997	(06062806)
631675.47	4175986.92	429.63547	(06062806)	631656.09	4175986.77	420.62818	(08091905)
631636.70	4175986.62	487.61688	(07091007)	631617.32	4175986.46	547.50733	(07091007)
631597.94	4175986.31	562.47724	(07091007)	631578.55	4175986.16	463.30228	(05072006)
631559.17	4175986.01	445.33163	(04111519)	631539.79	4175985.86	497.15724	(07030418)
631520.40	4175985.71	519.45192	(05112506)	631501.02	4175985.56	554.72310	(08091907)
631481.64	4175985.40	580.84094	(08091907)	631462.25	4175985.25	571.51700	(07090905)
631442.87	4175985.10	550.98621	(05122507)	631423.49	4175984.95	544.95920	(04022205)
631404.10	4175984.80	519.95216	(05112504)	631384.72	4175984.65	511.95095	(05122508)
631365.34	4175984.50	485.66635	(05122508)	631345.95	4175984.35	476.96108	(04022119)
631326.57	4175984.19	453.23766	(07010318)	631307.19	4175984.04	441.53070	(06020108)
631287.80	4175983.89	422.37138	(06020108)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	149.50409	(05011520)	632304.44	4174354.52	75.89376	(04122822)
632192.15	4174956.32	132.78893	(04022018)	632420.62	4175510.15	170.69703	(06011618)
632418.97	4175552.92	173.86408	(06011618)	631187.00	4175727.00	422.96564	(04101604)
631166.00	4175729.00	395.98179	(04101604)	631121.00	4175719.00	303.64753	(04101604)

631035.00	4174830.00	142.91935	(06011109)	631106.00	4174825.00	121.79102	(06011109)
631937.00	4174528.00	108.02686	(07011417)	631322.00	4174522.00	90.55552	(08022002)
629800.63	4173850.44	22.54558	(06011022)	630150.63	4173850.44	34.23300	(06011109)
630500.63	4173850.44	47.24255	(06011109)	630850.63	4173850.44	42.41791	(05010318)
631200.63	4173850.44	48.79962	(06121420)	631550.63	4173850.44	43.34989	(05021805)
631900.63	4173850.44	51.62146	(07012317)	632250.63	4173850.44	48.18049	(04022218)
632600.63	4173850.44	41.67817	(04122822)	632950.63	4173850.44	34.77790	(05011520)
633300.63	4173850.44	31.31843	(04022018)	629800.63	4174200.44	31.78991	(06121421)
630150.63	4174200.44	31.90990	(06011022)	630500.63	4174200.44	58.61320	(06011109)
630850.63	4174200.44	62.32011	(06011021)	631200.63	4174200.44	70.14712	(08022002)
631550.63	4174200.44	60.47853	(05021805)	631900.63	4174200.44	71.25844	(07020623)
632250.63	4174200.44	59.60939	(06020105)	632600.63	4174200.44	54.41726	(05011521)
632950.63	4174200.44	46.72976	(04022018)	633300.63	4174200.44	29.47432	(07012702)
629800.63	4174550.44	36.74326	(04011017)	630150.63	4174550.44	44.50691	(06121421)
630500.63	4174550.44	51.26644	(04012317)	630850.63	4174550.44	102.14353	(06011109)
631200.63	4174550.44	90.55229	(06102817)	631550.63	4174550.44	85.90206	(05021805)
631900.63	4174550.44	108.59613	(07011417)	632250.63	4174550.44	93.17583	(05020818)
632600.63	4174550.44	78.22555	(04022018)	632950.63	4174550.44	50.29942	(06011617)
633300.63	4174550.44	42.39597	(06011617)	629800.63	4174900.44	39.41943	(06121217)
630150.63	4174900.44	54.23762	(06120217)	630500.63	4174900.44	64.49833	(06121421)
630850.63	4174900.44	106.15706	(04012317)	631200.63	4174900.44	135.98163	(06102817)
631550.63	4174900.44	121.44320	(05021805)	631900.63	4174900.44	145.89363	(08071406)
632250.63	4174900.44	126.09372	(04022018)	632600.63	4174900.44	107.04192	(06011617)
632950.63	4174900.44	64.71035	(06120617)	633300.63	4174900.44	43.90307	(04022223)
629800.63	4175250.44	47.49582	(04022207)	630150.63	4175250.44	58.87067	(04022207)
630500.63	4175250.44	87.67502	(06121217)	630850.63	4175250.44	144.30044	(04011017)
631200.63	4175250.44	204.83653	(04012317)	631550.63	4175250.44	260.17866	(04102623)
631900.63	4175250.44	222.28824	(05011520)	632250.63	4175250.44	178.47000	(05020802)
632600.63	4175250.44	120.97320	(05021801)	632950.63	4175250.44	82.72024	(07010217)
633300.63	4175250.44	46.81762	(07020218)	629800.63	4175600.44	49.28522	(04121304)
630150.63	4175600.44	65.58864	(04121304)	630500.63	4175600.44	97.71945	(04121224)
630850.63	4175600.44	163.06357	(08012221)	631200.63	4175600.44	341.45062	(04041821)
631550.63	4175600.44	1145.82195	(07030618)	631900.63	4175600.44	717.74530	(08092319)
632250.63	4175600.44	249.40861	(05122223)	632600.63	4175600.44	130.80048	(05121217)
632950.63	4175600.44	69.19888	(05121217)	633300.63	4175600.44	48.48323	(08011019)
629800.63	4175950.44	42.10587	(06011024)	630150.63	4175950.44	62.20391	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	90.31326	(06011024)	630850.63	4175950.44	163.85750	(04041820)
631200.63	4175950.44	316.05216	(05122621)	631550.63	4175950.44	516.90337	(07030418)
631900.63	4175950.44	269.80625	(07092306)	632250.63	4175950.44	190.58191	(05011322)

632600.63	4175950.44	115.59187	(06012918)	632950.63	4175950.44	69.06886	(06121320)
633300.63	4175950.44	49.49324	(07012418)	629800.63	4176300.44	37.58685	(07120621)
630150.63	4176300.44	58.75598	(07120622)	630500.63	4176300.44	90.23749	(06122121)
630850.63	4176300.44	143.35481	(04021521)	631200.63	4176300.44	166.23313	(06041021)
631550.63	4176300.44	169.25103	(05122221)	631900.63	4176300.44	152.00697	(08021819)
632250.63	4176300.44	131.51768	(06122320)	632600.63	4176300.44	99.21015	(05011818)
632950.63	4176300.44	63.91916	(07122919)	633300.63	4176300.44	47.12392	(05122401)
629800.63	4176650.44	36.84426	(06122121)	630150.63	4176650.44	52.18500	(04021520)
630500.63	4176650.44	73.90615	(04021521)	630850.63	4176650.44	102.48768	(04120908)
631200.63	4176650.44	125.44616	(08091907)	631550.63	4176650.44	113.94359	(07121903)
631900.63	4176650.44	128.03252	(07091007)	632250.63	4176650.44	112.95444	(06062806)
632600.63	4176650.44	90.23381	(08021908)	632950.63	4176650.44	66.09987	(08021808)
633300.63	4176650.44	42.68011	(07022020)	629800.63	4177000.44	34.40162	(04021520)
630150.63	4177000.44	42.58487	(04021521)	630500.63	4177000.44	55.25178	(04121223)
630850.63	4177000.44	76.10663	(07021218)	631200.63	4177000.44	87.80189	(08011009)
631550.63	4177000.44	83.61441	(07121903)	631900.63	4177000.44	90.90857	(07091007)
632250.63	4177000.44	73.07678	(06120218)	632600.63	4177000.44	68.78562	(07022408)
632950.63	4177000.44	59.09723	(08021908)	633300.63	4177000.44	47.27857	(08021808)
629800.63	4177350.44	29.05139	(04021521)	630150.63	4177350.44	35.76739	(04120903)
630500.63	4177350.44	47.21467	(07122917)	630850.63	4177350.44	53.75720	(07012720)
631200.63	4177350.44	65.74419	(07021108)	631550.63	4177350.44	61.11308	(07121903)
631900.63	4177350.44	60.24825	(07021206)	632250.63	4177350.44	55.41271	(06013004)
632600.63	4177350.44	48.07485	(06010521)	632950.63	4177350.44	45.63053	(07022408)
633300.63	4177350.44	41.86101	(08021908)	631670.70	4175493.59	307.96363	(04101820)
631669.80	4175641.41	1071.89858	(08081602)	631665.32	4175796.39	302.56167	(06102818)
631417.17	4175826.85	972.97691	(04110906)	631417.17	4175673.66	1431.10108	(04041821)
631422.55	4175484.63	208.17398	(07100818)	631268.42	4175983.74	308.80281	(04022119)
631275.69	4175523.99	340.69715	(05072102)	631345.65	4175419.50	433.32504	(06011109)
631384.72	4175441.30	446.03871	(08121017)	631491.93	4175442.21	250.00150	(07030618)
631491.93	4175414.95	236.37949	(07030618)	631385.63	4175413.14	255.20094	(08121017)
631358.37	4175395.87	450.82525	(06011109)	631409.25	4175336.81	398.32913	(06102817)
631567.35	4175235.96	282.57719	(04102623)	631756.33	4175028.80	169.74815	(05011817)
631807.22	4175003.36	176.46439	(05011817)	631867.18	4174987.91	164.43611	(08071406)
631849.92	4175988.28	289.29981	(06052306)	631268.74	4175963.75	330.96470	(04022119)
631269.05	4175943.76	343.66815	(07010318)	631269.37	4175923.77	360.32260	(05122621)
631269.68	4175903.78	390.69646	(05122621)	631270.00	4175883.79	401.12325	(07120623)
631270.32	4175863.81	412.70712	(04022924)	631270.63	4175843.82	447.49964	(06033021)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	467.47320	(06033021)	631271.26	4175803.84	504.75769	(06011217)
631271.58	4175783.85	561.85666	(06011217)	631271.90	4175763.86	546.40176	(06011217)

631272.21	4175743.87	566.27660	(06111024)	631272.53	4175723.88	569.86714	(04101604)
631272.85	4175703.89	456.76909	(05030402)	631273.16	4175683.90	518.58949	(05030402)
631273.48	4175663.91	521.84066	(06092418)	631273.79	4175643.92	519.59811	(06121422)
631274.11	4175623.94	466.17259	(06121422)	631274.43	4175603.95	439.26972	(07110617)
631274.74	4175583.96	429.26143	(07110617)	631275.06	4175563.97	387.73695	(07110617)
631275.37	4175543.98	355.62400	(04022118)	631285.68	4175509.06	332.95379	(05072102)
631295.68	4175494.14	317.21932	(04012317)	631305.67	4175479.21	318.96330	(05111717)
631315.67	4175464.28	342.13165	(04012317)	631325.66	4175449.35	345.86894	(04012317)
631335.66	4175434.43	394.79450	(06011109)	631358.67	4175426.77	455.99797	(06011109)
631371.70	4175434.03	411.05275	(04012317)	631402.59	4175441.45	418.19950	(08121017)
631420.46	4175441.60	229.40408	(07100818)	631438.33	4175441.76	330.20585	(07100818)
631456.19	4175441.91	328.75108	(08081805)	631474.06	4175442.06	237.34202	(05050803)
631491.93	4175428.58	243.19939	(07030618)	631474.21	4175414.65	239.13192	(05050803)
631456.50	4175414.35	327.83539	(08081805)	631438.78	4175414.05	335.28216	(07100818)
631421.06	4175413.74	287.13237	(08121017)	631403.35	4175413.44	341.05936	(08121017)
631372.00	4175404.51	459.38953	(06011109)	631371.09	4175381.11	369.83072	(06011109)
631383.81	4175366.34	376.29340	(05030118)	631396.53	4175351.58	378.90150	(06102817)
631425.06	4175326.73	401.21988	(06102817)	631440.87	4175316.64	362.23856	(06102817)
631456.68	4175306.56	313.99570	(07100818)	631472.49	4175296.47	316.01651	(07100818)
631488.30	4175286.39	317.11701	(08081805)	631504.11	4175276.30	265.10280	(08081805)
631519.92	4175266.22	205.81941	(08081805)	631535.73	4175256.13	227.74445	(04102623)
631551.54	4175246.05	256.62015	(04102623)	631579.95	4175222.15	229.51757	(08102618)
631592.55	4175208.34	249.03567	(08102618)	631605.15	4175194.53	231.29418	(04102617)
631617.74	4175180.72	226.42164	(04102617)	631630.34	4175166.91	224.82915	(04102617)
631642.94	4175153.10	220.72528	(04102617)	631655.54	4175139.29	214.50507	(04102617)
631668.14	4175125.47	206.56695	(04102617)	631680.74	4175111.66	197.29985	(04102617)
631693.34	4175097.85	187.05592	(04102617)	631705.94	4175084.04	179.55431	(05112422)
631718.53	4175070.23	177.55870	(05112422)	631731.13	4175056.42	173.95109	(08071405)
631743.73	4175042.61	170.51329	(08071405)	631773.29	4175020.32	174.45517	(05011817)
631790.26	4175011.84	176.66775	(05011817)	631822.21	4174999.50	175.13371	(05011817)
631837.20	4174995.64	172.94404	(08071406)	631852.19	4174991.77	169.57756	(08071406)
631866.84	4175007.53	165.69780	(08071406)	631866.50	4175027.14	167.91284	(06051924)
631866.16	4175046.76	170.24476	(06051924)	631865.83	4175066.37	170.63151	(06051924)
631865.49	4175085.99	173.20093	(04122822)	631865.15	4175105.60	181.80806	(04122822)
631864.81	4175125.22	187.97910	(04122822)	631864.47	4175144.83	191.17805	(04122822)
631864.13	4175164.45	194.24670	(08031018)	631863.80	4175184.06	205.00930	(08031018)
631863.46	4175203.68	214.55026	(08031018)	631863.12	4175223.29	222.43795	(08031018)
631862.78	4175242.91	228.22863	(08031018)	631862.44	4175262.52	236.30478	(05011521)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK21 ***

INCLUDING SOURCE(S): STCK21 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	246.72917	(05011521)	631861.77	4175301.75	262.90896	(08031018)

631861.43	4175321.37	435.83382	(05011317)	631861.09	4175340.98	421.77430	(08090902)
631860.75	4175360.60	582.23531	(06051904)	631860.41	4175380.21	506.17617	(08090906)
631860.07	4175399.83	553.75823	(07102905)	631859.73	4175419.44	507.89558	(06100507)
631859.40	4175439.06	524.81296	(07102905)	631859.06	4175458.67	561.19291	(07102905)
631858.72	4175478.29	579.24500	(05102522)	631858.38	4175497.90	569.04955	(05112917)
631858.04	4175517.52	628.05576	(06052002)	631857.70	4175537.13	686.25579	(06052002)
631857.37	4175556.75	702.04604	(04022223)	631857.03	4175576.36	683.82014	(05021801)
631856.69	4175595.98	932.00982	(06111919)	631856.35	4175615.59	930.18928	(06111919)
631856.01	4175635.21	932.15269	(06112003)	631855.67	4175654.82	947.27382	(04030118)
631855.33	4175674.44	965.15393	(04030118)	631855.00	4175694.05	892.32052	(04030118)
631854.66	4175713.67	748.54387	(04030118)	631854.32	4175733.28	802.36466	(04030118)
631853.98	4175752.90	559.96172	(06111908)	631853.64	4175772.51	484.02885	(05080806)
631853.30	4175792.13	524.75715	(07121418)	631852.97	4175811.74	426.75192	(05072806)
631852.63	4175831.36	409.21519	(06111908)	631852.29	4175850.97	369.23548	(06111908)
631851.95	4175870.59	343.63310	(05072806)	631851.61	4175890.20	325.45595	(07112517)
631851.27	4175909.82	312.91695	(07092306)	631850.94	4175929.43	304.61859	(06052306)
631850.60	4175949.05	310.92347	(06052306)	631850.26	4175968.66	305.19862	(06052306)
631830.54	4175988.13	280.64567	(06052306)	631811.15	4175987.98	295.31995	(06062806)
631791.77	4175987.83	320.06077	(06062806)	631772.39	4175987.67	334.60959	(06062806)
631753.00	4175987.52	336.39891	(06062806)	631733.62	4175987.37	324.41887	(06062806)
631714.24	4175987.22	416.03812	(06062806)	631694.85	4175987.07	433.63013	(06081406)
631675.47	4175986.92	451.68453	(07091007)	631656.09	4175986.77	503.55473	(07091007)
631636.70	4175986.62	528.24542	(07091007)	631617.32	4175986.46	519.57084	(07091007)
631597.94	4175986.31	477.19475	(07091007)	631578.55	4175986.16	391.65988	(04111519)
631559.17	4175986.01	361.18032	(04111519)	631539.79	4175985.86	334.53939	(07030418)
631520.40	4175985.71	344.27165	(07030418)	631501.02	4175985.56	335.26749	(07080306)
631481.64	4175985.40	335.78896	(05112506)	631462.25	4175985.25	362.01220	(08091907)
631442.87	4175985.10	369.55351	(08091907)	631423.49	4175984.95	353.65314	(08091907)
631404.10	4175984.80	335.41154	(07090905)	631384.72	4175984.65	326.22599	(05122507)
631365.34	4175984.50	334.17198	(04022205)	631345.95	4175984.35	334.56581	(04022205)
631326.57	4175984.19	320.00587	(04022205)	631307.19	4175984.04	314.34911	(05122508)
631287.80	4175983.89	311.74084	(05122508)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	145.41812	(05011317)	632304.44	4174354.52	74.71282	(05020818)
632192.15	4174956.32	149.59061	(05112916)	632420.62	4175510.15	182.75805	(05121217)
632418.97	4175552.92	157.78237	(05121217)	631187.00	4175727.00	390.33965	(06011217)
631166.00	4175729.00	376.57938	(06011217)	631121.00	4175719.00	349.75541	(06011217)
631035.00	4174830.00	159.37621	(06011109)	631106.00	4174825.00	163.55134	(06011109)
631937.00	4174528.00	102.00479	(04022218)	631322.00	4174522.00	100.26168	(08022002)
629800.63	4173850.44	22.96845	(06121421)	630150.63	4173850.44	30.53631	(06011109)

630500.63	4173850.44	52.05579	(06011109)	630850.63	4173850.44	44.23404	(05010318)
631200.63	4173850.44	52.03781	(08022002)	631550.63	4173850.44	46.42022	(05021805)
631900.63	4173850.44	50.98221	(07012317)	632250.63	4173850.44	47.36661	(06020105)
632600.63	4173850.44	42.74099	(05020818)	632950.63	4173850.44	36.23298	(05011520)
633300.63	4173850.44	30.36926	(04022018)	629800.63	4174200.44	30.78517	(06121421)
630150.63	4174200.44	32.39907	(06121421)	630500.63	4174200.44	53.97278	(06011109)
630850.63	4174200.44	72.22184	(05012117)	631200.63	4174200.44	72.84398	(08022002)
631550.63	4174200.44	64.79642	(05021805)	631900.63	4174200.44	73.35301	(04122824)
632250.63	4174200.44	60.88650	(04122822)	632600.63	4174200.44	55.65457	(05011521)
632950.63	4174200.44	44.22144	(04022018)	633300.63	4174200.44	37.27617	(06011617)
629800.63	4174550.44	38.56605	(06120217)	630150.63	4174550.44	39.35110	(07020624)
630500.63	4174550.44	52.61578	(04012317)	630850.63	4174550.44	109.38256	(06011109)
631200.63	4174550.44	104.69859	(06102817)	631550.63	4174550.44	91.67465	(05021805)
631900.63	4174550.44	108.56503	(07011417)	632250.63	4174550.44	85.97339	(05011521)
632600.63	4174550.44	72.57999	(06122122)	632950.63	4174550.44	63.96747	(06011617)
633300.63	4174550.44	40.63168	(07012703)	629800.63	4174900.44	43.72704	(06020109)
630150.63	4174900.44	53.24290	(05022818)	630500.63	4174900.44	83.28380	(04011017)
630850.63	4174900.44	116.26066	(04012317)	631200.63	4174900.44	155.06781	(06011109)
631550.63	4174900.44	134.03648	(07030618)	631900.63	4174900.44	138.17141	(08071406)
632250.63	4174900.44	135.93834	(05112916)	632600.63	4174900.44	96.52458	(06011617)
632950.63	4174900.44	66.68424	(06120617)	633300.63	4174900.44	44.27404	(05021801)
629800.63	4175250.44	42.38635	(08012221)	630150.63	4175250.44	66.30905	(04022207)
630500.63	4175250.44	88.38433	(04022207)	630850.63	4175250.44	153.40179	(07111023)
631200.63	4175250.44	270.24005	(04012317)	631550.63	4175250.44	288.66408	(04102623)
631900.63	4175250.44	268.60759	(05112916)	632250.63	4175250.44	191.37425	(04022223)
632600.63	4175250.44	132.35983	(07010217)	632950.63	4175250.44	66.90420	(07020218)
633300.63	4175250.44	47.66923	(08011001)	629800.63	4175600.44	45.04961	(05122618)
630150.63	4175600.44	61.12693	(05122618)	630500.63	4175600.44	90.36218	(04121304)
630850.63	4175600.44	162.21377	(04010517)	631200.63	4175600.44	351.55151	(06032819)
631550.63	4175600.44	0.00000	(00000000)	631900.63	4175600.44	558.62805	(07102804)
632250.63	4175600.44	246.00994	(06011619)	632600.63	4175600.44	108.41574	(06011619)
632950.63	4175600.44	67.04054	(06011619)	633300.63	4175600.44	49.34688	(06011619)
629800.63	4175950.44	45.67069	(06011024)	630150.63	4175950.44	55.65586	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	86.38506	(07120621)	630850.63	4175950.44	152.06526	(05030322)
631200.63	4175950.44	225.26879	(04022119)	631550.63	4175950.44	374.81614	(07030418)
631900.63	4175950.44	264.74795	(06052306)	632250.63	4175950.44	193.05040	(04121024)
632600.63	4175950.44	126.25419	(05122401)	632950.63	4175950.44	72.81977	(08010924)
633300.63	4175950.44	48.82767	(05012018)	629800.63	4176300.44	41.96023	(07120622)
630150.63	4176300.44	50.63646	(05021923)	630500.63	4176300.44	84.92549	(04021520)

630850.63	4176300.44	115.81515	(04010518)	631200.63	4176300.44	137.59556	(08091907)
631550.63	4176300.44	148.80232	(05122221)	631900.63	4176300.44	151.34120	(06010520)
632250.63	4176300.44	143.58602	(08021908)	632600.63	4176300.44	104.56409	(08021808)
632950.63	4176300.44	66.90481	(08121018)	633300.63	4176300.44	46.05468	(05020719)
629800.63	4176650.44	38.62712	(06122121)	630150.63	4176650.44	47.65614	(04021520)
630500.63	4176650.44	67.70207	(04010518)	630850.63	4176650.44	86.60282	(07012719)
631200.63	4176650.44	104.77164	(08091907)	631550.63	4176650.44	106.71754	(07121903)
631900.63	4176650.44	136.07850	(07091007)	632250.63	4176650.44	96.64916	(06062806)
632600.63	4176650.44	85.73438	(08021908)	632950.63	4176650.44	69.35849	(08021808)
633300.63	4176650.44	44.30817	(05011818)	629800.63	4177000.44	32.30010	(04021521)
630150.63	4177000.44	42.10220	(04010518)	630500.63	4177000.44	53.95894	(04120908)
630850.63	4177000.44	66.12905	(07021218)	631200.63	4177000.44	83.98156	(08011009)
631550.63	4177000.44	78.55913	(07121903)	631900.63	4177000.44	88.19515	(07091007)
632250.63	4177000.44	72.63048	(06010520)	632600.63	4177000.44	62.60645	(06062806)
632950.63	4177000.44	53.54581	(08021908)	633300.63	4177000.44	40.86598	(08021808)
629800.63	4177350.44	29.60783	(04010518)	630150.63	4177350.44	34.44114	(04120908)
630500.63	4177350.44	43.39685	(07122917)	630850.63	4177350.44	47.09615	(07012720)
631200.63	4177350.44	61.28395	(07021108)	631550.63	4177350.44	57.49641	(07121903)
631900.63	4177350.44	58.12111	(05122402)	632250.63	4177350.44	53.32944	(06020201)
632600.63	4177350.44	46.68800	(07010323)	632950.63	4177350.44	45.45584	(07022408)
633300.63	4177350.44	37.69209	(08021908)	631670.70	4175493.59	373.34778	(06052002)
631669.80	4175641.41	967.00423	(06121422)	631665.32	4175796.39	309.91259	(06062806)
631417.17	4175826.85	487.93955	(04081204)	631417.17	4175673.66	998.80919	(07102702)
631422.55	4175484.63	1010.23752	(06051905)	631268.42	4175983.74	229.36443	(04022205)
631275.69	4175523.99	501.97499	(04041821)	631345.65	4175419.50	423.53262	(05111717)
631384.72	4175441.30	962.56303	(04012317)	631491.93	4175442.21	371.82638	(08121017)
631491.93	4175414.95	293.93146	(08121017)	631385.63	4175413.14	556.50140	(04012317)
631358.37	4175395.87	477.49582	(06011109)	631409.25	4175336.81	525.91893	(05030118)
631567.35	4175235.96	316.09274	(04102623)	631756.33	4175028.80	199.94236	(05011817)
631807.22	4175003.36	187.66872	(08071406)	631867.18	4174987.91	152.58696	(08071406)
631849.92	4175988.28	302.81934	(06062806)	631268.74	4175963.75	233.64120	(04022205)
631269.05	4175943.76	239.62660	(05112504)	631269.37	4175923.77	250.13555	(05122508)
631269.68	4175903.78	261.28964	(05122508)	631270.00	4175883.79	273.80874	(04022119)
631270.32	4175863.81	291.58869	(04022119)	631270.63	4175843.82	302.50453	(07010318)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	329.29674	(05122621)	631271.26	4175803.84	354.08154	(05122621)
631271.58	4175783.85	362.91900	(07120623)	631271.90	4175763.86	379.11490	(06033021)
631272.21	4175743.87	427.26130	(06033021)	631272.53	4175723.88	445.74304	(06033021)
631272.85	4175703.89	488.64812	(06011217)	631273.16	4175683.90	535.91222	(06011217)
631273.48	4175663.91	535.38413	(06121423)	631273.79	4175643.92	540.84193	(06121424)

631274.11	4175623.94	542.53794	(04101604)	631274.43	4175603.95	471.79371	(05030320)
631274.74	4175583.96	551.83441	(04101719)	631275.06	4175563.97	550.51072	(04110818)
631275.37	4175543.98	540.87133	(06121422)	631285.68	4175509.06	543.31186	(07110617)
631295.68	4175494.14	553.57534	(07110617)	631305.67	4175479.21	510.35850	(07110617)
631315.67	4175464.28	484.04520	(04022118)	631325.66	4175449.35	466.30008	(05072102)
631335.66	4175434.43	439.09316	(05072102)	631358.67	4175426.77	442.54564	(05111717)
631371.70	4175434.03	825.16474	(04012317)	631402.59	4175441.45	877.41099	(08121017)
631420.46	4175441.60	797.95735	(05111717)	631438.33	4175441.76	682.54192	(05111717)
631456.19	4175441.91	552.32763	(05111717)	631474.06	4175442.06	451.09137	(08121017)
631491.93	4175428.58	333.96816	(08121017)	631474.21	4175414.65	380.54863	(08121017)
631456.50	4175414.35	464.80419	(08121017)	631438.78	4175414.05	534.20154	(08121017)
631421.06	4175413.74	644.17763	(07121217)	631403.35	4175413.44	957.96149	(04012317)
631372.00	4175404.51	565.48831	(06011109)	631371.09	4175381.11	427.37591	(06011109)
631383.81	4175366.34	409.37658	(06011109)	631396.53	4175351.58	480.84296	(05030118)
631425.06	4175326.73	540.29702	(05030118)	631440.87	4175316.64	529.78144	(06102817)
631456.68	4175306.56	437.44133	(06102817)	631472.49	4175296.47	413.92926	(07100818)
631488.30	4175286.39	415.70431	(07100818)	631504.11	4175276.30	350.72818	(08081805)
631519.92	4175266.22	274.32603	(08081805)	631535.73	4175256.13	254.67732	(04102623)
631551.54	4175246.05	286.77087	(04102623)	631579.95	4175222.15	277.75432	(08102618)
631592.55	4175208.34	297.33532	(08102618)	631605.15	4175194.53	270.33435	(04102617)
631617.74	4175180.72	262.23740	(04102617)	631630.34	4175166.91	254.31786	(04102617)
631642.94	4175153.10	243.70497	(04102617)	631655.54	4175139.29	231.13284	(04102617)
631668.14	4175125.47	217.24303	(04102617)	631680.74	4175111.66	202.58609	(04102617)
631693.34	4175097.85	202.24663	(05011817)	631705.94	4175084.04	204.48362	(05011817)
631718.53	4175070.23	205.20602	(05011817)	631731.13	4175056.42	204.57990	(05011817)
631743.73	4175042.61	202.77238	(05011817)	631773.29	4175020.32	197.50547	(05011817)
631790.26	4175011.84	193.20515	(08071406)	631822.21	4174999.50	181.29979	(08071406)
631837.20	4174995.64	173.06437	(08071406)	631852.19	4174991.77	163.35929	(08071406)
631866.84	4175007.53	157.20309	(04122822)	631866.50	4175027.14	164.14412	(08031018)
631866.16	4175046.76	175.25218	(08031018)	631865.83	4175066.37	185.92688	(08031018)
631865.49	4175085.99	195.84599	(08031018)	631865.15	4175105.60	204.63799	(08031018)
631864.81	4175125.22	211.91323	(08031018)	631864.47	4175144.83	217.23489	(08031018)
631864.13	4175164.45	220.18614	(08031018)	631863.80	4175184.06	220.36667	(08031018)
631863.46	4175203.68	220.84541	(05011317)	631863.12	4175223.29	238.89146	(05011317)
631862.78	4175242.91	253.64115	(05011317)	631862.44	4175262.52	273.15709	(05112916)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK22 ***

INCLUDING SOURCE(S): STCK22 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	298.06769	(05112916)	631861.77	4175301.75	318.35457	(05112916)
631861.43	4175321.37	332.98187	(05112916)	631861.09	4175340.98	431.47497	(05011417)
631860.75	4175360.60	710.88314	(05110817)	631860.41	4175380.21	603.95411	(07111901)
631860.07	4175399.83	785.34624	(08022004)	631859.73	4175419.44	742.13879	(08012218)

631859.40	4175439.06	762.44850	(07080303)	631859.06	4175458.67	977.15419	(07080303)
631858.72	4175478.29	759.35247	(07080303)	631858.38	4175497.90	767.67757	(04081304)
631858.04	4175517.52	757.76978	(05071701)	631857.70	4175537.13	705.80946	(05071701)
631857.37	4175556.75	812.04655	(04030118)	631857.03	4175576.36	1033.93356	(04030118)
631856.69	4175595.98	795.28549	(04030118)	631856.35	4175615.59	805.44550	(04030118)
631856.01	4175635.21	676.67819	(08112619)	631855.67	4175654.82	800.35742	(08112619)
631855.33	4175674.44	862.70964	(08112619)	631855.00	4175694.05	893.43886	(06111908)
631854.66	4175713.67	943.03637	(06111908)	631854.32	4175733.28	918.96144	(06111908)
631853.98	4175752.90	883.72919	(06111908)	631853.64	4175772.51	722.97535	(05072806)
631853.30	4175792.13	876.23656	(06110305)	631852.97	4175811.74	714.62498	(05072806)
631852.63	4175831.36	767.24130	(04121019)	631852.29	4175850.97	542.69356	(06052306)
631851.95	4175870.59	574.84495	(07020318)	631851.61	4175890.20	313.65193	(06052306)
631851.27	4175909.82	299.84502	(06062806)	631850.94	4175929.43	309.72984	(06062806)
631850.60	4175949.05	313.65705	(06062806)	631850.26	4175968.66	311.22855	(06062806)
631830.54	4175988.13	303.84086	(06062806)	631811.15	4175987.98	295.07909	(06062806)
631791.77	4175987.83	276.81058	(06062806)	631772.39	4175987.67	250.38012	(06062806)
631753.00	4175987.52	244.39875	(06081406)	631733.62	4175987.37	272.54707	(07091007)
631714.24	4175987.22	318.20852	(07091007)	631694.85	4175987.07	445.57954	(06081406)
631675.47	4175986.92	512.86736	(07091007)	631656.09	4175986.77	532.69802	(07091007)
631636.70	4175986.62	515.28367	(07091007)	631617.32	4175986.46	472.68483	(07091007)
631597.94	4175986.31	410.23021	(07091007)	631578.55	4175986.16	356.05037	(04111519)
631559.17	4175986.01	320.24953	(04111519)	631539.79	4175985.86	272.22553	(04111519)
631520.40	4175985.71	264.46623	(07030418)	631501.02	4175985.56	262.08746	(07030418)
631481.64	4175985.40	259.59765	(07080306)	631462.25	4175985.25	251.92887	(07020208)
631442.87	4175985.10	256.94479	(08091907)	631423.49	4175984.95	273.94807	(08091907)
631404.10	4175984.80	278.78079	(08091907)	631384.72	4175984.65	269.66375	(08091907)
631365.34	4175984.50	248.65334	(08091907)	631345.95	4175984.35	238.21124	(07090905)
631326.57	4175984.19	235.31511	(05122507)	631307.19	4175984.04	230.95503	(07012721)
631287.80	4175983.89	232.10839	(04022205)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	160.52022	(05112916)	632304.44	4174354.52	70.22691	(05020818)
632192.15	4174956.32	145.03329	(05112916)	632420.62	4175510.15	161.28896	(06011619)
632418.97	4175552.92	178.07082	(07012318)	631187.00	4175727.00	252.65383	(07120623)
631166.00	4175729.00	241.49882	(07120623)	631121.00	4175719.00	227.11245	(05110619)
631035.00	4174830.00	149.01253	(07121217)	631106.00	4174825.00	205.36989	(06011109)
631937.00	4174528.00	102.79285	(05011817)	631322.00	4174522.00	111.51032	(08022002)
629800.63	4173850.44	27.78321	(06121421)	630150.63	4173850.44	29.41045	(05122423)
630500.63	4173850.44	56.10121	(06011109)	630850.63	4173850.44	50.30531	(06011021)
631200.63	4173850.44	57.31606	(08022002)	631550.63	4173850.44	50.21101	(05021805)
631900.63	4173850.44	55.09751	(07020623)	632250.63	4173850.44	50.59266	(06020105)

632600.63	4173850.44	43.01297 (05020818)	632950.63	4173850.44	35.43554 (04022018)
633300.63	4173850.44	30.29035 (05021018)	629800.63	4174200.44	28.88075 (07020624)
630150.63	4174200.44	40.11895 (06121421)	630500.63	4174200.44	46.84766 (07121217)
630850.63	4174200.44	83.70158 (05012117)	631200.63	4174200.44	75.49124 (08022002)
631550.63	4174200.44	70.75950 (05021805)	631900.63	4174200.44	76.70775 (05021804)
632250.63	4174200.44	68.59751 (04122822)	632600.63	4174200.44	56.70848 (05011520)
632950.63	4174200.44	42.93776 (05021018)	633300.63	4174200.44	42.74674 (06011617)
629800.63	4174550.44	36.82568 (06120217)	630150.63	4174550.44	48.90938 (07020624)
630500.63	4174550.44	68.86168 (06121421)	630850.63	4174550.44	103.49623 (06011109)
631200.63	4174550.44	124.21347 (06102817)	631550.63	4174550.44	101.16256 (05021805)
631900.63	4174550.44	107.40370 (05011817)	632250.63	4174550.44	93.00779 (05011521)
632600.63	4174550.44	73.74301 (05112916)	632950.63	4174550.44	60.63460 (06011617)
633300.63	4174550.44	43.29977 (06120617)	629800.63	4174900.44	45.23941 (06020109)
630150.63	4174900.44	54.98341 (06121217)	630500.63	4174900.44	89.43195 (06120217)
630850.63	4174900.44	141.72376 (06121421)	631200.63	4174900.44	236.58871 (06011109)
631550.63	4174900.44	157.21409 (07030618)	631900.63	4174900.44	153.31406 (08031018)
632250.63	4174900.44	132.74114 (05112916)	632600.63	4174900.44	92.36627 (06121106)
632950.63	4174900.44	63.09075 (05021801)	633300.63	4174900.44	49.88273 (07010217)
629800.63	4175250.44	41.68600 (08012221)	630150.63	4175250.44	60.64067 (08012221)
630500.63	4175250.44	105.77029 (04022207)	630850.63	4175250.44	161.65284 (04022208)
631200.63	4175250.44	304.63539 (05122619)	631550.63	4175250.44	350.49067 (05110722)
631900.63	4175250.44	261.51106 (05110817)	632250.63	4175250.44	175.69075 (07010217)
632600.63	4175250.44	111.41630 (07020218)	632950.63	4175250.44	66.84522 (06011618)
633300.63	4175250.44	48.05669 (05122223)	629800.63	4175600.44	46.20791 (05122618)
630150.63	4175600.44	60.69982 (05122618)	630500.63	4175600.44	83.85993 (05122618)
630850.63	4175600.44	167.30786 (06011024)	631200.63	4175600.44	363.01385 (05030324)
631550.63	4175600.44	1206.55534 (06111518)	631900.63	4175600.44	1029.33749 (04111603)
632250.63	4175600.44	255.89033 (07012418)	632600.63	4175600.44	128.30236 (07012318)
632950.63	4175600.44	71.13451 (07012318)	633300.63	4175600.44	49.48519 (07011518)
629800.63	4175950.44	39.20180 (06011024)	630150.63	4175950.44	52.07456 (07120621)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
630500.63	4175950.44	92.11178 (07120622)	630850.63	4175950.44	132.03547 (06122121)
631200.63	4175950.44	182.64979 (04022205)	631550.63	4175950.44	281.96297 (07030418)
631900.63	4175950.44	297.49621 (06062806)	632250.63	4175950.44	197.18545 (08122903)
632600.63	4175950.44	119.86647 (07122919)	632950.63	4175950.44	74.35330 (05122401)
633300.63	4175950.44	49.40425 (08010924)	629800.63	4176300.44	40.21623 (07120622)
630150.63	4176300.44	54.38593 (06122121)	630500.63	4176300.44	72.46496 (04021520)
630850.63	4176300.44	104.05727 (04120903)	631200.63	4176300.44	143.56329 (08091907)
631550.63	4176300.44	139.46390 (07121903)	631900.63	4176300.44	150.65207 (07091007)
632250.63	4176300.44	147.04085 (06062806)	632600.63	4176300.44	115.20481 (08021808)

632950.63	4176300.44	68.13271	(05011818)	633300.63	4176300.44	46.57868	(04011021)
629800.63	4176650.44	36.40455	(04021520)	630150.63	4176650.44	47.18391	(04021521)
630500.63	4176650.44	64.03893	(04120903)	630850.63	4176650.44	82.81201	(07122917)
631200.63	4176650.44	91.02683	(06013008)	631550.63	4176650.44	103.48724	(07121903)
631900.63	4176650.44	139.83863	(07091007)	632250.63	4176650.44	100.28916	(07010323)
632600.63	4176650.44	80.44576	(08122905)	632950.63	4176650.44	57.83042	(07021220)
633300.63	4176650.44	45.98806	(08021808)	629800.63	4177000.44	33.42273	(04021521)
630150.63	4177000.44	40.34806	(04120903)	630500.63	4177000.44	49.50042	(07012719)
630850.63	4177000.44	62.83402	(04022021)	631200.63	4177000.44	79.60979	(08011009)
631550.63	4177000.44	75.45100	(07121903)	631900.63	4177000.44	83.48813	(07091007)
632250.63	4177000.44	71.09635	(06122319)	632600.63	4177000.44	60.39513	(07121908)
632950.63	4177000.44	46.72569	(05010604)	633300.63	4177000.44	41.01386	(08021908)
629800.63	4177350.44	28.71590	(04010518)	630150.63	4177350.44	34.09292	(04120908)
630500.63	4177350.44	41.57076	(08122718)	630850.63	4177350.44	45.71939	(07012722)
631200.63	4177350.44	57.29045	(07021108)	631550.63	4177350.44	54.79007	(07121903)
631900.63	4177350.44	56.25714	(05122402)	632250.63	4177350.44	51.38012	(06012820)
632600.63	4177350.44	45.24048	(06010522)	632950.63	4177350.44	40.98925	(07022408)
633300.63	4177350.44	31.76362	(05010604)	631670.70	4175493.59	890.69767	(05030402)
631669.80	4175641.41	591.93503	(05111717)	631665.32	4175796.39	261.75237	(06081406)
631417.17	4175826.85	242.80765	(05042719)	631417.17	4175673.66	318.62045	(08091907)
631422.55	4175484.63	1062.06997	(06092418)	631268.42	4175983.74	187.88967	(05122507)
631275.69	4175523.99	466.71761	(05030320)	631345.65	4175419.50	744.02977	(07110617)
631384.72	4175441.30	899.66136	(07110617)	631491.93	4175442.21	1777.46503	(07110617)
631491.93	4175414.95	1305.62451	(05111717)	631385.63	4175413.14	748.12726	(07110617)
631358.37	4175395.87	639.15508	(04022118)	631409.25	4175336.81	600.45685	(04012317)
631567.35	4175235.96	372.07281	(04102623)	631756.33	4175028.80	218.67432	(08071406)
631807.22	4175003.36	182.87353	(08071406)	631867.18	4174987.91	183.98823	(08031018)
631849.92	4175988.28	231.86663	(06062806)	631268.74	4175963.75	193.44225	(05122507)
631269.05	4175943.76	198.47938	(07012721)	631269.37	4175923.77	201.97366	(07012721)
631269.68	4175903.78	210.91463	(04022205)	631270.00	4175883.79	218.24696	(04022205)
631270.32	4175863.81	222.42511	(04022205)	631270.63	4175843.82	227.20990	(05112504)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	236.87238	(05122508)	631271.26	4175803.84	247.92895	(05122508)
631271.58	4175783.85	253.11434	(05122508)	631271.90	4175763.86	266.86729	(07082502)
631272.21	4175743.87	276.30897	(07082502)	631272.53	4175723.88	322.36279	(04110906)
631272.85	4175703.89	303.49514	(04082001)	631273.16	4175683.90	311.75839	(04082001)
631273.48	4175663.91	321.68799	(06033021)	631273.79	4175643.92	354.64608	(06033021)
631274.11	4175623.94	368.64538	(06033021)	631274.43	4175603.95	384.97228	(06011217)
631274.74	4175583.96	431.61469	(06121423)	631275.06	4175563.97	465.04496	(06121423)
631275.37	4175543.98	470.22959	(06121424)	631285.68	4175509.06	462.09785	(05030320)

631295.68	4175494.14	549.36655	(04101719)	631305.67	4175479.21	642.82478	(04101719)
631315.67	4175464.28	659.75249	(04110818)	631325.66	4175449.35	645.24433	(04041821)
631335.66	4175434.43	689.51193	(07110617)	631358.67	4175426.77	792.76828	(07110617)
631371.70	4175434.03	844.61483	(07110617)	631402.59	4175441.45	979.12987	(07110617)
631420.46	4175441.60	1135.57726	(08081806)	631438.33	4175441.76	1346.34112	(08081806)
631456.19	4175441.91	1897.87781	(05072102)	631474.06	4175442.06	1865.24143	(05072102)
631491.93	4175428.58	1429.28628	(05111717)	631474.21	4175414.65	1799.52597	(05072102)
631456.50	4175414.35	1577.96910	(05111717)	631438.78	4175414.05	1555.33395	(08081806)
631421.06	4175413.74	985.67469	(06041020)	631403.35	4175413.44	1067.61444	(06041020)
631372.00	4175404.51	677.01060	(04022118)	631371.09	4175381.11	617.98748	(05072102)
631383.81	4175366.34	574.39074	(05122619)	631396.53	4175351.58	584.52272	(04012317)
631425.06	4175326.73	616.13045	(05030118)	631440.87	4175316.64	663.92139	(06102817)
631456.68	4175306.56	625.11353	(06102817)	631472.49	4175296.47	550.56142	(07100818)
631488.30	4175286.39	597.13027	(07100818)	631504.11	4175276.30	482.74972	(08081805)
631519.92	4175266.22	382.20129	(08081805)	631535.73	4175256.13	344.78295	(08081805)
631551.54	4175246.05	346.74107	(05110722)	631579.95	4175222.15	341.58773	(04102617)
631592.55	4175208.34	333.45501	(04102617)	631605.15	4175194.53	319.14302	(04102617)
631617.74	4175180.72	302.87928	(04102617)	631630.34	4175166.91	283.75275	(04102617)
631642.94	4175153.10	262.76650	(04102617)	631655.54	4175139.29	255.64702	(05011817)
631668.14	4175125.47	255.95577	(05011817)	631680.74	4175111.66	253.93596	(05011817)
631693.34	4175097.85	250.00168	(05011817)	631705.94	4175084.04	244.95244	(08071406)
631718.53	4175070.23	239.76540	(08071406)	631731.13	4175056.42	233.49103	(08071406)
631743.73	4175042.61	226.38906	(08071406)	631773.29	4175020.32	208.73581	(08071406)
631790.26	4175011.84	196.56205	(08071406)	631822.21	4174999.50	174.51317	(08031018)
631837.20	4174995.64	179.52559	(08031018)	631852.19	4174991.77	182.66363	(08031018)
631866.84	4175007.53	191.78540	(08031018)	631866.50	4175027.14	198.26466	(08031018)
631866.16	4175046.76	203.05708	(08031018)	631865.83	4175066.37	205.76717	(08031018)
631865.49	4175085.99	206.02827	(08031018)	631865.15	4175105.60	207.98274	(05011317)
631864.81	4175125.22	223.18573	(05011317)	631864.47	4175144.83	235.41289	(05011317)
631864.13	4175164.45	243.54959	(05011317)	631863.80	4175184.06	246.71169	(05011417)
631863.46	4175203.68	261.58610	(05011417)	631863.12	4175223.29	270.02257	(05011417)
631862.78	4175242.91	278.08783	(05110817)	631862.44	4175262.52	286.66137	(05110817)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK23 ***

INCLUDING SOURCE(S): STCK23 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	286.56035	(07102905)	631861.77	4175301.75	288.87350	(08022004)
631861.43	4175321.37	301.59754	(08021718)	631861.09	4175340.98	327.65001	(06052002)
631860.75	4175360.60	340.84792	(08110218)	631860.41	4175380.21	369.49110	(07111901)
631860.07	4175399.83	401.25048	(08012218)	631859.73	4175419.44	428.91115	(06111919)
631859.40	4175439.06	500.87671	(04081304)	631859.06	4175458.67	652.37318	(05020803)
631858.72	4175478.29	874.95518	(05020803)	631858.38	4175497.90	1063.13090	(05020803)
631858.04	4175517.52	1281.25192	(08041119)	631857.70	4175537.13	1305.62029	(05071803)

631857.37	4175556.75	1309.79812	(05080305)	631857.03	4175576.36	1064.22946	(06081403)
631856.69	4175595.98	720.76902	(06111908)	631856.35	4175615.59	767.51229	(06111908)
631856.01	4175635.21	758.73252	(06111908)	631855.67	4175654.82	700.81486	(06102818)
631855.33	4175674.44	633.30888	(06102818)	631855.00	4175694.05	609.41215	(07120406)
631854.66	4175713.67	622.94390	(07031619)	631854.32	4175733.28	578.41629	(07031619)
631853.98	4175752.90	582.32266	(06052306)	631853.64	4175772.51	598.20189	(06052306)
631853.30	4175792.13	591.29355	(06052306)	631852.97	4175811.74	556.10647	(07110618)
631852.63	4175831.36	501.42802	(07110618)	631852.29	4175850.97	532.54120	(06062806)
631851.95	4175870.59	557.20888	(07020318)	631851.61	4175890.20	373.91003	(06062806)
631851.27	4175909.82	344.98411	(06062806)	631850.94	4175929.43	317.23569	(06062806)
631850.60	4175949.05	288.98943	(06062806)	631850.26	4175968.66	260.34522	(06062806)
631830.54	4175988.13	223.62134	(05121424)	631811.15	4175987.98	228.26666	(06120218)
631791.77	4175987.83	235.31549	(06122319)	631772.39	4175987.67	241.57656	(07091007)
631753.00	4175987.52	279.49155	(07091007)	631733.62	4175987.37	312.25942	(07091007)
631714.24	4175987.22	336.41075	(07091007)	631694.85	4175987.07	364.62240	(07091007)
631675.47	4175986.92	476.61318	(07091007)	631656.09	4175986.77	497.77677	(07091007)
631636.70	4175986.62	454.02192	(07091007)	631617.32	4175986.46	395.98417	(07091007)
631597.94	4175986.31	331.77986	(05072006)	631578.55	4175986.16	326.83319	(04111519)
631559.17	4175986.01	292.09993	(04111519)	631539.79	4175985.86	249.36548	(04111519)
631520.40	4175985.71	214.06666	(07030418)	631501.02	4175985.56	217.35373	(07030418)
631481.64	4175985.40	215.29234	(07080306)	631462.25	4175985.25	212.48767	(07080306)
631442.87	4175985.10	210.04209	(07020208)	631423.49	4175984.95	209.12428	(07020208)
631404.10	4175984.80	221.02874	(08091907)	631384.72	4175984.65	232.50216	(08091907)
631365.34	4175984.50	234.43237	(08091907)	631345.95	4175984.35	227.05793	(08091907)
631326.57	4175984.19	211.68816	(08091907)	631307.19	4175984.04	191.60054	(07090905)
631287.80	4175983.89	186.20731	(05122507)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	151.35390	(05110817)	632304.44	4174354.52	80.62152	(05011521)
632192.15	4174956.32	135.34357	(06011617)	632420.62	4175510.15	164.18906	(07012418)
632418.97	4175552.92	164.57954	(06121320)	631187.00	4175727.00	216.37955	(07010318)
631166.00	4175729.00	210.42582	(07010318)	631121.00	4175719.00	201.18094	(06020108)
631035.00	4174830.00	215.94427	(04012317)	631106.00	4174825.00	199.64633	(07121217)
631937.00	4174528.00	108.80681	(06020105)	631322.00	4174522.00	132.20651	(07111022)
629800.63	4173850.44	31.01966	(06121421)	630150.63	4173850.44	31.34004	(06011022)
630500.63	4173850.44	57.58965	(06011109)	630850.63	4173850.44	59.74166	(06011021)
631200.63	4173850.44	64.23290	(08022002)	631550.63	4173850.44	55.32258	(05021805)
631900.63	4173850.44	59.99521	(07020623)	632250.63	4173850.44	52.55921	(06020105)
632600.63	4173850.44	44.62433	(05011521)	632950.63	4173850.44	40.66702	(04022018)
633300.63	4173850.44	29.18545	(05021018)	629800.63	4174200.44	34.58628	(07020624)
630150.63	4174200.44	44.25734	(06121421)	630500.63	4174200.44	49.85384	(05122423)

630850.63	4174200.44	101.51964	(06011109)	631200.63	4174200.44	80.69002	(06121017)
631550.63	4174200.44	80.10838	(05021805)	631900.63	4174200.44	86.65809	(07011417)
632250.63	4174200.44	71.79911	(05020818)	632600.63	4174200.44	59.51184	(04022018)
632950.63	4174200.44	40.32176	(05112916)	633300.63	4174200.44	42.69423	(06011617)
629800.63	4174550.44	37.44605	(06121217)	630150.63	4174550.44	53.57343	(04011017)
630500.63	4174550.44	71.37027	(06121421)	630850.63	4174550.44	101.73402	(04012317)
631200.63	4174550.44	153.38103	(06102817)	631550.63	4174550.44	118.91816	(05021805)
631900.63	4174550.44	116.15229	(05011817)	632250.63	4174550.44	94.57809	(05011520)
632600.63	4174550.44	74.39687	(06011617)	632950.63	4174550.44	55.71238	(07012703)
633300.63	4174550.44	42.06210	(04022223)	629800.63	4174900.44	46.52949	(04022207)
630150.63	4174900.44	55.61639	(04022208)	630500.63	4174900.44	80.62390	(06121217)
630850.63	4174900.44	134.16475	(07020624)	631200.63	4174900.44	300.76409	(06011109)
631550.63	4174900.44	195.23728	(05110722)	631900.63	4174900.44	176.35027	(08031018)
632250.63	4174900.44	128.85566	(06011617)	632600.63	4174900.44	94.08476	(04022223)
632950.63	4174900.44	67.90039	(07010217)	633300.63	4174900.44	48.34352	(07010217)
629800.63	4175250.44	47.13093	(04121304)	630150.63	4175250.44	59.75403	(04121304)
630500.63	4175250.44	89.06412	(08012221)	630850.63	4175250.44	164.95232	(04022207)
631200.63	4175250.44	337.68263	(05112423)	631550.63	4175250.44	525.87137	(07030618)
631900.63	4175250.44	285.34301	(04021502)	632250.63	4175250.44	182.85666	(06011618)
632600.63	4175250.44	107.31792	(05122223)	632950.63	4175250.44	68.94954	(05121217)
633300.63	4175250.44	48.87370	(05121217)	629800.63	4175600.44	38.55225	(07020701)
630150.63	4175600.44	57.88388	(06011024)	630500.63	4175600.44	94.50541	(06011024)
630850.63	4175600.44	143.40189	(05040705)	631200.63	4175600.44	257.23348	(07102702)
631550.63	4175600.44	804.39702	(05112507)	631900.63	4175600.44	477.74190	(06102818)
632250.63	4175600.44	209.85082	(08010924)	632600.63	4175600.44	117.69931	(05012018)
632950.63	4175600.44	70.12386	(07012418)	633300.63	4175600.44	48.49726	(07012418)
629800.63	4175950.44	36.63435	(07120621)	630150.63	4175950.44	57.95019	(07120622)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	77.84486	(06122121)	630850.63	4175950.44	116.08200	(07102703)
631200.63	4175950.44	164.23058	(07090906)	631550.63	4175950.44	231.29469	(06111518)
631900.63	4175950.44	234.94871	(06010521)	632250.63	4175950.44	180.18253	(08121517)
632600.63	4175950.44	116.77507	(05020806)	632950.63	4175950.44	68.67376	(06121503)
633300.63	4175950.44	48.82637	(05122401)	629800.63	4176300.44	35.04983	(05021923)
630150.63	4176300.44	51.11511	(06122121)	630500.63	4176300.44	76.01339	(04021521)
630850.63	4176300.44	99.80427	(04120908)	631200.63	4176300.44	141.31538	(08091907)
631550.63	4176300.44	141.49452	(07121903)	631900.63	4176300.44	174.06665	(07091007)
632250.63	4176300.44	154.23935	(06062806)	632600.63	4176300.44	99.89539	(06122320)
632950.63	4176300.44	65.46345	(04121101)	633300.63	4176300.44	44.32677	(05020806)
629800.63	4176650.44	36.28622	(04021520)	630150.63	4176650.44	46.34945	(04021521)
630500.63	4176650.44	57.78554	(04120903)	630850.63	4176650.44	79.21770	(08122718)

631200.63	4176650.44	97.38135	(08011009)	631550.63	4176650.44	102.93024	(07121903)
631900.63	4176650.44	139.01185	(07091007)	632250.63	4176650.44	102.00159	(06120218)
632600.63	4176650.44	84.95877	(07022408)	632950.63	4176650.44	64.97085	(08021908)
633300.63	4176650.44	51.13775	(08021808)	629800.63	4177000.44	31.29140	(04021521)
630150.63	4177000.44	38.87188	(04120903)	630500.63	4177000.44	49.91206	(07122917)
630850.63	4177000.44	61.22864	(07012720)	631200.63	4177000.44	76.23848	(07021108)
631550.63	4177000.44	73.65077	(07121903)	631900.63	4177000.44	77.48878	(07091007)
632250.63	4177000.44	70.64560	(05022620)	632600.63	4177000.44	57.63357	(06121107)
632950.63	4177000.44	47.44944	(07022408)	633300.63	4177000.44	43.78048	(08021908)
629800.63	4177350.44	28.07211	(04120903)	630150.63	4177350.44	31.76381	(04120908)
630500.63	4177350.44	40.70481	(07021218)	630850.63	4177350.44	45.47178	(07012722)
631200.63	4177350.44	53.10527	(07021108)	631550.63	4177350.44	52.71020	(07121903)
631900.63	4177350.44	54.08919	(05122402)	632250.63	4177350.44	50.70205	(06012820)
632600.63	4177350.44	43.63177	(06120218)	632950.63	4177350.44	37.13968	(07121908)
633300.63	4177350.44	31.06714	(08122905)	631670.70	4175493.59	1231.00298	(08081806)
631669.80	4175641.41	871.23731	(04101605)	631665.32	4175796.39	280.72237	(06102817)
631417.17	4175826.85	250.79673	(05042719)	631417.17	4175673.66	434.94428	(08091907)
631422.55	4175484.63	360.82340	(04101820)	631268.42	4175983.74	172.54227	(08091907)
631275.69	4175523.99	342.17461	(06033021)	631345.65	4175419.50	491.65559	(05030320)
631384.72	4175441.30	550.57760	(06041503)	631491.93	4175442.21	512.80655	(06110119)
631491.93	4175414.95	455.06723	(05122618)	631385.63	4175413.14	574.09248	(05030320)
631358.37	4175395.87	523.97608	(04010517)	631409.25	4175336.81	695.69304	(04041822)
631567.35	4175235.96	490.12077	(04102617)	631756.33	4175028.80	224.71035	(08090903)
631807.22	4175003.36	221.58939	(08031018)	631867.18	4174987.91	197.00414	(08031018)
631849.92	4175988.28	231.46028	(06010520)	631268.74	4175963.75	168.04755	(08091907)
631269.05	4175943.76	170.66761	(06102618)	631269.37	4175923.77	172.26976	(05122507)
631269.68	4175903.78	180.23681	(05122507)	631270.00	4175883.79	187.08322	(05122507)
631270.32	4175863.81	192.43554	(05122507)	631270.63	4175843.82	197.11701	(07012721)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	200.28666	(07012721)	631271.26	4175803.84	211.03404	(05081406)
631271.58	4175783.85	225.78233	(05081406)	631271.90	4175763.86	219.99913	(04083005)
631272.21	4175743.87	235.78812	(05081406)	631272.53	4175723.88	253.74115	(05122508)
631272.85	4175703.89	270.78243	(05122508)	631273.16	4175683.90	244.82745	(04022119)
631273.48	4175663.91	261.79472	(04022119)	631273.79	4175643.92	284.14815	(07010318)
631274.11	4175623.94	295.90318	(07080103)	631274.43	4175603.95	308.70902	(05081503)
631274.74	4175583.96	305.70900	(04082001)	631275.06	4175563.97	311.34580	(07102702)
631275.37	4175543.98	329.09234	(06033021)	631285.68	4175509.06	355.21235	(05072902)
631295.68	4175494.14	368.10448	(06011217)	631305.67	4175479.21	395.51797	(06011217)
631315.67	4175464.28	420.90212	(06121423)	631325.66	4175449.35	445.39730	(06041503)
631335.66	4175434.43	470.28761	(05071702)	631358.67	4175426.77	516.13606	(05071702)

631371.70	4175434.03	538.63689	(06041503)	631402.59	4175441.45	584.82023	(06121423)
631420.46	4175441.60	616.42620	(06121423)	631438.33	4175441.76	647.08857	(06121423)
631456.19	4175441.91	665.04983	(06121423)	631474.06	4175442.06	526.74495	(05081406)
631491.93	4175428.58	311.23796	(04041817)	631474.21	4175414.65	620.57466	(05122618)
631456.50	4175414.35	815.05328	(05071702)	631438.78	4175414.05	740.41855	(05071702)
631421.06	4175413.74	671.11329	(05030320)	631403.35	4175413.44	620.04216	(05030320)
631372.00	4175404.51	533.46766	(05122618)	631371.09	4175381.11	529.44700	(06032819)
631383.81	4175366.34	531.20137	(04022207)	631396.53	4175351.58	590.16561	(07101502)
631425.06	4175326.73	771.10995	(05122619)	631440.87	4175316.64	912.32087	(05122619)
631456.68	4175306.56	960.72498	(06041020)	631472.49	4175296.47	983.23530	(08121017)
631488.30	4175286.39	972.35790	(06011109)	631504.11	4175276.30	887.87901	(06102817)
631519.92	4175266.22	796.55856	(06102817)	631535.73	4175256.13	597.08883	(06102817)
631551.54	4175246.05	515.76725	(07030618)	631579.95	4175222.15	459.30924	(04102617)
631592.55	4175208.34	424.27741	(04102617)	631605.15	4175194.53	383.40084	(04102617)
631617.74	4175180.72	366.22118	(08071406)	631630.34	4175166.91	361.49308	(08071406)
631642.94	4175153.10	352.32917	(08071406)	631655.54	4175139.29	340.08048	(08071406)
631668.14	4175125.47	325.80843	(08071406)	631680.74	4175111.66	310.34906	(08071406)
631693.34	4175097.85	294.31078	(08071406)	631705.94	4175084.04	278.14510	(08071406)
631718.53	4175070.23	262.17871	(08071406)	631731.13	4175056.42	246.61234	(08071406)
631743.73	4175042.61	231.63265	(08090903)	631773.29	4175020.32	226.20770	(08031018)
631790.26	4175011.84	225.04995	(08031018)	631822.21	4174999.50	218.12341	(08031018)
631837.20	4174995.64	212.63668	(08031018)	631852.19	4174991.77	205.48023	(08031018)
631866.84	4175007.53	203.42009	(05011317)	631866.50	4175027.14	216.73116	(05011317)
631866.16	4175046.76	227.34895	(05011317)	631865.83	4175066.37	234.28578	(05011317)
631865.49	4175085.99	236.60999	(05011317)	631865.15	4175105.60	248.82845	(05011417)
631864.81	4175125.22	255.63553	(05011417)	631864.47	4175144.83	265.15255	(05110817)
631864.13	4175164.45	271.85047	(05110817)	631863.80	4175184.06	269.50308	(07102905)
631863.46	4175203.68	274.20696	(08022004)	631863.12	4175223.29	284.79949	(08021718)
631862.78	4175242.91	304.19032	(06052002)	631862.44	4175262.52	314.77922	(08110218)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK24 ***

INCLUDING SOURCE(S): STCK24 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	321.23878	(07080303)	631861.77	4175301.75	341.79008	(04110905)
631861.43	4175321.37	367.82291	(04101518)	631861.09	4175340.98	377.98544	(04030118)
631860.75	4175360.60	432.13450	(07102822)	631860.41	4175380.21	477.26881	(07102822)
631860.07	4175399.83	559.27326	(05020803)	631859.73	4175419.44	608.19867	(05012118)
631859.40	4175439.06	616.72735	(05012118)	631859.06	4175458.67	621.53319	(07102907)
631858.72	4175478.29	608.94088	(08010919)	631858.38	4175497.90	575.41043	(08010919)
631858.04	4175517.52	499.14485	(08010919)	631857.70	4175537.13	380.09594	(08010919)
631857.37	4175556.75	263.38478	(05072806)	631857.03	4175576.36	272.39942	(05072806)
631856.69	4175595.98	288.34413	(04121021)	631856.35	4175615.59	323.81494	(08081806)
631856.01	4175635.21	371.89263	(08081806)	631855.67	4175654.82	328.64455	(06052306)

631855.33	4175674.44	344.81227	(08021908)	631855.00	4175694.05	361.06941	(05021219)
631854.66	4175713.67	372.18299	(05021219)	631854.32	4175733.28	383.63160	(08122905)
631853.98	4175752.90	394.69677	(07122918)	631853.64	4175772.51	413.23314	(07022408)
631853.30	4175792.13	424.31065	(06062806)	631852.97	4175811.74	429.62888	(06062806)
631852.63	4175831.36	435.17788	(08122823)	631852.29	4175850.97	426.78219	(04121820)
631851.95	4175870.59	442.81051	(06010521)	631851.61	4175890.20	444.33760	(06010521)
631851.27	4175909.82	336.06984	(06072006)	631850.94	4175929.43	268.07160	(06072006)
631850.60	4175949.05	251.18224	(06120218)	631850.26	4175968.66	238.16414	(06010520)
631830.54	4175988.13	234.21909	(06122319)	631811.15	4175987.98	228.09368	(05022620)
631791.77	4175987.83	250.31167	(07091007)	631772.39	4175987.67	279.65048	(07091007)
631753.00	4175987.52	302.94698	(07091007)	631733.62	4175987.37	317.84083	(07091007)
631714.24	4175987.22	322.59794	(07091007)	631694.85	4175987.07	316.29713	(07091007)
631675.47	4175986.92	379.84405	(07091007)	631656.09	4175986.77	406.10047	(07091007)
631636.70	4175986.62	355.00854	(07091007)	631617.32	4175986.46	298.68482	(05092002)
631597.94	4175986.31	314.85338	(05122220)	631578.55	4175986.16	301.47430	(05122220)
631559.17	4175986.01	264.77466	(04111519)	631539.79	4175985.86	227.65408	(04111519)
631520.40	4175985.71	200.93279	(06010519)	631501.02	4175985.56	199.72453	(06080606)
631481.64	4175985.40	192.52076	(06111524)	631462.25	4175985.25	192.15906	(08112519)
631442.87	4175985.10	186.28639	(08112519)	631423.49	4175984.95	190.61785	(07092303)
631404.10	4175984.80	183.27096	(08011009)	631384.72	4175984.65	183.46297	(08091907)
631365.34	4175984.50	198.52925	(08091907)	631345.95	4175984.35	207.02064	(08091907)
631326.57	4175984.19	208.34950	(08091907)	631307.19	4175984.04	202.68520	(08091907)
631287.80	4175983.89	190.86935	(08091907)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	121.04572	(04022018)	632304.44	4174354.52	58.61995	(05020818)
632192.15	4174956.32	123.62709	(04022018)	632420.62	4175510.15	109.82922	(08011001)
632418.97	4175552.92	109.18938	(05122223)	631187.00	4175727.00	789.21139	(05083119)
631166.00	4175729.00	713.40488	(05083119)	631121.00	4175719.00	604.41603	(05122618)
631035.00	4174830.00	144.09606	(05012117)	631106.00	4174825.00	129.39709	(06011021)
631937.00	4174528.00	85.81047	(04022218)	631322.00	4174522.00	95.71946	(06121420)
629800.63	4173850.44	23.80665	(06011022)	630150.63	4173850.44	37.36864	(06011109)
630500.63	4173850.44	46.88845	(05012117)	630850.63	4173850.44	40.96952	(06121017)
631200.63	4173850.44	47.60692	(06121420)	631550.63	4173850.44	45.69440	(05021805)
631900.63	4173850.44	44.44810	(07020623)	632250.63	4173850.44	40.30968	(06020105)
632600.63	4173850.44	36.26300	(05020818)	632950.63	4173850.44	32.17165	(05011520)
633300.63	4173850.44	28.43307	(04022018)	629800.63	4174200.44	32.42867	(06121421)
630150.63	4174200.44	32.28665	(06011022)	630500.63	4174200.44	57.14443	(06011109)
630850.63	4174200.44	55.79363	(06011021)	631200.63	4174200.44	64.32645	(06121420)
631550.63	4174200.44	64.31854	(05021805)	631900.63	4174200.44	65.00322	(07011417)
632250.63	4174200.44	50.95389	(04122822)	632600.63	4174200.44	44.52603	(05011521)

632950.63	4174200.44	38.47273 (04022018)	633300.63	4174200.44	31.01484 (06011617)
629800.63	4174550.44	36.60923 (07020624)	630150.63	4174550.44	46.03115 (06121421)
630500.63	4174550.44	50.36787 (05122423)	630850.63	4174550.44	97.32559 (05012117)
631200.63	4174550.44	99.12796 (08022002)	631550.63	4174550.44	97.95239 (04122823)
631900.63	4174550.44	95.97290 (07011417)	632250.63	4174550.44	68.21810 (05011521)
632600.63	4174550.44	58.31291 (04022018)	632950.63	4174550.44	48.92630 (06011617)
633300.63	4174550.44	35.59789 (07012703)	629800.63	4174900.44	40.36889 (06121217)
630150.63	4174900.44	56.09880 (04011017)	630500.63	4174900.44	75.09341 (06121421)
630850.63	4174900.44	109.67295 (07121217)	631200.63	4174900.44	159.45307 (06102817)
631550.63	4174900.44	149.30813 (04122823)	631900.63	4174900.44	138.40399 (04122822)
632250.63	4174900.44	109.55128 (04022018)	632600.63	4174900.44	84.02756 (06011617)
632950.63	4174900.44	53.33712 (06120617)	633300.63	4174900.44	40.91455 (08010918)
629800.63	4175250.44	49.86042 (04022207)	630150.63	4175250.44	58.36692 (04022208)
630500.63	4175250.44	90.86364 (06121217)	630850.63	4175250.44	169.24336 (07020624)
631200.63	4175250.44	315.14957 (06011109)	631550.63	4175250.44	287.96685 (04102617)
631900.63	4175250.44	225.60637 (05011317)	632250.63	4175250.44	142.07467 (05020802)
632600.63	4175250.44	80.55869 (05021801)	632950.63	4175250.44	62.05755 (07010217)
633300.63	4175250.44	44.33435 (07020218)	629800.63	4175600.44	52.00108 (04121304)
630150.63	4175600.44	69.81048 (04121304)	630500.63	4175600.44	106.82965 (04121224)
630850.63	4175600.44	235.03974 (08012221)	631200.63	4175600.44	625.94953 (06020109)
631550.63	4175600.44	1015.54289 (07102905)	631900.63	4175600.44	383.80850 (07020218)
632250.63	4175600.44	157.43161 (05122223)	632600.63	4175600.44	89.00645 (05121217)
632950.63	4175600.44	60.71942 (08011019)	633300.63	4175600.44	46.01602 (08011019)
629800.63	4175950.44	45.43453 (06011024)	630150.63	4175950.44	66.18809 (06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
630500.63	4175950.44	90.78590 (06011024)	630850.63	4175950.44	225.88152 (07120622)
631200.63	4175950.44	360.83102 (07111102)	631550.63	4175950.44	490.85204 (07091007)
631900.63	4175950.44	309.60884 (05011818)	632250.63	4175950.44	163.43564 (05122401)
632600.63	4175950.44	87.35028 (06012918)	632950.63	4175950.44	61.77278 (06121320)
633300.63	4175950.44	46.76033 (07012418)	629800.63	4176300.44	40.15902 (07120622)
630150.63	4176300.44	59.26948 (07120622)	630500.63	4176300.44	94.01363 (06122121)
630850.63	4176300.44	148.66225 (04021018)	631200.63	4176300.44	201.88640 (08091907)
631550.63	4176300.44	199.79985 (05072006)	631900.63	4176300.44	213.44582 (06062806)
632250.63	4176300.44	144.99965 (08021808)	632600.63	4176300.44	78.86077 (08120618)
632950.63	4176300.44	56.87206 (05020719)	633300.63	4176300.44	44.58218 (05122401)
629800.63	4176650.44	40.03366 (06122121)	630150.63	4176650.44	52.74074 (04021520)
630500.63	4176650.44	71.48390 (04010518)	630850.63	4176650.44	105.89539 (07122917)
631200.63	4176650.44	128.16813 (06013008)	631550.63	4176650.44	129.40034 (08011006)
631900.63	4176650.44	122.24507 (05022620)	632250.63	4176650.44	107.75329 (07022408)
632600.63	4176650.44	74.68785 (08021908)	632950.63	4176650.44	54.79065 (08021808)

633300.63	4176650.44	39.88768	(05020806)	629800.63	4177000.44	33.29664	(04021520)
630150.63	4177000.44	43.05342	(04010518)	630500.63	4177000.44	56.80014	(04120908)
630850.63	4177000.44	73.96782	(04022021)	631200.63	4177000.44	93.14073	(07021108)
631550.63	4177000.44	85.78505	(08122723)	631900.63	4177000.44	82.00715	(04020619)
632250.63	4177000.44	68.79214	(07010323)	632600.63	4177000.44	60.92816	(07022408)
632950.63	4177000.44	52.84415	(08021908)	633300.63	4177000.44	44.80884	(08021808)
629800.63	4177350.44	30.79669	(04010518)	630150.63	4177350.44	35.99196	(04120908)
630500.63	4177350.44	44.87261	(07122917)	630850.63	4177350.44	50.56117	(07012722)
631200.63	4177350.44	59.31639	(07021108)	631550.63	4177350.44	59.86785	(06013007)
631900.63	4177350.44	57.09580	(05021302)	632250.63	4177350.44	51.17063	(05121501)
632600.63	4177350.44	44.20374	(07121908)	632950.63	4177350.44	39.53597	(07022408)
633300.63	4177350.44	39.90799	(08021908)	631670.70	4175493.59	480.56770	(05011417)
631669.80	4175641.41	773.75538	(06111919)	631665.32	4175796.39	748.31494	(06111908)
631417.17	4175826.85	472.27801	(04101820)	631417.17	4175673.66	1248.66013	(08010919)
631422.55	4175484.63	426.39209	(06102817)	631268.42	4175983.74	346.38271	(04022205)
631275.69	4175523.99	487.41120	(05111717)	631345.65	4175419.50	414.70685	(06011109)
631384.72	4175441.30	796.51081	(06102817)	631491.93	4175442.21	668.16627	(04102617)
631491.93	4175414.95	386.06871	(04102617)	631385.63	4175413.14	445.90478	(06102817)
631358.37	4175395.87	407.46545	(06102817)	631409.25	4175336.81	309.98753	(08081805)
631567.35	4175235.96	272.28876	(04102617)	631756.33	4175028.80	175.87525	(05011817)
631807.22	4175003.36	154.55829	(06020105)	631867.18	4174987.91	160.40034	(04122822)
631849.92	4175988.28	321.87175	(06052306)	631268.74	4175963.75	356.98696	(05112504)
631269.05	4175943.76	375.64922	(04082205)	631269.37	4175923.77	396.64106	(05051803)
631269.68	4175903.78	427.43013	(04022119)	631270.00	4175883.79	558.41372	(04082205)
631270.32	4175863.81	1018.84703	(05081503)	631270.63	4175843.82	868.77321	(05081503)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	1429.18391	(05061703)	631271.26	4175803.84	1089.22406	(06080604)
631271.58	4175783.85	1014.23136	(05061703)	631271.90	4175763.86	1156.27706	(08081602)
631272.21	4175743.87	1329.86955	(05111817)	631272.53	4175723.88	1100.49054	(06011217)
631272.85	4175703.89	1010.15944	(04101624)	631273.16	4175683.90	1081.23775	(06072904)
631273.48	4175663.91	1023.73431	(07110617)	631273.79	4175643.92	908.70844	(04041822)
631274.11	4175623.94	1112.28968	(04041822)	631274.43	4175603.95	1160.77777	(05030319)
631274.74	4175583.96	833.80295	(08081806)	631275.06	4175563.97	770.21530	(05111717)
631275.37	4175543.98	608.27471	(06041020)	631285.68	4175509.06	529.79226	(04012317)
631295.68	4175494.14	537.16863	(04012317)	631305.67	4175479.21	505.39307	(04012317)
631315.67	4175464.28	503.28464	(06011109)	631325.66	4175449.35	500.78645	(06011109)
631335.66	4175434.43	469.07793	(06011109)	631358.67	4175426.77	433.64074	(06102817)
631371.70	4175434.03	472.67267	(06102817)	631402.59	4175441.45	841.08359	(06102817)
631420.46	4175441.60	760.74827	(06102817)	631438.33	4175441.76	637.54653	(08081805)
631456.19	4175441.91	569.81702	(08081805)	631474.06	4175442.06	607.56235	(04102623)

631491.93	4175428.58	411.54362	(04102617)	631474.21	4175414.65	365.10283	(05110722)
631456.50	4175414.35	362.16957	(06102817)	631438.78	4175414.05	375.92340	(08081805)
631421.06	4175413.74	383.88135	(06102817)	631403.35	4175413.44	427.63635	(06102817)
631372.00	4175404.51	429.74449	(06102817)	631371.09	4175381.11	399.47956	(06102817)
631383.81	4175366.34	372.77331	(06102817)	631396.53	4175351.58	330.08565	(06102817)
631425.06	4175326.73	300.52156	(08081805)	631440.87	4175316.64	278.57019	(08081805)
631456.68	4175306.56	266.75824	(07030618)	631472.49	4175296.47	268.23040	(05110722)
631488.30	4175286.39	270.39494	(05110722)	631504.11	4175276.30	280.98169	(04102617)
631519.92	4175266.22	290.97997	(04102617)	631535.73	4175256.13	292.16086	(04102617)
631551.54	4175246.05	285.45155	(04102617)	631579.95	4175222.15	256.54513	(04102617)
631592.55	4175208.34	239.61518	(04102617)	631605.15	4175194.53	224.94442	(05112422)
631617.74	4175180.72	221.48759	(05112422)	631630.34	4175166.91	215.57153	(08071405)
631642.94	4175153.10	215.26033	(05011817)	631655.54	4175139.29	215.18610	(05011817)
631668.14	4175125.47	213.66690	(05011817)	631680.74	4175111.66	210.86632	(05011817)
631693.34	4175097.85	206.93616	(05011817)	631705.94	4175084.04	202.03743	(05011817)
631718.53	4175070.23	196.33081	(05011817)	631731.13	4175056.42	189.97133	(05011817)
631743.73	4175042.61	183.10668	(05011817)	631773.29	4175020.32	169.47950	(06020105)
631790.26	4175011.84	163.51739	(06020105)	631822.21	4174999.50	148.55533	(04122822)
631837.20	4174995.64	155.35424	(04122822)	631852.19	4174991.77	159.34890	(04122822)
631866.84	4175007.53	164.74846	(04122822)	631866.50	4175027.14	167.10010	(04122822)
631866.16	4175046.76	171.71424	(05020818)	631865.83	4175066.37	175.98175	(05020818)
631865.49	4175085.99	177.55270	(05020818)	631865.15	4175105.60	178.40002	(08031018)
631864.81	4175125.22	186.32386	(08031018)	631864.47	4175144.83	198.18619	(05011521)
631864.13	4175164.45	207.19206	(05011521)	631863.80	4175184.06	211.44801	(05011521)
631863.46	4175203.68	216.64452	(05011520)	631863.12	4175223.29	220.36653	(05011520)
631862.78	4175242.91	221.46776	(05011317)	631862.44	4175262.52	237.79795	(05011317)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK25 ***

INCLUDING SOURCE(S): STCK25 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	250.54867	(05011317)	631861.77	4175301.75	260.16070	(05112916)
631861.43	4175321.37	280.50606	(05112916)	631861.09	4175340.98	294.12200	(05112916)
631860.75	4175360.60	299.03703	(05112916)	631860.41	4175380.21	296.68178	(05011417)
631860.07	4175399.83	298.35416	(05110817)	631859.73	4175419.44	305.08175	(05110817)
631859.40	4175439.06	310.17247	(05102522)	631859.06	4175458.67	320.50933	(05112917)
631858.72	4175478.29	328.47567	(06121106)	631858.38	4175497.90	334.12422	(04022219)
631858.04	4175517.52	370.25626	(04022223)	631857.70	4175537.13	379.22687	(05021801)
631857.37	4175556.75	367.96322	(05021801)	631857.03	4175576.36	386.30547	(07010217)
631856.69	4175595.98	418.91340	(07020218)	631856.35	4175615.59	428.77544	(07020218)
631856.01	4175635.21	435.64596	(06011618)	631855.67	4175654.82	449.82305	(05122223)
631855.33	4175674.44	428.85848	(05121217)	631855.00	4175694.05	359.56344	(06012822)
631854.66	4175713.67	403.06597	(07012318)	631854.32	4175733.28	455.37830	(07012318)
631853.98	4175752.90	454.00074	(07012418)	631853.64	4175772.51	450.55400	(05012018)

631853.30	4175792.13	444.16053	(07120624)	631852.97	4175811.74	404.26238	(07030419)
631852.63	4175831.36	399.95319	(05011322)	631852.29	4175850.97	396.59979	(05020719)
631851.95	4175870.59	388.92517	(05011418)	631851.61	4175890.20	353.28040	(04111606)
631851.27	4175909.82	346.10595	(04121022)	631850.94	4175929.43	343.68287	(06092519)
631850.60	4175949.05	339.53876	(07031619)	631850.26	4175968.66	318.80299	(07031619)
631830.54	4175988.13	349.48361	(06052306)	631811.15	4175987.98	369.05231	(06052306)
631791.77	4175987.83	377.72789	(06052306)	631772.39	4175987.67	373.69455	(06052306)
631753.00	4175987.52	356.45444	(06052306)	631733.62	4175987.37	397.70784	(06062806)
631714.24	4175987.22	426.05303	(06062806)	631694.85	4175987.07	434.69245	(06062806)
631675.47	4175986.92	420.66339	(06062806)	631656.09	4175986.77	384.62563	(06062806)
631636.70	4175986.62	366.97063	(08091905)	631617.32	4175986.46	380.52153	(06081406)
631597.94	4175986.31	393.23546	(07091007)	631578.55	4175986.16	433.05222	(07091007)
631559.17	4175986.01	448.09228	(07091007)	631539.79	4175985.86	433.79699	(07091007)
631520.40	4175985.71	403.62272	(05072006)	631501.02	4175985.56	379.17577	(04111519)
631481.64	4175985.40	379.02090	(06052305)	631462.25	4175985.25	487.01638	(05112506)
631442.87	4175985.10	461.82231	(05112506)	631423.49	4175984.95	437.52734	(07090905)
631404.10	4175984.80	411.27509	(08091907)	631384.72	4175984.65	439.70835	(08091907)
631365.34	4175984.50	435.43208	(08091907)	631345.95	4175984.35	401.03757	(08091907)
631326.57	4175984.19	357.46709	(07090905)	631307.19	4175984.04	352.11501	(04083005)
631287.80	4175983.89	352.74504	(04022205)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	141.01953	(04022018)	632304.44	4174354.52	58.60509	(05020818)
632192.15	4174956.32	122.17077	(05112916)	632420.62	4175510.15	114.23446	(05121217)
632418.97	4175552.92	110.14333	(08011019)	631187.00	4175727.00	547.12705	(05081503)
631166.00	4175729.00	489.78239	(05030321)	631121.00	4175719.00	450.12506	(04041820)
631035.00	4174830.00	155.97920	(06011109)	631106.00	4174825.00	139.42561	(05012117)
631937.00	4174528.00	96.59630	(06020105)	631322.00	4174522.00	104.10568	(06121420)
629800.63	4173850.44	23.40793	(06011022)	630150.63	4173850.44	34.83658	(06011109)
630500.63	4173850.44	48.36781	(05012117)	630850.63	4173850.44	42.29564	(05010318)
631200.63	4173850.44	51.03418	(06121420)	631550.63	4173850.44	49.22871	(05021805)
631900.63	4173850.44	47.63121	(04122824)	632250.63	4173850.44	42.79267	(06020105)
632600.63	4173850.44	37.03049	(05020818)	632950.63	4173850.44	31.90992	(05011520)
633300.63	4173850.44	28.22184	(05021018)	629800.63	4174200.44	33.39716	(06121421)
630150.63	4174200.44	32.80014	(06011022)	630500.63	4174200.44	55.86445	(06011109)
630850.63	4174200.44	62.89956	(06011021)	631200.63	4174200.44	68.32578	(08022002)
631550.63	4174200.44	69.66038	(05021805)	631900.63	4174200.44	75.75284	(07011417)
632250.63	4174200.44	57.55127	(04122822)	632600.63	4174200.44	47.30496	(05011520)
632950.63	4174200.44	38.02845	(05021018)	633300.63	4174200.44	37.31046	(06011617)
629800.63	4174550.44	40.13979	(04011017)	630150.63	4174550.44	44.47213	(06121421)
630500.63	4174550.44	52.10943	(06011022)	630850.63	4174550.44	99.27679	(06011109)

631200.63	4174550.44	101.43558	(08022002)	631550.63	4174550.44	106.49674	(04122823)
631900.63	4174550.44	99.16198	(06020105)	632250.63	4174550.44	79.47801	(05011521)
632600.63	4174550.44	56.19826	(05021018)	632950.63	4174550.44	53.95403	(06011617)
633300.63	4174550.44	37.34750	(06121106)	629800.63	4174900.44	42.98843	(06020109)
630150.63	4174900.44	53.04056	(05022818)	630500.63	4174900.44	73.83813	(07020624)
630850.63	4174900.44	105.06428	(04012317)	631200.63	4174900.44	164.94540	(06102817)
631550.63	4174900.44	170.00857	(07012317)	631900.63	4174900.44	166.15949	(05020818)
632250.63	4174900.44	104.99449	(05112916)	632600.63	4174900.44	71.41925	(07012703)
632950.63	4174900.44	53.50342	(04022223)	633300.63	4174900.44	40.16547	(07010217)
629800.63	4175250.44	44.90788	(04022207)	630150.63	4175250.44	68.52941	(04022207)
630500.63	4175250.44	95.98885	(04022208)	630850.63	4175250.44	173.80681	(06120217)
631200.63	4175250.44	286.16471	(04012317)	631550.63	4175250.44	364.23752	(04102617)
631900.63	4175250.44	253.90895	(05112916)	632250.63	4175250.44	144.03022	(08010918)
632600.63	4175250.44	93.24969	(07010217)	632950.63	4175250.44	59.01111	(07020218)
633300.63	4175250.44	45.03507	(08011001)	629800.63	4175600.44	47.65303	(05122618)
630150.63	4175600.44	65.50850	(05122618)	630500.63	4175600.44	98.49811	(04121304)
630850.63	4175600.44	231.33376	(04010517)	631200.63	4175600.44	791.35506	(04101624)
631550.63	4175600.44	3524.82683	(05020803)	631900.63	4175600.44	320.20974	(06011619)
632250.63	4175600.44	144.84532	(06011619)	632600.63	4175600.44	89.28506	(06011619)
632950.63	4175600.44	62.36348	(06011619)	633300.63	4175600.44	46.78896	(06011619)
629800.63	4175950.44	47.85181	(06011024)	630150.63	4175950.44	56.39859	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	96.85557	(07120621)	630850.63	4175950.44	207.01160	(06122121)
631200.63	4175950.44	313.27316	(07092301)	631550.63	4175950.44	395.07045	(07091007)
631900.63	4175950.44	251.71863	(06052306)	632250.63	4175950.44	150.84987	(04011021)
632600.63	4175950.44	87.50761	(05122401)	632950.63	4175950.44	60.63740	(06012918)
633300.63	4175950.44	46.20485	(05012018)	629800.63	4176300.44	44.43273	(07120622)
630150.63	4176300.44	52.66688	(06122121)	630500.63	4176300.44	90.98963	(04021520)
630850.63	4176300.44	156.99194	(04120903)	631200.63	4176300.44	206.17609	(08091907)
631550.63	4176300.44	183.55760	(08011006)	631900.63	4176300.44	162.33981	(07010323)
632250.63	4176300.44	136.18372	(08021908)	632600.63	4176300.44	79.39230	(04121101)
632950.63	4176300.44	55.06621	(04011021)	633300.63	4176300.44	43.12274	(06121503)
629800.63	4176650.44	39.23283	(06122121)	630150.63	4176650.44	47.30387	(04021521)
630500.63	4176650.44	72.21932	(04120903)	630850.63	4176650.44	106.41879	(07122917)
631200.63	4176650.44	134.81331	(08011009)	631550.63	4176650.44	125.15088	(08122723)
631900.63	4176650.44	112.18197	(05021722)	632250.63	4176650.44	87.43905	(07121908)
632600.63	4176650.44	77.77397	(08021908)	632950.63	4176650.44	60.14608	(08021808)
633300.63	4176650.44	40.48240	(05011818)	629800.63	4177000.44	34.88270	(04021521)
630150.63	4177000.44	42.38848	(04010518)	630500.63	4177000.44	52.71766	(07012719)
630850.63	4177000.44	71.45610	(07012720)	631200.63	4177000.44	89.18214	(07021108)

631550.63	4177000.44	81.21968	(06013007)	631900.63	4177000.44	75.58642	(04021506)
632250.63	4177000.44	63.88749	(06120218)	632600.63	4177000.44	59.92783	(07022408)
632950.63	4177000.44	51.96557	(08021908)	633300.63	4177000.44	41.70773	(08021808)
629800.63	4177350.44	30.51647	(04010518)	630150.63	4177350.44	35.87214	(04120908)
630500.63	4177350.44	43.71657	(08122718)	630850.63	4177350.44	49.84470	(07012722)
631200.63	4177350.44	53.92970	(06021703)	631550.63	4177350.44	56.29339	(06013007)
631900.63	4177350.44	52.63701	(05021719)	632250.63	4177350.44	48.34472	(05022620)
632600.63	4177350.44	41.90425	(06010521)	632950.63	4177350.44	41.77124	(07022408)
633300.63	4177350.44	38.36666	(08021908)	631670.70	4175493.59	664.34107	(08021718)
631669.80	4175641.41	800.19814	(06121502)	631665.32	4175796.39	716.29310	(06062806)
631417.17	4175826.85	316.26496	(04083006)	631417.17	4175673.66	845.49371	(05051824)
631422.55	4175484.63	287.99187	(06011109)	631268.42	4175983.74	300.03739	(06102618)
631275.69	4175523.99	749.93357	(06020109)	631345.65	4175419.50	484.18079	(06011109)
631384.72	4175441.30	747.09377	(06011109)	631491.93	4175442.21	1121.82206	(04102617)
631491.93	4175414.95	568.29090	(04102617)	631385.63	4175413.14	509.41221	(06011109)
631358.37	4175395.87	488.37577	(06011109)	631409.25	4175336.81	394.02133	(06102817)
631567.35	4175235.96	330.47046	(04102617)	631756.33	4175028.80	201.43384	(06051924)
631807.22	4175003.36	204.75434	(04122822)	631867.18	4174987.91	186.98205	(05020818)
631849.92	4175988.28	249.12846	(06062806)	631268.74	4175963.75	317.17827	(06041021)
631269.05	4175943.76	333.16436	(07122917)	631269.37	4175923.77	354.85739	(06041021)
631269.68	4175903.78	742.62362	(07090906)	631270.00	4175883.79	852.00339	(05051802)
631270.32	4175863.81	570.99254	(07092301)	631270.63	4175843.82	562.75129	(06110118)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	596.22666	(05051803)	631271.26	4175803.84	617.27235	(07082502)
631271.58	4175783.85	663.29473	(04082001)	631271.90	4175763.86	728.34875	(04082001)
631272.21	4175743.87	722.03858	(04082001)	631272.53	4175723.88	838.75387	(06033021)
631272.85	4175703.89	917.29012	(06033021)	631273.16	4175683.90	947.37335	(05072902)
631273.48	4175663.91	947.37874	(05111617)	631273.79	4175643.92	880.14482	(06011217)
631274.11	4175623.94	1101.03677	(05083119)	631274.43	4175603.95	1214.81192	(05071702)
631274.74	4175583.96	1161.31726	(05071702)	631275.06	4175563.97	916.25112	(05030320)
631275.37	4175543.98	729.98723	(06020109)	631285.68	4175509.06	717.15569	(06020109)
631295.68	4175494.14	621.15629	(06020109)	631305.67	4175479.21	555.54449	(05072102)
631315.67	4175464.28	513.49461	(04041824)	631325.66	4175449.35	507.36380	(05111717)
631335.66	4175434.43	510.83533	(04012317)	631358.67	4175426.77	523.48498	(06011109)
631371.70	4175434.03	560.68491	(06011109)	631402.59	4175441.45	793.70911	(06011109)
631420.46	4175441.60	822.52830	(06102817)	631438.33	4175441.76	777.54698	(06102817)
631456.19	4175441.91	722.68496	(08081805)	631474.06	4175442.06	881.01160	(08102618)
631491.93	4175428.58	617.05266	(04102617)	631474.21	4175414.65	512.44035	(07030618)
631456.50	4175414.35	498.59715	(06102817)	631438.78	4175414.05	500.62188	(06102817)
631421.06	4175413.74	535.21070	(06102817)	631403.35	4175413.44	524.31698	(06102817)

631372.00	4175404.51	502.40803	(06011109)	631371.09	4175381.11	444.54081	(06011109)
631383.81	4175366.34	439.49183	(06102817)	631396.53	4175351.58	431.23657	(06102817)
631425.06	4175326.73	376.56429	(08081805)	631440.87	4175316.64	362.34318	(08081805)
631456.68	4175306.56	340.08319	(07030618)	631472.49	4175296.47	341.91068	(07030618)
631488.30	4175286.39	346.54780	(04102617)	631504.11	4175276.30	374.34159	(04102617)
631519.92	4175266.22	385.45180	(04102617)	631535.73	4175256.13	380.02333	(04102617)
631551.54	4175246.05	360.42446	(04102617)	631579.95	4175222.15	315.98768	(05011817)
631592.55	4175208.34	322.05170	(05011817)	631605.15	4175194.53	324.30758	(05011817)
631617.74	4175180.72	323.00151	(05011817)	631630.34	4175166.91	318.49156	(05011817)
631642.94	4175153.10	311.16112	(05011817)	631655.54	4175139.29	301.45051	(05011817)
631668.14	4175125.47	289.82047	(05011817)	631680.74	4175111.66	276.75047	(05011817)
631693.34	4175097.85	262.68397	(05011817)	631705.94	4175084.04	248.03632	(05011817)
631718.53	4175070.23	233.18634	(05011817)	631731.13	4175056.42	218.42523	(05011817)
631743.73	4175042.61	210.21333	(06051924)	631773.29	4175020.32	200.71039	(04122822)
631790.26	4175011.84	205.30271	(04122822)	631822.21	4174999.50	200.73813	(04122822)
631837.20	4174995.64	197.26650	(05020818)	631852.19	4174991.77	194.18234	(05020818)
631866.84	4175007.53	184.46626	(05020818)	631866.50	4175027.14	193.41595	(08031018)
631866.16	4175046.76	205.20059	(05011521)	631865.83	4175066.37	214.40411	(05011521)
631865.49	4175085.99	218.03211	(05011521)	631865.15	4175105.60	225.40686	(05011520)
631864.81	4175125.22	228.22808	(05011520)	631864.47	4175144.83	224.65044	(05011317)
631864.13	4175164.45	243.32976	(05011317)	631863.80	4175184.06	257.43102	(05011317)
631863.46	4175203.68	265.06383	(05011317)	631863.12	4175223.29	275.14718	(05112916)
631862.78	4175242.91	288.65011	(05112916)	631862.44	4175262.52	291.41294	(05112916)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK26 ***

INCLUDING SOURCE(S): STCK26 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	289.53853	(05011417)	631861.77	4175301.75	295.58215	(05110817)
631861.43	4175321.37	300.24838	(05110817)	631861.09	4175340.98	301.14953	(05102522)
631860.75	4175360.60	322.33608	(05020802)	631860.41	4175380.21	334.18929	(06121106)
631860.07	4175399.83	341.84180	(06120617)	631859.73	4175419.44	375.53536	(04022223)
631859.40	4175439.06	384.38067	(05021801)	631859.06	4175458.67	362.37685	(05021801)
631858.72	4175478.29	393.25410	(07010217)	631858.38	4175497.90	410.34995	(07020218)
631858.04	4175517.52	413.21999	(06011618)	631857.70	4175537.13	416.73699	(06011618)
631857.37	4175556.75	438.61102	(05122223)	631857.03	4175576.36	406.82156	(05121217)
631856.69	4175595.98	356.38753	(06011619)	631856.35	4175615.59	406.50196	(07012318)
631856.01	4175635.21	441.13346	(07012318)	631855.67	4175654.82	439.85319	(07012418)
631855.33	4175674.44	436.86741	(05012018)	631855.00	4175694.05	431.50954	(07120624)
631854.66	4175713.67	386.47263	(07120624)	631854.32	4175733.28	350.13833	(06111908)
631853.98	4175752.90	346.76049	(05020719)	631853.64	4175772.51	340.51961	(05011418)
631853.30	4175792.13	309.13158	(06112102)	631852.97	4175811.74	303.66755	(07071002)
631852.63	4175831.36	299.94470	(06092519)	631852.29	4175850.97	295.88030	(07031619)
631851.95	4175870.59	279.53274	(07031619)	631851.61	4175890.20	290.91482	(06052306)

631851.27	4175909.82	293.09109	(06052306)	631850.94	4175929.43	285.87593	(06052306)
631850.60	4175949.05	270.74706	(06052306)	631850.26	4175968.66	249.74068	(06052306)
631830.54	4175988.13	276.44731	(06062806)	631811.15	4175987.98	298.64326	(06062806)
631791.77	4175987.83	313.25343	(06062806)	631772.39	4175987.67	318.24347	(06062806)
631753.00	4175987.52	312.31719	(06062806)	631733.62	4175987.37	295.28345	(06062806)
631714.24	4175987.22	268.18019	(06062806)	631694.85	4175987.07	269.61557	(08091905)
631675.47	4175986.92	276.98381	(06081406)	631656.09	4175986.77	285.58644	(07091007)
631636.70	4175986.62	330.42038	(07091007)	631617.32	4175986.46	365.67050	(07091007)
631597.94	4175986.31	386.18316	(07091007)	631578.55	4175986.16	388.20417	(07091007)
631559.17	4175986.01	370.44190	(07091007)	631539.79	4175985.86	334.62591	(07091007)
631520.40	4175985.71	312.76063	(05072006)	631501.02	4175985.56	302.28486	(05020318)
631481.64	4175985.40	300.36349	(06052305)	631462.25	4175985.25	308.94661	(07110718)
631442.87	4175985.10	322.21675	(06110120)	631423.49	4175984.95	320.02013	(04111518)
631404.10	4175984.80	309.72989	(07042205)	631384.72	4175984.65	323.76507	(08091907)
631365.34	4175984.50	359.97578	(08091907)	631345.95	4175984.35	376.81543	(08091907)
631326.57	4175984.19	372.34432	(08091907)	631307.19	4175984.04	348.15747	(08091907)
631287.80	4175983.89	315.12880	(06102618)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	113.47134	(05112916)	632304.44	4174354.52	54.81321	(05011521)
632192.15	4174956.32	104.58545	(05112916)	632420.62	4175510.15	94.78336	(08011001)
632418.97	4175552.92	97.38607	(05122223)	631187.00	4175727.00	880.78432	(06121424)
631166.00	4175729.00	808.81756	(06111024)	631121.00	4175719.00	672.84085	(04101604)
631035.00	4174830.00	130.82521	(06102817)	631106.00	4174825.00	122.16455	(06102817)
631937.00	4174528.00	74.30907	(04122822)	631322.00	4174522.00	81.70999	(05010417)
629800.63	4173850.44	24.56305	(05122423)	630150.63	4173850.44	42.93230	(06011109)
630500.63	4173850.44	42.12264	(05012117)	630850.63	4173850.44	42.20893	(08022002)
631200.63	4173850.44	44.70313	(05122422)	631550.63	4173850.44	51.11904	(07012317)
631900.63	4173850.44	48.41299	(07011417)	632250.63	4173850.44	35.53165	(06020105)
632600.63	4173850.44	32.88250	(05011521)	632950.63	4173850.44	29.66224	(04022018)
633300.63	4173850.44	25.93702	(05021018)	629800.63	4174200.44	31.01217	(06121421)
630150.63	4174200.44	36.06721	(07121217)	630500.63	4174200.44	58.95289	(05012117)
630850.63	4174200.44	56.51400	(06121017)	631200.63	4174200.44	59.98481	(06121420)
631550.63	4174200.44	75.48767	(07012317)	631900.63	4174200.44	65.58777	(07011417)
632250.63	4174200.44	50.38516	(05020818)	632600.63	4174200.44	41.18434	(05011520)
632950.63	4174200.44	34.24525	(05021018)	633300.63	4174200.44	33.82107	(06011617)
629800.63	4174550.44	34.87950	(07020624)	630150.63	4174550.44	45.87958	(06121421)
630500.63	4174550.44	65.98609	(06011109)	630850.63	4174550.44	88.02620	(06011021)
631200.63	4174550.44	99.35322	(06121420)	631550.63	4174550.44	108.49845	(07012317)
631900.63	4174550.44	80.22721	(06020105)	632250.63	4174550.44	68.50406	(05011520)
632600.63	4174550.44	49.04262	(05021018)	632950.63	4174550.44	48.49484	(06011617)

633300.63	4174550.44	34.09347 (07012703)	629800.63	4174900.44	42.79970 (05022818)
630150.63	4174900.44	60.52766 (04011017)	630500.63	4174900.44	81.73373 (06121421)
630850.63	4174900.44	160.87463 (06011109)	631200.63	4174900.44	148.58183 (08022002)
631550.63	4174900.44	151.44839 (07020623)	631900.63	4174900.44	127.40793 (05011521)
632250.63	4174900.44	90.52398 (05112916)	632600.63	4174900.44	66.07840 (06011617)
632950.63	4174900.44	48.29580 (06120617)	633300.63	4174900.44	37.83475 (05021801)
629800.63	4175250.44	53.94596 (04022207)	630150.63	4175250.44	66.78417 (04022208)
630500.63	4175250.44	107.38392 (05022818)	630850.63	4175250.44	207.61643 (06121421)
631200.63	4175250.44	301.36590 (06102817)	631550.63	4175250.44	274.86797 (08071406)
631900.63	4175250.44	204.65355 (05112916)	632250.63	4175250.44	131.93366 (06120617)
632600.63	4175250.44	77.45212 (07010217)	632950.63	4175250.44	53.77006 (07010217)
633300.63	4175250.44	40.39833 (07020218)	629800.63	4175600.44	57.23086 (04121304)
630150.63	4175600.44	78.09951 (04121304)	630500.63	4175600.44	118.51951 (04121224)
630850.63	4175600.44	259.42426 (08012221)	631200.63	4175600.44	769.11278 (04022118)
631550.63	4175600.44	1342.63558 (06052002)	631900.63	4175600.44	327.20017 (06011618)
632250.63	4175600.44	136.92047 (05121217)	632600.63	4175600.44	77.20783 (05121217)
632950.63	4175600.44	54.94664 (08011019)	633300.63	4175600.44	42.22552 (08011019)
629800.63	4175950.44	51.79481 (06011024)	630150.63	4175950.44	74.42121 (06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
630500.63	4175950.44	99.97023 (07120621)	630850.63	4175950.44	235.07690 (07120622)
631200.63	4175950.44	384.50657 (04022205)	631550.63	4175950.44	501.84768 (06062806)
631900.63	4175950.44	290.89315 (05011418)	632250.63	4175950.44	139.27668 (08010924)
632600.63	4175950.44	77.01550 (05012018)	632950.63	4175950.44	55.31963 (07012418)
633300.63	4175950.44	42.73713 (07012418)	629800.63	4176300.44	47.83045 (07120622)
630150.63	4176300.44	59.53293 (07120622)	630500.63	4176300.44	106.66829 (04021520)
630850.63	4176300.44	160.16491 (04120903)	631200.63	4176300.44	191.02783 (06013008)
631550.63	4176300.44	235.97959 (07091007)	631900.63	4176300.44	185.00974 (06062806)
632250.63	4176300.44	132.24665 (08021808)	632600.63	4176300.44	71.81555 (08121018)
632950.63	4176300.44	51.87274 (06121503)	633300.63	4176300.44	40.89025 (05122401)
629800.63	4176650.44	44.29152 (06122121)	630150.63	4176650.44	53.30427 (04021521)
630500.63	4176650.44	81.34688 (04120903)	630850.63	4176650.44	114.40470 (07021218)
631200.63	4176650.44	127.46035 (07021108)	631550.63	4176650.44	131.93442 (05122402)
631900.63	4176650.44	118.66970 (06010522)	632250.63	4176650.44	87.84816 (05010604)
632600.63	4176650.44	73.64760 (08021808)	632950.63	4176650.44	48.81821 (05011818)
633300.63	4176650.44	37.55872 (08121018)	629800.63	4177000.44	38.61412 (04021521)
630150.63	4177000.44	47.36969 (04120903)	630500.63	4177000.44	61.45129 (07122917)
630850.63	4177000.44	70.91918 (06021720)	631200.63	4177000.44	83.77426 (06020124)
631550.63	4177000.44	86.52516 (08021906)	631900.63	4177000.44	79.09603 (06020201)
632250.63	4177000.44	65.17132 (07121908)	632600.63	4177000.44	52.64728 (08021908)
632950.63	4177000.44	42.95923 (08021808)	633300.63	4177000.44	39.27853 (08021808)

629800.63	4177350.44	33.25445	(04010518)	630150.63	4177350.44	39.23792	(04120908)
630500.63	4177350.44	48.85847	(07021218)	630850.63	4177350.44	55.29965	(08011009)
631200.63	4177350.44	57.90070	(07021219)	631550.63	4177350.44	60.18595	(05122220)
631900.63	4177350.44	56.05313	(04020619)	632250.63	4177350.44	49.04728	(06120218)
632600.63	4177350.44	45.81303	(07022408)	632950.63	4177350.44	38.03722	(08021908)
633300.63	4177350.44	34.10358	(08021908)	631670.70	4175493.59	400.14558	(05112917)
631669.80	4175641.41	592.98428	(07062003)	631665.32	4175796.39	549.34231	(06081403)
631417.17	4175826.85	469.03359	(06062806)	631417.17	4175673.66	1320.75994	(06121423)
631422.55	4175484.63	275.40883	(08071406)	631268.42	4175983.74	408.71982	(08091907)
631275.69	4175523.99	749.39276	(05091918)	631345.65	4175419.50	345.81671	(08081805)
631384.72	4175441.30	566.66203	(04102617)	631491.93	4175442.21	737.57146	(08090903)
631491.93	4175414.95	388.88567	(05011817)	631385.63	4175413.14	405.88951	(08102618)
631358.37	4175395.87	334.01866	(07030618)	631409.25	4175336.81	338.76387	(04102617)
631567.35	4175235.96	261.46613	(08071406)	631756.33	4175028.80	168.26727	(05020818)
631807.22	4175003.36	152.61627	(05020818)	631867.18	4174987.91	153.62856	(05011521)
631849.92	4175988.28	289.99245	(08021806)	631268.74	4175963.75	440.70981	(08091907)
631269.05	4175943.76	475.02834	(08091907)	631269.37	4175923.77	740.04197	(08091907)
631269.68	4175903.78	917.03966	(07090905)	631270.00	4175883.79	964.09781	(07090905)
631270.32	4175863.81	675.84836	(04101820)	631270.63	4175843.82	722.05039	(04101820)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	898.26303	(07082502)	631271.26	4175803.84	1218.59070	(04082001)
631271.58	4175783.85	1569.61199	(04082001)	631271.90	4175763.86	1700.87076	(04082001)
631272.21	4175743.87	2455.43582	(08081602)	631272.53	4175723.88	2495.51041	(05111817)
631272.85	4175703.89	1975.86020	(05111817)	631273.16	4175683.90	2630.38096	(04041821)
631273.48	4175663.91	2405.56210	(07110617)	631273.79	4175643.92	2069.63245	(05072102)
631274.11	4175623.94	1853.15463	(05072102)	631274.43	4175603.95	1441.28457	(05111717)
631274.74	4175583.96	1197.21714	(05111717)	631275.06	4175563.97	927.30793	(08121017)
631275.37	4175543.98	832.04284	(08121017)	631285.68	4175509.06	693.51787	(05091918)
631295.68	4175494.14	931.89825	(06102817)	631305.67	4175479.21	847.50342	(06102817)
631315.67	4175464.28	680.46148	(07100818)	631325.66	4175449.35	635.25099	(07100818)
631335.66	4175434.43	383.38897	(08081805)	631358.67	4175426.77	422.38457	(04102623)
631371.70	4175434.03	495.31778	(04102623)	631402.59	4175441.45	628.84084	(04102617)
631420.46	4175441.60	648.19559	(04102617)	631438.33	4175441.76	662.40779	(05011817)
631456.19	4175441.91	717.89517	(08071406)	631474.06	4175442.06	732.36190	(08071406)
631491.93	4175428.58	402.18970	(05011817)	631474.21	4175414.65	414.32365	(05011817)
631456.50	4175414.35	413.36543	(05011817)	631438.78	4175414.05	430.68509	(08071406)
631421.06	4175413.74	473.15907	(05011817)	631403.35	4175413.44	478.30724	(08102618)
631372.00	4175404.51	360.96850	(05110722)	631371.09	4175381.11	337.54884	(05110722)
631383.81	4175366.34	330.15094	(04102617)	631396.53	4175351.58	338.23706	(04102617)
631425.06	4175326.73	336.39582	(04102617)	631440.87	4175316.64	323.98618	(04102617)

631456.68	4175306.56	303.61457	(04102617)	631472.49	4175296.47	277.54933	(04102617)
631488.30	4175286.39	285.91065	(05011817)	631504.11	4175276.30	290.37097	(05011817)
631519.92	4175266.22	289.17168	(05011817)	631535.73	4175256.13	282.98234	(05011817)
631551.54	4175246.05	272.68505	(08071406)	631579.95	4175222.15	249.49492	(08071406)
631592.55	4175208.34	237.20301	(08071406)	631605.15	4175194.53	224.78785	(08071406)
631617.74	4175180.72	212.42478	(08071406)	631630.34	4175166.91	201.11662	(06051924)
631642.94	4175153.10	200.09747	(04122822)	631655.54	4175139.29	198.74580	(04122822)
631668.14	4175125.47	196.49471	(04122822)	631680.74	4175111.66	193.45561	(04122822)
631693.34	4175097.85	189.72768	(04122822)	631705.94	4175084.04	185.41334	(04122822)
631718.53	4175070.23	180.61485	(04122822)	631731.13	4175056.42	175.42149	(04122822)
631743.73	4175042.61	171.38533	(05020818)	631773.29	4175020.32	165.26278	(05020818)
631790.26	4175011.84	159.89830	(05020818)	631822.21	4174999.50	146.39519	(05011521)
631837.20	4174995.64	150.94066	(05011521)	631852.19	4174991.77	153.35416	(05011521)
631866.84	4175007.53	157.96298	(05011521)	631866.50	4175027.14	159.57526	(05011521)
631866.16	4175046.76	165.03371	(05011520)	631865.83	4175066.37	168.11878	(05011520)
631865.49	4175085.99	167.60336	(05011520)	631865.15	4175105.60	163.27557	(05011520)
631864.81	4175125.22	174.16122	(04022018)	631864.47	4175144.83	183.96359	(04022018)
631864.13	4175164.45	188.96419	(04022018)	631863.80	4175184.06	202.21411	(05112916)
631863.46	4175203.68	214.39969	(05112916)	631863.12	4175223.29	223.27965	(05112916)
631862.78	4175242.91	228.05236	(05112916)	631862.44	4175262.52	228.12803	(05112916)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK27 ***

INCLUDING SOURCE(S): STCK27 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	223.23245	(05112916)	631861.77	4175301.75	223.81734	(07021118)
631861.43	4175321.37	235.29411	(06011617)	631861.09	4175340.98	242.42584	(06011617)
631860.75	4175360.60	235.54591	(06011617)	631860.41	4175380.21	256.90331	(05020802)
631860.07	4175399.83	271.01341	(05020802)	631859.73	4175419.44	273.74616	(06121106)
631859.40	4175439.06	281.86408	(06120617)	631859.06	4175458.67	305.47043	(04022223)
631858.72	4175478.29	313.79517	(08010918)	631858.38	4175497.90	315.66244	(05021801)
631858.04	4175517.52	305.54429	(07010217)	631857.70	4175537.13	329.35984	(07010217)
631857.37	4175556.75	334.88141	(07020218)	631857.03	4175576.36	361.92363	(07020218)
631856.69	4175595.98	362.28945	(06011618)	631856.35	4175615.59	361.64776	(06011618)
631856.01	4175635.21	379.35450	(05122223)	631855.67	4175654.82	377.76489	(05121217)
631855.33	4175674.44	374.95568	(05011522)	631855.00	4175694.05	372.34426	(06011619)
631854.66	4175713.67	388.66650	(06011619)	631854.32	4175733.28	381.56348	(07012318)
631853.98	4175752.90	381.76309	(07012318)	631853.64	4175772.51	385.93733	(07012418)
631853.30	4175792.13	382.50312	(05012018)	631852.97	4175811.74	379.12785	(06012918)
631852.63	4175831.36	370.69809	(07120624)	631852.29	4175850.97	346.39457	(05122401)
631851.95	4175870.59	341.39871	(05122401)	631851.61	4175890.20	338.28571	(06121503)
631851.27	4175909.82	329.98444	(05011418)	631850.94	4175929.43	323.66541	(05011418)
631850.60	4175949.05	296.90272	(04121024)	631850.26	4175968.66	295.52097	(04121022)
631830.54	4175988.13	297.04660	(06011623)	631811.15	4175987.98	304.50742	(08122903)

631791.77	4175987.83	315.45746	(07031619)	631772.39	4175987.67	323.02165	(07031619)
631753.00	4175987.52	319.17103	(06092419)	631733.62	4175987.37	323.75234	(06052306)
631714.24	4175987.22	349.45798	(06052306)	631694.85	4175987.07	368.31966	(06052306)
631675.47	4175986.92	378.01586	(06052306)	631656.09	4175986.77	376.71994	(06052306)
631636.70	4175986.62	363.42897	(06052306)	631617.32	4175986.46	387.15570	(06062806)
631597.94	4175986.31	420.55283	(06062806)	631578.55	4175986.16	438.05385	(06062806)
631559.17	4175986.01	435.75123	(06062806)	631539.79	4175985.86	412.33884	(06062806)
631520.40	4175985.71	369.61671	(06062806)	631501.02	4175985.56	376.21721	(06081406)
631481.64	4175985.40	393.62137	(07091007)	631462.25	4175985.25	440.24551	(07091007)
631442.87	4175985.10	461.53417	(07091007)	631423.49	4175984.95	451.50680	(07091007)
631404.10	4175984.80	534.95501	(07091007)	631384.72	4175984.65	520.11789	(07091007)
631365.34	4175984.50	394.53215	(07091007)	631345.95	4175984.35	389.48120	(07030418)
631326.57	4175984.19	389.83579	(07030418)	631307.19	4175984.04	377.01245	(07080306)
631287.80	4175983.89	377.18004	(08091907)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	109.11914	(05112916)	632304.44	4174354.52	57.91982	(05011520)
632192.15	4174956.32	114.90001	(06011617)	632420.62	4175510.15	97.46870	(05121217)
632418.97	4175552.92	94.34202	(08011019)	631187.00	4175727.00	696.24176	(05081503)
631166.00	4175729.00	656.48302	(05081503)	631121.00	4175719.00	467.67522	(06033021)
631035.00	4174830.00	150.76037	(06011021)	631106.00	4174825.00	161.68641	(06102817)
631937.00	4174528.00	86.04663	(04122822)	631322.00	4174522.00	87.89181	(05010417)
629800.63	4173850.44	26.00131	(06011022)	630150.63	4173850.44	42.73224	(06011109)
630500.63	4173850.44	49.10110	(05012117)	630850.63	4173850.44	43.68282	(07122217)
631200.63	4173850.44	47.77452	(05122422)	631550.63	4173850.44	55.91871	(07012317)
631900.63	4173850.44	53.12104	(07011417)	632250.63	4173850.44	39.72769	(04122822)
632600.63	4173850.44	36.66908	(05011521)	632950.63	4173850.44	33.23585	(04022018)
633300.63	4173850.44	25.52550	(05021018)	629800.63	4174200.44	35.68149	(06121421)
630150.63	4174200.44	36.06878	(05122423)	630500.63	4174200.44	63.74740	(06011109)
630850.63	4174200.44	60.59952	(05010318)	631200.63	4174200.44	67.45102	(06121420)
631550.63	4174200.44	80.90066	(07012317)	631900.63	4174200.44	63.90120	(07011417)
632250.63	4174200.44	51.98201	(05020818)	632600.63	4174200.44	45.32451	(04022018)
632950.63	4174200.44	32.96203	(05021018)	633300.63	4174200.44	36.57948	(06011617)
629800.63	4174550.44	41.34725	(07020624)	630150.63	4174550.44	52.21089	(06121421)
630500.63	4174550.44	59.10374	(07121217)	630850.63	4174550.44	106.08203	(05012117)
631200.63	4174550.44	112.20515	(06121420)	631550.63	4174550.44	109.60912	(07012317)
631900.63	4174550.44	87.16377	(04122822)	632250.63	4174550.44	67.96559	(04022018)
632600.63	4174550.44	50.02888	(06011617)	632950.63	4174550.44	45.90054	(06011617)
633300.63	4174550.44	36.50269	(06120617)	629800.63	4174900.44	46.21678	(06121217)
630150.63	4174900.44	63.67313	(06120217)	630500.63	4174900.44	89.16615	(06121421)
630850.63	4174900.44	156.69761	(06011109)	631200.63	4174900.44	175.87984	(08022002)

631550.63	4174900.44	158.76277	(04122824)	631900.63	4174900.44	133.10103	(05011520)
632250.63	4174900.44	101.85652	(06011617)	632600.63	4174900.44	66.30112	(06120617)
632950.63	4174900.44	49.12872	(08010918)	633300.63	4174900.44	40.14013	(07010217)
629800.63	4175250.44	52.44051	(04022207)	630150.63	4175250.44	76.06049	(04022207)
630500.63	4175250.44	113.40670	(05122617)	630850.63	4175250.44	233.36376	(07020624)
631200.63	4175250.44	369.72357	(06102817)	631550.63	4175250.44	269.57339	(08071406)
631900.63	4175250.44	192.41122	(05020802)	632250.63	4175250.44	117.06971	(05021801)
632600.63	4175250.44	77.49091	(07010217)	632950.63	4175250.44	52.43040	(08011001)
633300.63	4175250.44	41.11809	(08011001)	629800.63	4175600.44	52.74735	(05122618)
630150.63	4175600.44	74.38766	(05122618)	630500.63	4175600.44	116.72739	(04121304)
630850.63	4175600.44	242.94246	(04010517)	631200.63	4175600.44	836.25548	(05030320)
631550.63	4175600.44	1938.30672	(05020803)	631900.63	4175600.44	323.19368	(06011619)
632250.63	4175600.44	122.27101	(06011619)	632600.63	4175600.44	78.14849	(06011619)
632950.63	4175600.44	56.14406	(06011619)	633300.63	4175600.44	42.90194	(06011619)
629800.63	4175950.44	51.45391	(06011024)	630150.63	4175950.44	57.53665	(07120621)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	116.68324	(07120622)	630850.63	4175950.44	206.29935	(04021520)
631200.63	4175950.44	317.76273	(08091907)	631550.63	4175950.44	361.72153	(06072006)
631900.63	4175950.44	279.42294	(08122903)	632250.63	4175950.44	136.55620	(06121503)
632600.63	4175950.44	77.11470	(08010924)	632950.63	4175950.44	54.76829	(06012918)
633300.63	4175950.44	42.48014	(06121320)	629800.63	4176300.44	47.68190	(07120622)
630150.63	4176300.44	64.11566	(06122121)	630500.63	4176300.44	95.30523	(04021521)
630850.63	4176300.44	141.26057	(04120908)	631200.63	4176300.44	178.80451	(08011009)
631550.63	4176300.44	230.77858	(07091007)	631900.63	4176300.44	207.16491	(06062806)
632250.63	4176300.44	128.43408	(08021808)	632600.63	4176300.44	71.50544	(05011818)
632950.63	4176300.44	50.42028	(07122919)	633300.63	4176300.44	39.36775	(05011322)
629800.63	4176650.44	42.73500	(04021520)	630150.63	4176650.44	55.31719	(04021521)
630500.63	4176650.44	70.30771	(04120908)	630850.63	4176650.44	100.32889	(04022021)
631200.63	4176650.44	118.77452	(06021703)	631550.63	4176650.44	129.46840	(05122402)
631900.63	4176650.44	119.16690	(06013003)	632250.63	4176650.44	96.22223	(07022408)
632600.63	4176650.44	65.63107	(08021908)	632950.63	4176650.44	51.16373	(08021808)
633300.63	4176650.44	36.33166	(07022020)	629800.63	4177000.44	37.25216	(04021521)
630150.63	4177000.44	44.46639	(04120903)	630500.63	4177000.44	58.78246	(07122917)
630850.63	4177000.44	69.86938	(07012722)	631200.63	4177000.44	76.74581	(06020124)
631550.63	4177000.44	84.01359	(06020918)	631900.63	4177000.44	75.73603	(06020201)
632250.63	4177000.44	62.74932	(06010521)	632600.63	4177000.44	51.78747	(07022408)
632950.63	4177000.44	47.39153	(08021908)	633300.63	4177000.44	41.04211	(08021808)
629800.63	4177350.44	32.26282	(04120903)	630150.63	4177350.44	36.66020	(07012719)
630500.63	4177350.44	44.47627	(04022021)	630850.63	4177350.44	56.11039	(08011009)
631200.63	4177350.44	54.21767	(07021219)	631550.63	4177350.44	57.11646	(05122220)

631900.63	4177350.44	53.12732	(04021506)	632250.63	4177350.44	46.78521	(06013003)
632600.63	4177350.44	40.53966	(07121908)	632950.63	4177350.44	34.74150	(08122905)
633300.63	4177350.44	36.53517	(08021908)	631670.70	4175493.59	440.60459	(06111919)
631669.80	4175641.41	658.47040	(05071803)	631665.32	4175796.39	469.03866	(06092519)
631417.17	4175826.85	329.97390	(04121819)	631417.17	4175673.66	1280.24464	(05111717)
631422.55	4175484.63	224.48445	(07030618)	631268.42	4175983.74	292.66292	(07020208)
631275.69	4175523.99	1214.06190	(06011109)	631345.65	4175419.50	536.82239	(08081805)
631384.72	4175441.30	691.02458	(04102617)	631491.93	4175442.21	636.04980	(05051824)
631491.93	4175414.95	460.37613	(08031018)	631385.63	4175413.14	520.46672	(04102617)
631358.37	4175395.87	465.32363	(07030618)	631409.25	4175336.81	406.10816	(04102617)
631567.35	4175235.96	264.57306	(08031018)	631756.33	4175028.80	166.93495	(05011521)
631807.22	4175003.36	158.41114	(05011521)	631867.18	4174987.91	145.62433	(05011520)
631849.92	4175988.28	277.73894	(08121517)	631268.74	4175963.75	303.91948	(07020208)
631269.05	4175943.76	332.70268	(08091907)	631269.37	4175923.77	478.72571	(08091907)
631269.68	4175903.78	525.41389	(08091907)	631270.00	4175883.79	464.10522	(07090905)
631270.32	4175863.81	435.31953	(05042719)	631270.63	4175843.82	396.13215	(05042719)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	476.28304	(05112506)	631271.26	4175803.84	479.23312	(05112506)
631271.58	4175783.85	505.12775	(05022619)	631271.90	4175763.86	545.42441	(06011108)
631272.21	4175743.87	653.14246	(08091907)	631272.53	4175723.88	651.87180	(06110119)
631272.85	4175703.89	593.57705	(06110119)	631273.16	4175683.90	468.73873	(06033021)
631273.48	4175663.91	648.04319	(06033021)	631273.79	4175643.92	1070.50302	(06121423)
631274.11	4175623.94	1819.12325	(05071702)	631274.43	4175603.95	2457.59634	(05071702)
631274.74	4175583.96	1905.21469	(05030320)	631275.06	4175563.97	1472.32522	(07110617)
631275.37	4175543.98	1652.45079	(06041020)	631285.68	4175509.06	1591.11724	(06011109)
631295.68	4175494.14	1530.48991	(06102817)	631305.67	4175479.21	1744.33642	(06102817)
631315.67	4175464.28	1398.55402	(06102817)	631325.66	4175449.35	1003.94400	(07100818)
631335.66	4175434.43	592.31658	(08081805)	631358.67	4175426.77	530.17142	(07030618)
631371.70	4175434.03	612.69834	(04102617)	631402.59	4175441.45	702.44325	(04102617)
631420.46	4175441.60	675.01313	(05011817)	631438.33	4175441.76	676.07706	(08071406)
631456.19	4175441.91	649.80527	(08031018)	631474.06	4175442.06	655.20772	(08031018)
631491.93	4175428.58	474.20009	(08031018)	631474.21	4175414.65	469.62815	(08031018)
631456.50	4175414.35	515.37891	(06052001)	631438.78	4175414.05	516.52813	(08071406)
631421.06	4175413.74	574.75800	(08102618)	631403.35	4175413.44	580.82226	(08102618)
631372.00	4175404.51	486.46655	(07030618)	631371.09	4175381.11	445.25894	(07030618)
631383.81	4175366.34	426.25647	(04102617)	631396.53	4175351.58	421.30493	(04102617)
631425.06	4175326.73	383.31568	(04102617)	631440.87	4175316.64	349.42726	(04102617)
631456.68	4175306.56	354.28553	(05011817)	631472.49	4175296.47	352.80675	(08071406)
631488.30	4175286.39	346.34043	(08071406)	631504.11	4175276.30	333.07262	(08071406)
631519.92	4175266.22	314.68628	(08071406)	631535.73	4175256.13	292.80607	(08071406)

631551.54	4175246.05	268.85338	(08071406)	631579.95	4175222.15	258.11043	(08031018)
631592.55	4175208.34	251.33798	(08031018)	631605.15	4175194.53	244.34381	(08031018)
631617.74	4175180.72	237.19790	(08031018)	631630.34	4175166.91	229.96537	(08031018)
631642.94	4175153.10	222.69234	(08031018)	631655.54	4175139.29	215.41987	(08031018)
631668.14	4175125.47	208.17735	(08031018)	631680.74	4175111.66	201.00398	(08031018)
631693.34	4175097.85	193.91847	(08031018)	631705.94	4175084.04	186.94123	(08031018)
631718.53	4175070.23	180.09110	(08031018)	631731.13	4175056.42	173.37936	(08031018)
631743.73	4175042.61	169.82260	(05011521)	631773.29	4175020.32	165.84856	(05011521)
631790.26	4175011.84	162.91643	(05011521)	631822.21	4174999.50	156.67917	(05011520)
631837.20	4174995.64	154.52435	(05011520)	631852.19	4174991.77	150.75924	(05011520)
631866.84	4175007.53	144.41093	(04022018)	631866.50	4175027.14	153.55759	(04022018)
631866.16	4175046.76	160.07658	(04022018)	631865.83	4175066.37	165.52205	(05112916)
631865.49	4175085.99	176.14144	(05112916)	631865.15	4175105.60	184.98413	(05112916)
631864.81	4175125.22	191.45085	(05112916)	631864.47	4175144.83	194.98812	(05112916)
631864.13	4175164.45	195.17778	(05112916)	631863.80	4175184.06	191.77207	(05112916)
631863.46	4175203.68	186.74430	(07021118)	631863.12	4175223.29	194.71819	(06011617)
631862.78	4175242.91	198.29841	(06011617)	631862.44	4175262.52	194.04096	(05020802)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK28 ***

INCLUDING SOURCE(S): STCK28 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	211.71261	(05020802)	631861.77	4175301.75	219.40950	(05020802)
631861.43	4175321.37	222.75001	(06120617)	631861.09	4175340.98	236.67032	(04022223)
631860.75	4175360.60	255.34687	(04022223)	631860.41	4175380.21	260.17267	(08010918)
631860.07	4175399.83	260.59287	(05021801)	631859.73	4175419.44	261.47695	(07010217)
631859.40	4175439.06	275.56630	(07010217)	631859.06	4175458.67	306.17740	(07020218)
631858.72	4175478.29	323.86665	(07020218)	631858.38	4175497.90	326.11819	(06011618)
631858.04	4175517.52	321.46761	(06011618)	631857.70	4175537.13	336.17081	(05122223)
631857.37	4175556.75	347.80610	(05011522)	631857.03	4175576.36	371.58190	(05011522)
631856.69	4175595.98	373.46959	(06011619)	631856.35	4175615.59	383.70181	(06011619)
631856.01	4175635.21	399.12775	(07012318)	631855.67	4175654.82	393.82495	(07012318)
631855.33	4175674.44	400.22081	(07012418)	631855.00	4175694.05	398.28686	(05012018)
631854.66	4175713.67	394.33780	(06012918)	631854.32	4175733.28	383.08654	(07120624)
631853.98	4175752.90	368.42916	(05122401)	631853.64	4175772.51	359.77433	(05122401)
631853.30	4175792.13	358.42699	(06121503)	631852.97	4175811.74	350.61827	(05011418)
631852.63	4175831.36	341.54885	(05011418)	631852.29	4175850.97	319.20530	(04121024)
631851.95	4175870.59	319.13808	(04121022)	631851.61	4175890.20	312.57522	(08021806)
631851.27	4175909.82	307.83087	(07120406)	631850.94	4175929.43	300.30220	(08122903)
631850.60	4175949.05	299.05684	(08021808)	631850.26	4175968.66	292.32410	(08021808)
631830.54	4175988.13	282.76645	(07021220)	631811.15	4175987.98	289.20886	(06122320)
631791.77	4175987.83	303.49842	(08021908)	631772.39	4175987.67	313.71236	(08021908)
631753.00	4175987.52	306.95110	(08021908)	631733.62	4175987.37	298.92449	(08051502)
631714.24	4175987.22	316.77863	(06062806)	631694.85	4175987.07	345.76133	(06062806)

631675.47	4175986.92	365.63552	(06062806)	631656.09	4175986.77	373.81969	(06062806)
631636.70	4175986.62	368.65963	(06062806)	631617.32	4175986.46	350.89918	(06062806)
631597.94	4175986.31	322.73420	(06062806)	631578.55	4175986.16	326.85266	(06072006)
631559.17	4175986.01	318.54455	(06121921)	631539.79	4175985.86	321.81285	(06122319)
631520.40	4175985.71	333.52986	(07091007)	631501.02	4175985.56	373.09861	(07091007)
631481.64	4175985.40	397.33268	(07091007)	631462.25	4175985.25	401.82569	(07091007)
631442.87	4175985.10	384.83823	(07091007)	631423.49	4175984.95	348.10295	(07091007)
631404.10	4175984.80	367.92356	(07091007)	631384.72	4175984.65	367.96994	(07091007)
631365.34	4175984.50	298.33087	(05122221)	631345.95	4175984.35	302.45429	(05122221)
631326.57	4175984.19	307.20103	(07030418)	631307.19	4175984.04	303.46351	(07080306)
631287.80	4175983.89	296.85473	(07080306)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	123.98906	(04122822)	632304.44	4174354.52	71.38299	(06020105)
632192.15	4174956.32	132.10844	(08031018)	632420.62	4175510.15	189.74232	(05122223)
632418.97	4175552.92	183.75143	(05121217)	631187.00	4175727.00	230.61891	(06011024)
631166.00	4175729.00	223.35440	(06011024)	631121.00	4175719.00	207.02620	(06011024)
631035.00	4174830.00	96.19938	(04012317)	631106.00	4174825.00	104.33651	(04012317)
631937.00	4174528.00	89.50989	(07012317)	631322.00	4174522.00	84.61565	(06102817)
629800.63	4173850.44	28.92211	(06121421)	630150.63	4173850.44	28.53922	(04012317)
630500.63	4173850.44	36.97232	(07121217)	630850.63	4173850.44	51.83805	(05012117)
631200.63	4173850.44	45.20854	(06121017)	631550.63	4173850.44	51.99347	(06121420)
631900.63	4173850.44	49.54835	(04122823)	632250.63	4173850.44	49.95395	(05021804)
632600.63	4173850.44	42.94265	(06020105)	632950.63	4173850.44	38.23631	(05011521)
633300.63	4173850.44	35.17796	(04022018)	629800.63	4174200.44	30.01180	(07020624)
630150.63	4174200.44	38.06236	(06121421)	630500.63	4174200.44	39.63576	(04012317)
630850.63	4174200.44	59.21959	(07011517)	631200.63	4174200.44	59.81461	(06011021)
631550.63	4174200.44	69.61425	(06121420)	631900.63	4174200.44	63.64370	(07012317)
632250.63	4174200.44	69.78341	(07011417)	632600.63	4174200.44	57.90951	(05020818)
632950.63	4174200.44	47.60779	(05011520)	633300.63	4174200.44	38.99471	(05021018)
629800.63	4174550.44	31.96452	(06120217)	630150.63	4174550.44	43.93185	(04011017)
630500.63	4174550.44	53.71806	(06121421)	630850.63	4174550.44	65.28045	(04012317)
631200.63	4174550.44	87.68436	(05012117)	631550.63	4174550.44	89.78116	(08022002)
631900.63	4174550.44	89.36680	(07012317)	632250.63	4174550.44	82.90306	(06020105)
632600.63	4174550.44	76.21508	(05011520)	632950.63	4174550.44	55.52055	(08030618)
633300.63	4174550.44	53.11976	(06011617)	629800.63	4174900.44	34.17242	(04022208)
630150.63	4174900.44	45.16687	(06121217)	630500.63	4174900.44	62.79576	(06120217)
630850.63	4174900.44	80.86570	(04101819)	631200.63	4174900.44	118.77184	(04012317)
631550.63	4174900.44	148.39562	(06102817)	631900.63	4174900.44	139.17878	(04102617)
632250.63	4174900.44	119.46489	(08031018)	632600.63	4174900.44	92.72056	(08030618)
632950.63	4174900.44	73.14842	(05020802)	633300.63	4174900.44	53.17570	(04022223)

629800.63	4175250.44	37.15084	(08012221)	630150.63	4175250.44	49.17611	(04022207)
630500.63	4175250.44	78.11242	(04022207)	630850.63	4175250.44	106.41754	(04022208)
631200.63	4175250.44	181.16848	(06120217)	631550.63	4175250.44	268.30156	(06011109)
631900.63	4175250.44	248.42718	(05011817)	632250.63	4175250.44	190.26255	(05102522)
632600.63	4175250.44	129.87449	(05021801)	632950.63	4175250.44	87.27097	(07010217)
633300.63	4175250.44	56.07089	(07020218)	629800.63	4175600.44	40.04563	(05122618)
630150.63	4175600.44	50.55636	(05122618)	630500.63	4175600.44	66.87395	(05122618)
630850.63	4175600.44	108.58997	(04010517)	631200.63	4175600.44	222.88509	(05122618)
631550.63	4175600.44	907.52552	(06072903)	631900.63	4175600.44	1480.29203	(08112619)
632250.63	4175600.44	188.50203	(08041119)	632600.63	4175600.44	108.34190	(06011619)
632950.63	4175600.44	76.95043	(06011619)	633300.63	4175600.44	58.51943	(06011619)
629800.63	4175950.44	40.57513	(06011024)	630150.63	4175950.44	50.82914	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***
INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	61.88593	(05040705)	630850.63	4175950.44	111.73829	(07120622)
631200.63	4175950.44	176.57773	(06122121)	631550.63	4175950.44	431.92200	(04101820)
631900.63	4175950.44	230.11641	(06012924)	632250.63	4175950.44	185.23804	(06092419)
632600.63	4175950.44	127.49426	(05011418)	632950.63	4175950.44	81.95980	(05122401)
633300.63	4175950.44	57.83358	(06012918)	629800.63	4176300.44	33.11401	(07120622)
630150.63	4176300.44	48.99499	(07120622)	630500.63	4176300.44	63.12596	(06122121)
630850.63	4176300.44	92.59118	(04021520)	631200.63	4176300.44	111.00275	(04121223)
631550.63	4176300.44	143.33315	(08091907)	631900.63	4176300.44	140.59182	(05072006)
632250.63	4176300.44	125.17061	(06062806)	632600.63	4176300.44	101.88191	(07021220)
632950.63	4176300.44	77.21102	(05011818)	633300.63	4176300.44	55.20599	(04011021)
629800.63	4176650.44	31.73581	(06122121)	630150.63	4176650.44	42.30301	(06122121)
630500.63	4176650.44	56.70332	(04021521)	630850.63	4176650.44	73.66914	(04120903)
631200.63	4176650.44	85.94343	(08122718)	631550.63	4176650.44	93.55639	(07021108)
631900.63	4176650.44	92.29353	(06020918)	632250.63	4176650.44	86.99336	(05022620)
632600.63	4176650.44	78.71750	(05021921)	632950.63	4176650.44	69.86779	(08021908)
633300.63	4176650.44	56.53494	(08021808)	629800.63	4177000.44	33.21177	(04021520)
630150.63	4177000.44	39.92854	(04021521)	630500.63	4177000.44	48.31621	(04120903)
630850.63	4177000.44	57.04379	(07122917)	631200.63	4177000.44	63.94058	(07012720)
631550.63	4177000.44	69.36713	(06021703)	631900.63	4177000.44	70.53386	(05122220)
632250.63	4177000.44	67.72974	(04020619)	632600.63	4177000.44	61.46026	(06010522)
632950.63	4177000.44	55.90995	(07022408)	633300.63	4177000.44	51.19958	(08021908)
629800.63	4177350.44	30.01101	(04021521)	630150.63	4177350.44	34.15588	(04120903)
630500.63	4177350.44	39.87017	(04120908)	630850.63	4177350.44	48.14564	(07021218)
631200.63	4177350.44	51.70367	(07012722)	631550.63	4177350.44	54.25247	(06020124)
631900.63	4177350.44	52.46306	(05122220)	632250.63	4177350.44	53.27825	(05021302)
632600.63	4177350.44	48.71700	(05121501)	632950.63	4177350.44	42.84630	(04121820)
633300.63	4177350.44	39.88855	(07022408)	631670.70	4175493.59	336.49606	(07092306)

631669.80	4175641.41	722.75015	(06072803)	631665.32	4175796.39	184.14501	(04101820)
631417.17	4175826.85	258.92315	(04082206)	631417.17	4175673.66	375.89384	(06072906)
631422.55	4175484.63	326.88488	(07101502)	631268.42	4175983.74	179.58428	(04030101)
631275.69	4175523.99	280.43944	(06051906)	631345.65	4175419.50	271.60827	(06100918)
631384.72	4175441.30	293.27874	(06100918)	631491.93	4175442.21	763.37777	(07110617)
631491.93	4175414.95	587.86122	(07110617)	631385.63	4175413.14	277.53397	(06100918)
631358.37	4175395.87	255.07245	(06121217)	631409.25	4175336.81	230.58122	(07020624)
631567.35	4175235.96	264.64483	(06011109)	631756.33	4175028.80	141.27481	(05010417)
631807.22	4175003.36	143.38509	(04102617)	631867.18	4174987.91	159.23212	(04102617)
631849.92	4175988.28	232.65197	(05072006)	631268.74	4175963.75	188.99996	(04030101)
631269.05	4175943.76	192.10640	(05110324)	631269.37	4175923.77	195.87760	(04082206)
631269.68	4175903.78	198.93997	(06080704)	631270.00	4175883.79	202.78160	(08100321)
631270.32	4175863.81	212.05627	(05110619)	631270.63	4175843.82	226.89798	(05110619)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***

INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	232.52010	(07071004)	631271.26	4175803.84	236.43378	(05030321)
631271.58	4175783.85	231.81020	(04041820)	631271.90	4175763.86	245.18816	(05030324)
631272.21	4175743.87	269.08831	(05030324)	631272.53	4175723.88	268.56214	(05030324)
631272.85	4175703.89	272.93407	(06072906)	631273.16	4175683.90	271.66128	(07042002)
631273.48	4175663.91	276.53454	(07042002)	631273.79	4175643.92	275.11955	(04101604)
631274.11	4175623.94	273.89493	(05122618)	631274.43	4175603.95	268.16469	(05122618)
631274.74	4175583.96	273.97588	(04121304)	631275.06	4175563.97	285.14038	(06032819)
631275.37	4175543.98	280.79294	(06032819)	631285.68	4175509.06	277.56665	(04110818)
631295.68	4175494.14	257.05614	(04110818)	631305.67	4175479.21	251.71671	(04022207)
631315.67	4175464.28	268.02929	(06041224)	631325.66	4175449.35	270.27828	(07101502)
631335.66	4175434.43	258.70222	(05102719)	631358.67	4175426.77	278.84502	(06100918)
631371.70	4175434.03	286.08286	(06100918)	631402.59	4175441.45	305.59798	(06100918)
631420.46	4175441.60	314.21444	(06100918)	631438.33	4175441.76	318.25529	(06100918)
631456.19	4175441.91	690.42940	(04041822)	631474.06	4175442.06	491.02331	(04041821)
631491.93	4175428.58	678.81477	(07110617)	631474.21	4175414.65	732.38217	(06051905)
631456.50	4175414.35	318.97678	(07111023)	631438.78	4175414.05	276.51830	(06120217)
631421.06	4175413.74	268.41720	(07111023)	631403.35	4175413.44	274.46287	(06100918)
631372.00	4175404.51	266.03295	(06100918)	631371.09	4175381.11	237.76171	(07111023)
631383.81	4175366.34	245.10216	(08041719)	631396.53	4175351.58	240.26380	(07020624)
631425.06	4175326.73	229.06104	(04101819)	631440.87	4175316.64	225.83027	(04101819)
631456.68	4175306.56	233.59443	(08062901)	631472.49	4175296.47	238.06674	(04012317)
631488.30	4175286.39	255.29004	(04012317)	631504.11	4175276.30	259.12751	(04012317)
631519.92	4175266.22	248.75078	(04012317)	631535.73	4175256.13	256.05271	(06011109)
631551.54	4175246.05	266.79303	(06011109)	631579.95	4175222.15	247.64570	(06011109)
631592.55	4175208.34	222.15181	(06011109)	631605.15	4175194.53	225.24697	(06102817)
631617.74	4175180.72	226.39441	(06102817)	631630.34	4175166.91	223.77582	(06102817)

631642.94	4175153.10	213.98411	(06102817)	631655.54	4175139.29	198.43250	(06102817)
631668.14	4175125.47	178.83817	(06102817)	631680.74	4175111.66	175.37188	(05021806)
631693.34	4175097.85	172.79977	(05021806)	631705.94	4175084.04	167.02270	(05021806)
631718.53	4175070.23	158.66676	(05021806)	631731.13	4175056.42	153.18262	(05122422)
631743.73	4175042.61	148.50529	(05122422)	631773.29	4175020.32	133.32692	(05010417)
631790.26	4175011.84	133.55286	(04102617)	631822.21	4174999.50	150.83140	(04102617)
631837.20	4174995.64	156.01610	(04102617)	631852.19	4174991.77	158.81430	(04102617)
631866.84	4175007.53	163.91044	(04102617)	631866.50	4175027.14	168.73784	(04102617)
631866.16	4175046.76	173.72208	(04102617)	631865.83	4175066.37	178.85837	(04102617)
631865.49	4175085.99	184.15383	(04102617)	631865.15	4175105.60	189.59774	(04102617)
631864.81	4175125.22	195.18666	(04102617)	631864.47	4175144.83	200.89473	(04102617)
631864.13	4175164.45	206.72248	(04102617)	631863.80	4175184.06	212.63084	(04102617)
631863.46	4175203.68	218.59408	(04102617)	631863.12	4175223.29	224.54195	(04102617)
631862.78	4175242.91	232.75844	(04102617)	631862.44	4175262.52	241.90754	(04102617)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK3 ***
INCLUDING SOURCE(S): STCK3 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	298.56806	(04102617)	631861.77	4175301.75	389.24601	(05011817)
631861.43	4175321.37	418.44373	(08102618)	631861.09	4175340.98	268.83102	(04102623)
631860.75	4175360.60	321.89744	(04102617)	631860.41	4175380.21	325.03717	(04102617)
631860.07	4175399.83	326.02013	(04102617)	631859.73	4175419.44	323.58575	(04102617)
631859.40	4175439.06	350.61750	(05051824)	631859.06	4175458.67	428.03057	(05051824)
631858.72	4175478.29	537.74446	(07102905)	631858.38	4175497.90	704.13417	(07102905)
631858.04	4175517.52	854.45676	(06052002)	631857.70	4175537.13	1202.63313	(06052002)
631857.37	4175556.75	1393.04968	(06052002)	631857.03	4175576.36	1415.00702	(05071701)
631856.69	4175595.98	1741.02451	(04030118)	631856.35	4175615.59	1462.69328	(08112619)
631856.01	4175635.21	1559.08283	(06111908)	631855.67	4175654.82	1369.99994	(06102818)
631855.33	4175674.44	976.41729	(06102818)	631855.00	4175694.05	723.01236	(07092306)
631854.66	4175713.67	543.31750	(07092306)	631854.32	4175733.28	433.52840	(06110304)
631853.98	4175752.90	351.67948	(06110304)	631853.64	4175772.51	311.75409	(08112318)
631853.30	4175792.13	300.18210	(04111519)	631852.97	4175811.74	301.65646	(04111519)
631852.63	4175831.36	207.56493	(06081406)	631852.29	4175850.97	197.23528	(06081406)
631851.95	4175870.59	182.44656	(06081406)	631851.61	4175890.20	340.00456	(06081406)
631851.27	4175909.82	376.16283	(06080603)	631850.94	4175929.43	336.59433	(05072006)
631850.60	4175949.05	267.35226	(05072006)	631850.26	4175968.66	241.08648	(05072006)
631830.54	4175988.13	230.27695	(05072006)	631811.15	4175987.98	216.20549	(05072006)
631791.77	4175987.83	217.09644	(07030418)	631772.39	4175987.67	251.40632	(07030418)
631753.00	4175987.52	278.43815	(07030418)	631733.62	4175987.37	294.87157	(07030418)
631714.24	4175987.22	307.00223	(05112506)	631694.85	4175987.07	329.71063	(05112506)
631675.47	4175986.92	337.77917	(05112506)	631656.09	4175986.77	364.23153	(08091907)
631636.70	4175986.62	377.94757	(08091907)	631617.32	4175986.46	367.16680	(07090905)
631597.94	4175986.31	368.61206	(07090905)	631578.55	4175986.16	257.91276	(05112504)

631559.17	4175986.01	196.98503	(05122507)	631539.79	4175985.86	193.84790	(05122507)
631520.40	4175985.71	198.91239	(04081204)	631501.02	4175985.56	195.66921	(04081204)
631481.64	4175985.40	193.53247	(07092301)	631462.25	4175985.25	186.59789	(07092301)
631442.87	4175985.10	185.56167	(06110118)	631423.49	4175984.95	184.59111	(05051803)
631404.10	4175984.80	192.03713	(05051803)	631384.72	4175984.65	192.36548	(05051803)
631365.34	4175984.50	187.47698	(07111102)	631345.95	4175984.35	186.35686	(07080202)
631326.57	4175984.19	181.84978	(07080202)	631307.19	4175984.04	179.16704	(04081205)
631287.80	4175983.89	175.27211	(07102703)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	174.41836	(08031018)	632304.44	4174354.52	76.70044	(06020105)
632192.15	4174956.32	162.65171	(05011520)	632420.62	4175510.15	141.13153	(07012318)
632418.97	4175552.92	176.79800	(07012318)	631187.00	4175727.00	203.97104	(05030321)
631166.00	4175729.00	193.92517	(05030321)	631121.00	4175719.00	187.36802	(04041820)
631035.00	4174830.00	98.08573	(06121421)	631106.00	4174825.00	99.14341	(04012317)
631937.00	4174528.00	98.15548	(04102617)	631322.00	4174522.00	88.61990	(06011021)
629800.63	4173850.44	29.30347	(06121421)	630150.63	4173850.44	28.37267	(04012317)
630500.63	4173850.44	36.86636	(07121217)	630850.63	4173850.44	51.88507	(05012117)
631200.63	4173850.44	47.21300	(06102817)	631550.63	4173850.44	55.99593	(06121420)
631900.63	4173850.44	52.94827	(04122823)	632250.63	4173850.44	56.01102	(07011417)
632600.63	4173850.44	45.20459	(04122822)	632950.63	4173850.44	43.38584	(05011521)
633300.63	4173850.44	39.15733	(04022018)	629800.63	4174200.44	33.22007	(07020624)
630150.63	4174200.44	36.33004	(06121421)	630500.63	4174200.44	39.20372	(04012317)
630850.63	4174200.44	55.38080	(07011517)	631200.63	4174200.44	67.39887	(06011021)
631550.63	4174200.44	72.83215	(06121420)	631900.63	4174200.44	70.71250	(07012317)
632250.63	4174200.44	74.08256	(04022218)	632600.63	4174200.44	62.64241	(05020818)
632950.63	4174200.44	55.03398	(04022018)	633300.63	4174200.44	37.60994	(08030618)
629800.63	4174550.44	33.43553	(06121217)	630150.63	4174550.44	44.98813	(06120217)
630500.63	4174550.44	47.58345	(07020624)	630850.63	4174550.44	63.52561	(04012317)
631200.63	4174550.44	85.40332	(06011109)	631550.63	4174550.44	95.55282	(08022002)
631900.63	4174550.44	100.38698	(04102617)	632250.63	4174550.44	91.74583	(04122822)
632600.63	4174550.44	81.60467	(04022018)	632950.63	4174550.44	61.55284	(07021118)
633300.63	4174550.44	48.55619	(05020802)	629800.63	4174900.44	39.46632	(04022207)
630150.63	4174900.44	44.41982	(04022208)	630500.63	4174900.44	60.57408	(06121217)
630850.63	4174900.44	91.25749	(07020624)	631200.63	4174900.44	119.48099	(04012317)
631550.63	4174900.44	159.76287	(06102817)	631900.63	4174900.44	158.96113	(04102617)
632250.63	4174900.44	149.84017	(05011520)	632600.63	4174900.44	119.75511	(06011617)
632950.63	4174900.44	79.66798	(06120617)	633300.63	4174900.44	53.43381	(05021801)
629800.63	4175250.44	34.77266	(06032819)	630150.63	4175250.44	46.88759	(08012221)
630500.63	4175250.44	67.07697	(08012221)	630850.63	4175250.44	113.12663	(04022207)
631200.63	4175250.44	169.33767	(06100918)	631550.63	4175250.44	275.90478	(04012317)

631900.63	4175250.44	319.86984	(05011817)	632250.63	4175250.44	222.40476	(06120617)
632600.63	4175250.44	149.88691	(07010217)	632950.63	4175250.44	76.53718	(06011618)
633300.63	4175250.44	55.75276	(06011618)	629800.63	4175600.44	41.67566	(05122618)
630150.63	4175600.44	51.45923	(05122618)	630500.63	4175600.44	65.17377	(05122618)
630850.63	4175600.44	107.92802	(07020701)	631200.63	4175600.44	235.87012	(06011024)
631550.63	4175600.44	441.66240	(08110218)	631900.63	4175600.44	639.53759	(06102818)
632250.63	4175600.44	238.97059	(05012018)	632600.63	4175600.44	126.97099	(07012418)
632950.63	4175600.44	80.73277	(07012318)	633300.63	4175600.44	58.33225	(07012318)
629800.63	4175950.44	38.91267	(06011024)	630150.63	4175950.44	42.46066	(05030324)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	65.80430	(07120621)	630850.63	4175950.44	103.08720	(07120622)
631200.63	4175950.44	163.69260	(07102703)	631550.63	4175950.44	415.85550	(06102618)
631900.63	4175950.44	179.36531	(06021018)	632250.63	4175950.44	154.20829	(06052306)
632600.63	4175950.44	109.06676	(04121022)	632950.63	4175950.44	77.20583	(06121503)
633300.63	4175950.44	56.70452	(05122401)	629800.63	4176300.44	37.85651	(07120622)
630150.63	4176300.44	42.22497	(07120404)	630500.63	4176300.44	65.95934	(06122121)
630850.63	4176300.44	97.14571	(04021521)	631200.63	4176300.44	119.74640	(04120908)
631550.63	4176300.44	124.47625	(06033022)	631900.63	4176300.44	122.23001	(05072006)
632250.63	4176300.44	102.26081	(06010522)	632600.63	4176300.44	91.10000	(08021908)
632950.63	4176300.44	73.81269	(08021808)	633300.63	4176300.44	52.27865	(05020806)
629800.63	4176650.44	34.94723	(06122121)	630150.63	4176650.44	43.73933	(04021520)
630500.63	4176650.44	57.15413	(04021521)	630850.63	4176650.44	71.00912	(04121223)
631200.63	4176650.44	86.37197	(07021218)	631550.63	4176650.44	91.22464	(07021108)
631900.63	4176650.44	86.81717	(05122220)	632250.63	4176650.44	80.81106	(05021722)
632600.63	4176650.44	70.95021	(04121820)	632950.63	4176650.44	63.75451	(08021908)
633300.63	4176650.44	54.47795	(08021808)	629800.63	4177000.44	30.12851	(04021520)
630150.63	4177000.44	37.15970	(04021521)	630500.63	4177000.44	45.51966	(04120903)
630850.63	4177000.44	58.89941	(07122917)	631200.63	4177000.44	62.30868	(08091907)
631550.63	4177000.44	67.42696	(06020124)	631900.63	4177000.44	65.71287	(05122220)
632250.63	4177000.44	63.40645	(04021506)	632600.63	4177000.44	57.23096	(06120218)
632950.63	4177000.44	52.55698	(07022408)	633300.63	4177000.44	47.07127	(08021908)
629800.63	4177350.44	27.30301	(04021521)	630150.63	4177350.44	33.35261	(04120903)
630500.63	4177350.44	38.10988	(07012719)	630850.63	4177350.44	45.45420	(07021218)
631200.63	4177350.44	48.21661	(07012722)	631550.63	4177350.44	51.45205	(06020124)
631900.63	4177350.44	48.81862	(05122220)	632250.63	4177350.44	50.13901	(05021302)
632600.63	4177350.44	46.64353	(05022620)	632950.63	4177350.44	41.65270	(06010521)
633300.63	4177350.44	40.90214	(07022408)	631670.70	4175493.59	562.98477	(05012118)
631669.80	4175641.41	468.21551	(05051824)	631665.32	4175796.39	175.65254	(07090905)
631417.17	4175826.85	296.47105	(04110906)	631417.17	4175673.66	440.41743	(05061703)
631422.55	4175484.63	383.37704	(04101624)	631268.42	4175983.74	169.61314	(05051803)

631275.69	4175523.99	266.30168	(05122618)	631345.65	4175419.50	283.49823	(04110818)
631384.72	4175441.30	316.61843	(04110818)	631491.93	4175442.21	596.83775	(04041821)
631491.93	4175414.95	609.59535	(04041821)	631385.63	4175413.14	286.32740	(04110818)
631358.37	4175395.87	249.60952	(06121422)	631409.25	4175336.81	253.61065	(06100918)
631567.35	4175235.96	268.73963	(04012317)	631756.33	4175028.80	162.03623	(05010417)
631807.22	4175003.36	175.96409	(04102617)	631867.18	4174987.91	188.73017	(04102617)
631849.92	4175988.28	187.26600	(05072006)	631268.74	4175963.75	173.65511	(07111102)
631269.05	4175943.76	178.42582	(04021521)	631269.37	4175923.77	179.72475	(04081205)
631269.68	4175903.78	183.52181	(07102703)	631270.00	4175883.79	190.17084	(04021520)
631270.32	4175863.81	201.33388	(04021520)	631270.63	4175843.82	202.28244	(04021520)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	206.76177	(04082206)	631271.26	4175803.84	209.43482	(07070904)
631271.58	4175783.85	214.68357	(08100321)	631271.90	4175763.86	214.15486	(05110619)
631272.21	4175743.87	230.38103	(05110619)	631272.53	4175723.88	236.26084	(07071004)
631272.85	4175703.89	239.55243	(05030321)	631273.16	4175683.90	233.83117	(04041820)
631273.48	4175663.91	245.31567	(04041820)	631273.79	4175643.92	267.83462	(05030324)
631274.11	4175623.94	267.80690	(05030324)	631274.43	4175603.95	272.70812	(06072906)
631274.74	4175583.96	270.32999	(07042002)	631275.06	4175563.97	275.64945	(07042002)
631275.37	4175543.98	275.03470	(04101604)	631285.68	4175509.06	270.76197	(05122618)
631295.68	4175494.14	267.47910	(04101624)	631305.67	4175479.21	285.63695	(04121304)
631315.67	4175464.28	287.56955	(06072904)	631325.66	4175449.35	280.27523	(06072904)
631335.66	4175434.43	284.07799	(06051906)	631358.67	4175426.77	296.35774	(04110818)
631371.70	4175434.03	307.55652	(04110818)	631402.59	4175441.45	329.70070	(04110818)
631420.46	4175441.60	342.53527	(04110818)	631438.33	4175441.76	354.94345	(04110818)
631456.19	4175441.91	370.83392	(05030320)	631474.06	4175442.06	377.47505	(04110818)
631491.93	4175428.58	614.41745	(04041821)	631474.21	4175414.65	350.94908	(04041822)
631456.50	4175414.35	319.52853	(06121422)	631438.78	4175414.05	309.49090	(06121422)
631421.06	4175413.74	298.87721	(06121422)	631403.35	4175413.44	289.96187	(04110818)
631372.00	4175404.51	263.61168	(04110818)	631371.09	4175381.11	242.33250	(07101502)
631383.81	4175366.34	250.27720	(07101502)	631396.53	4175351.58	253.26332	(07110617)
631425.06	4175326.73	244.41134	(06100918)	631440.87	4175316.64	255.81526	(04022118)
631456.68	4175306.56	258.00754	(04022118)	631472.49	4175296.47	249.95055	(05072102)
631488.30	4175286.39	247.68989	(05122619)	631504.11	4175276.30	252.79589	(05122619)
631519.92	4175266.22	257.00844	(06120517)	631535.73	4175256.13	263.97877	(04012317)
631551.54	4175246.05	273.99595	(04012317)	631579.95	4175222.15	263.31652	(06011109)
631592.55	4175208.34	271.25751	(06011109)	631605.15	4175194.53	264.73360	(06011109)
631617.74	4175180.72	245.36208	(06011109)	631630.34	4175166.91	236.68096	(06102817)
631642.94	4175153.10	243.47128	(06102817)	631655.54	4175139.29	240.31134	(06102817)
631668.14	4175125.47	228.39880	(06102817)	631680.74	4175111.66	209.73101	(06102817)
631693.34	4175097.85	202.16299	(05021806)	631705.94	4175084.04	199.91545	(05021806)

631718.53	4175070.23	193.10181	(05021806)	631731.13	4175056.42	182.68679	(05021806)
631743.73	4175042.61	170.73939	(05122422)	631773.29	4175020.32	154.02625	(05010417)
631790.26	4175011.84	163.79890	(04102617)	631822.21	4174999.50	184.62496	(04102617)
631837.20	4174995.64	189.69874	(04102617)	631852.19	4174991.77	191.02996	(04102617)
631866.84	4175007.53	194.47443	(04102617)	631866.50	4175027.14	200.34236	(04102617)
631866.16	4175046.76	206.33513	(04102617)	631865.83	4175066.37	212.42689	(04102617)
631865.49	4175085.99	218.60750	(04102617)	631865.15	4175105.60	224.82854	(04102617)
631864.81	4175125.22	231.04133	(04102617)	631864.47	4175144.83	237.15105	(04102617)
631864.13	4175164.45	248.52858	(05011817)	631863.80	4175184.06	268.51902	(05011817)
631863.46	4175203.68	289.56257	(05011817)	631863.12	4175223.29	311.43828	(05011817)
631862.78	4175242.91	333.83242	(05011817)	631862.44	4175262.52	356.21026	(05011817)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK4 ***

INCLUDING SOURCE(S): STCK4 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	386.91296	(05011817)	631861.77	4175301.75	697.10249	(08071406)
631861.43	4175321.37	713.59816	(08071406)	631861.09	4175340.98	774.75826	(06052001)
631860.75	4175360.60	986.64198	(05051824)	631860.41	4175380.21	916.97485	(05051824)
631860.07	4175399.83	1230.95171	(07102905)	631859.73	4175419.44	1191.00417	(07102905)
631859.40	4175439.06	1344.92570	(07102905)	631859.06	4175458.67	2237.09373	(06052002)
631858.72	4175478.29	1787.01845	(05071701)	631858.38	4175497.90	1766.15753	(05012118)
631858.04	4175517.52	1945.81181	(07102907)	631857.70	4175537.13	1556.97867	(08010919)
631857.37	4175556.75	833.06945	(08010919)	631857.03	4175576.36	333.48261	(06102818)
631856.69	4175595.98	287.70148	(06021018)	631856.35	4175615.59	349.94282	(06021018)
631856.01	4175635.21	403.13498	(06021018)	631855.67	4175654.82	421.36316	(06021018)
631855.33	4175674.44	411.31733	(08112520)	631855.00	4175694.05	382.66475	(05072006)
631854.66	4175713.67	380.64809	(05072006)	631854.32	4175733.28	374.51744	(05072006)
631853.98	4175752.90	337.24467	(07080305)	631853.64	4175772.51	307.62577	(06013006)
631853.30	4175792.13	289.64079	(08112318)	631852.97	4175811.74	282.28165	(08112318)
631852.63	4175831.36	265.65429	(04111519)	631852.29	4175850.97	258.97608	(04111519)
631851.95	4175870.59	252.42514	(04111519)	631851.61	4175890.20	262.60005	(04020106)
631851.27	4175909.82	247.04364	(04020106)	631850.94	4175929.43	264.58853	(05072006)
631850.60	4175949.05	213.27974	(05072006)	631850.26	4175968.66	193.85780	(05072006)
631830.54	4175988.13	179.65940	(05072006)	631811.15	4175987.98	166.26792	(04111519)
631791.77	4175987.83	194.60397	(07030418)	631772.39	4175987.67	224.68808	(07030418)
631753.00	4175987.52	250.55383	(07030418)	631733.62	4175987.37	268.50166	(07030418)
631714.24	4175987.22	279.18394	(05112506)	631694.85	4175987.07	306.52711	(05112506)
631675.47	4175986.92	324.12967	(05112506)	631656.09	4175986.77	333.26368	(05112506)
631636.70	4175986.62	357.75097	(08091907)	631617.32	4175986.46	320.50082	(08091907)
631597.94	4175986.31	269.65601	(07090905)	631578.55	4175986.16	222.81003	(08091907)
631559.17	4175986.01	208.16018	(08091907)	631539.79	4175985.86	191.55915	(04022021)
631520.40	4175985.71	189.56607	(07021218)	631501.02	4175985.56	180.06730	(08122718)
631481.64	4175985.40	182.92734	(07090906)	631462.25	4175985.25	187.64662	(04081204)

631442.87	4175985.10	190.27743	(04081204)	631423.49	4175984.95	186.48365	(05051802)
631404.10	4175984.80	184.25963	(07092301)	631384.72	4175984.65	178.23432	(07092301)
631365.34	4175984.50	176.33403	(06110118)	631345.95	4175984.35	173.20034	(04120903)
631326.57	4175984.19	170.47604	(04041920)	631307.19	4175984.04	171.89620	(05051803)
631287.80	4175983.89	173.38253	(05051803)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	237.81168	(08031018)	632304.44	4174354.52	93.49177	(04122822)
632192.15	4174956.32	224.81382	(04022018)	632420.62	4175510.15	148.65195	(06121320)
632418.97	4175552.92	146.14465	(06012918)	631187.00	4175727.00	170.05581	(05030120)
631166.00	4175729.00	165.60144	(05030322)	631121.00	4175719.00	153.38355	(05110619)
631035.00	4174830.00	94.04359	(04101819)	631106.00	4174825.00	105.97849	(06121421)
631937.00	4174528.00	117.11643	(04102617)	631322.00	4174522.00	94.87426	(05012117)
629800.63	4173850.44	27.17881	(06121421)	630150.63	4173850.44	32.47815	(06121421)
630500.63	4173850.44	34.30318	(07121217)	630850.63	4173850.44	49.29313	(05012117)
631200.63	4173850.44	49.83800	(06040920)	631550.63	4173850.44	60.63246	(06121420)
631900.63	4173850.44	57.22600	(07012317)	632250.63	4173850.44	68.30142	(07011417)
632600.63	4173850.44	54.57816	(04122822)	632950.63	4173850.44	45.92070	(05011520)
633300.63	4173850.44	39.78905	(04022018)	629800.63	4174200.44	34.83013	(06120217)
630150.63	4174200.44	34.93260	(07020624)	630500.63	4174200.44	46.23626	(06121421)
630850.63	4174200.44	55.82820	(07121217)	631200.63	4174200.44	72.10934	(06011021)
631550.63	4174200.44	76.71307	(06121420)	631900.63	4174200.44	85.31951	(07012317)
632250.63	4174200.44	83.51211	(06020105)	632600.63	4174200.44	69.85825	(05011521)
632950.63	4174200.44	59.20839	(04022018)	633300.63	4174200.44	47.18680	(06011617)
629800.63	4174550.44	35.06873	(06121217)	630150.63	4174550.44	40.30647	(05022818)
630500.63	4174550.44	57.36105	(07020624)	630850.63	4174550.44	72.63797	(06121421)
631200.63	4174550.44	90.39082	(07011517)	631550.63	4174550.44	101.47958	(07111022)
631900.63	4174550.44	126.63146	(07012317)	632250.63	4174550.44	137.94903	(04122822)
632600.63	4174550.44	103.39045	(04022018)	632950.63	4174550.44	77.65409	(06011617)
633300.63	4174550.44	51.66758	(06120617)	629800.63	4174900.44	41.58818	(04022207)
630150.63	4174900.44	49.56266	(04022207)	630500.63	4174900.44	60.28647	(05122617)
630850.63	4174900.44	84.95629	(06120217)	631200.63	4174900.44	119.78121	(06121421)
631550.63	4174900.44	164.39966	(06102817)	631900.63	4174900.44	238.62986	(05112422)
632250.63	4174900.44	200.82375	(04022018)	632600.63	4174900.44	108.88337	(05020802)
632950.63	4174900.44	73.73546	(05021801)	633300.63	4174900.44	59.61832	(07010217)
629800.63	4175250.44	42.39580	(04121304)	630150.63	4175250.44	51.04444	(04121304)
630500.63	4175250.44	64.07452	(04121224)	630850.63	4175250.44	99.72733	(08012221)
631200.63	4175250.44	157.44381	(04022207)	631550.63	4175250.44	302.87982	(05072102)
631900.63	4175250.44	638.30706	(08031018)	632250.63	4175250.44	203.52569	(07010217)
632600.63	4175250.44	111.19889	(06011618)	632950.63	4175250.44	78.64769	(05122223)
633300.63	4175250.44	58.85385	(05121217)	629800.63	4175600.44	34.86618	(05122618)

630150.63	4175600.44	43.76913 (07020701)	630500.63	4175600.44	68.28070 (06011024)
630850.63	4175600.44	111.49519 (06011024)	631200.63	4175600.44	187.75092 (04041820)
631550.63	4175600.44	389.75617 (07082501)	631900.63	4175600.44	368.19456 (05082502)
632250.63	4175600.44	183.39089 (06111908)	632600.63	4175600.44	113.50124 (08010924)
632950.63	4175600.44	78.58087 (06121320)	633300.63	4175600.44	58.82533 (07012418)
629800.63	4175950.44	33.24367 (05030324)	630150.63	4175950.44	43.28230 (07120621)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC (YYMMDDHH)
630500.63	4175950.44	70.03481 (07120622)	630850.63	4175950.44	105.59684 (06122121)
631200.63	4175950.44	142.88022 (05051803)	631550.63	4175950.44	360.81239 (07012720)
631900.63	4175950.44	268.51530 (07091007)	632250.63	4175950.44	151.56755 (06062806)
632600.63	4175950.44	99.21444 (08122903)	632950.63	4175950.44	74.85672 (04011021)
633300.63	4175950.44	55.20246 (06121503)	629800.63	4176300.44	36.43063 (07120622)
630150.63	4176300.44	44.53828 (06122121)	630500.63	4176300.44	63.57442 (04021520)
630850.63	4176300.44	84.18734 (04010518)	631200.63	4176300.44	114.81025 (07122917)
631550.63	4176300.44	125.33888 (06013008)	631900.63	4176300.44	130.91055 (07091007)
632250.63	4176300.44	96.53605 (06010520)	632600.63	4176300.44	81.96965 (08122905)
632950.63	4176300.44	70.77218 (08021808)	633300.63	4176300.44	53.20539 (05011818)
629800.63	4176650.44	33.50758 (06122121)	630150.63	4176650.44	38.30686 (04021520)
630500.63	4176650.44	53.15353 (04010518)	630850.63	4176650.44	71.36776 (04120908)
631200.63	4176650.44	86.80377 (04022021)	631550.63	4176650.44	87.85580 (07021108)
631900.63	4176650.44	83.33571 (05122220)	632250.63	4176650.44	81.85208 (07091007)
632600.63	4176650.44	66.67716 (05121423)	632950.63	4176650.44	55.82689 (05010604)
633300.63	4176650.44	46.41501 (07021220)	629800.63	4177000.44	29.78133 (04021521)
630150.63	4177000.44	36.15802 (04010518)	630500.63	4177000.44	43.70957 (04120908)
630850.63	4177000.44	55.10364 (08122718)	631200.63	4177000.44	62.73180 (07012722)
631550.63	4177000.44	66.01621 (06020124)	631900.63	4177000.44	61.78354 (05122220)
632250.63	4177000.44	60.49385 (04121819)	632600.63	4177000.44	54.51063 (06010520)
632950.63	4177000.44	46.96603 (04121820)	633300.63	4177000.44	40.07652 (05010604)
629800.63	4177350.44	27.25150 (04010518)	630150.63	4177350.44	30.05594 (04120903)
630500.63	4177350.44	38.23682 (07122917)	630850.63	4177350.44	44.48806 (04022021)
631200.63	4177350.44	48.06836 (06013008)	631550.63	4177350.44	48.83620 (06020124)
631900.63	4177350.44	45.88051 (08122723)	632250.63	4177350.44	47.44418 (05021719)
632600.63	4177350.44	44.47628 (06013004)	632950.63	4177350.44	39.90826 (07010323)
633300.63	4177350.44	38.79386 (07022408)	631670.70	4175493.59	822.44051 (05011317)
631669.80	4175641.41	533.37002 (08071406)	631665.32	4175796.39	280.23426 (08102618)
631417.17	4175826.85	406.52337 (04041819)	631417.17	4175673.66	225.35842 (05110620)
631422.55	4175484.63	302.88463 (06072906)	631268.42	4175983.74	152.77316 (04120903)
631275.69	4175523.99	224.00774 (05030324)	631345.65	4175419.50	250.08209 (05122618)
631384.72	4175441.30	296.31967 (04101604)	631491.93	4175442.21	340.69984 (05083119)
631491.93	4175414.95	354.22976 (05083119)	631385.63	4175413.14	270.39111 (05122618)

631358.37	4175395.87	256.66587	(04101624)	631409.25	4175336.81	266.29370	(04110818)
631567.35	4175235.96	302.68210	(05072102)	631756.33	4175028.80	198.98922	(08081805)
631807.22	4175003.36	242.25488	(04102617)	631867.18	4174987.91	264.89101	(05112422)
631849.92	4175988.28	202.48238	(07091007)	631268.74	4175963.75	156.30896	(04120903)
631269.05	4175943.76	156.99521	(04010518)	631269.37	4175923.77	160.51634	(04010518)
631269.68	4175903.78	158.86213	(04010518)	631270.00	4175883.79	161.74349	(05051803)
631270.32	4175863.81	166.76043	(04021521)	631270.63	4175843.82	173.00935	(04021521)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	172.02625	(04021521)	631271.26	4175803.84	174.77602	(04081205)
631271.58	4175783.85	177.24556	(05110620)	631271.90	4175763.86	183.54402	(04021520)
631272.21	4175743.87	185.11488	(05110324)	631272.53	4175723.88	188.75441	(04082102)
631272.85	4175703.89	191.90032	(06080704)	631273.16	4175683.90	195.04172	(08100321)
631273.48	4175663.91	196.82273	(05030322)	631273.79	4175643.92	204.87123	(05110619)
631274.11	4175623.94	210.51967	(07071004)	631274.43	4175603.95	211.91408	(05030321)
631274.74	4175583.96	206.05655	(04041820)	631275.06	4175563.97	216.96093	(04041820)
631275.37	4175543.98	223.53251	(05030324)	631285.68	4175509.06	232.36891	(06072906)
631295.68	4175494.14	242.99282	(06072906)	631305.67	4175479.21	243.36346	(06072906)
631315.67	4175464.28	253.92716	(06111024)	631325.66	4175449.35	261.24978	(04101604)
631335.66	4175434.43	261.11495	(04101604)	631358.67	4175426.77	266.70459	(04101604)
631371.70	4175434.03	284.38820	(04101604)	631402.59	4175441.45	307.79700	(04101604)
631420.46	4175441.60	319.24239	(04101604)	631438.33	4175441.76	407.95071	(05071702)
631456.19	4175441.91	437.99329	(05071702)	631474.06	4175442.06	331.84249	(05083119)
631491.93	4175428.58	361.59608	(05083119)	631474.21	4175414.65	337.76909	(05083119)
631456.50	4175414.35	418.08025	(05030320)	631438.78	4175414.05	404.60176	(05030320)
631421.06	4175413.74	291.07932	(05083119)	631403.35	4175413.44	279.48941	(05122618)
631372.00	4175404.51	259.62163	(05122618)	631371.09	4175381.11	267.20249	(04101624)
631383.81	4175366.34	275.37606	(06072904)	631396.53	4175351.58	264.25470	(06072904)
631425.06	4175326.73	274.34914	(06121422)	631440.87	4175316.64	277.92073	(06121422)
631456.68	4175306.56	272.99562	(06121422)	631472.49	4175296.47	279.95365	(07110617)
631488.30	4175286.39	292.59885	(07110617)	631504.11	4175276.30	293.88050	(07110617)
631519.92	4175266.22	289.03269	(04022118)	631535.73	4175256.13	296.16121	(04022118)
631551.54	4175246.05	300.81470	(05072102)	631579.95	4175222.15	297.53814	(06120517)
631592.55	4175208.34	295.64291	(04012317)	631605.15	4175194.53	296.17507	(04012317)
631617.74	4175180.72	289.59716	(06011109)	631630.34	4175166.91	299.92736	(06011109)
631642.94	4175153.10	290.40003	(06011109)	631655.54	4175139.29	269.35733	(05030118)
631668.14	4175125.47	277.78651	(06102817)	631680.74	4175111.66	275.01789	(06102817)
631693.34	4175097.85	260.00026	(06102817)	631705.94	4175084.04	240.22207	(07100818)
631718.53	4175070.23	237.59453	(08081805)	631731.13	4175056.42	229.61571	(08081805)
631743.73	4175042.61	216.42918	(08081805)	631773.29	4175020.32	198.30482	(04102623)
631790.26	4175011.84	223.46135	(06040124)	631822.21	4174999.50	254.80342	(04102617)

631837.20	4174995.64	259.72431	(04102617)	631852.19	4174991.77	256.59583	(04102617)
631866.84	4175007.53	283.20032	(05112422)	631866.50	4175027.14	301.40536	(05112422)
631866.16	4175046.76	319.06534	(05112422)	631865.83	4175066.37	335.61226	(05112422)
631865.49	4175085.99	351.90352	(08071405)	631865.15	4175105.60	384.58117	(05011817)
631864.81	4175125.22	423.20670	(05011817)	631864.47	4175144.83	461.96742	(05011817)
631864.13	4175164.45	499.14515	(05011817)	631863.80	4175184.06	533.47643	(08071406)
631863.46	4175203.68	569.91283	(08071406)	631863.12	4175223.29	597.21311	(08071406)
631862.78	4175242.91	644.22055	(08031018)	631862.44	4175262.52	747.39079	(08031018)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK5 ***

INCLUDING SOURCE(S): STCK5 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	821.22858	(08031018)	631861.77	4175301.75	980.92073	(08071406)
631861.43	4175321.37	1354.89068	(08031018)	631861.09	4175340.98	1233.52386	(05011317)
631860.75	4175360.60	1486.33672	(04042519)	631860.41	4175380.21	576.76998	(08012218)
631860.07	4175399.83	665.25701	(05012118)	631859.73	4175419.44	688.53708	(07102907)
631859.40	4175439.06	576.45103	(08010919)	631859.06	4175458.67	383.09368	(08010919)
631858.72	4175478.29	423.89297	(06112624)	631858.38	4175497.90	487.14116	(05082502)
631858.04	4175517.52	482.64998	(07102901)	631857.70	4175537.13	476.55892	(07091007)
631857.37	4175556.75	427.41096	(06021018)	631857.03	4175576.36	436.01723	(06021018)
631856.69	4175595.98	444.13281	(06021018)	631856.35	4175615.59	434.06669	(06021018)
631856.01	4175635.21	419.18190	(06021018)	631855.67	4175654.82	394.98684	(04081203)
631855.33	4175674.44	377.69092	(05072006)	631855.00	4175694.05	365.23155	(05072006)
631854.66	4175713.67	351.97653	(05072006)	631854.32	4175733.28	338.48550	(05072006)
631853.98	4175752.90	297.64602	(07080305)	631853.64	4175772.51	276.03773	(06013006)
631853.30	4175792.13	266.41136	(06013006)	631852.97	4175811.74	257.13603	(06013006)
631852.63	4175831.36	241.19821	(08112318)	631852.29	4175850.97	233.75938	(08112318)
631851.95	4175870.59	222.07022	(04111519)	631851.61	4175890.20	295.97043	(07091007)
631851.27	4175909.82	278.79562	(07091007)	631850.94	4175929.43	233.44949	(07091007)
631850.60	4175949.05	222.59849	(07091007)	631850.26	4175968.66	212.28629	(07091007)
631830.54	4175988.13	178.46838	(07091007)	631811.15	4175987.98	153.07839	(07091007)
631791.77	4175987.83	176.13347	(07030418)	631772.39	4175987.67	216.88261	(06110120)
631753.00	4175987.52	251.40893	(06110120)	631733.62	4175987.37	257.47033	(06110120)
631714.24	4175987.22	240.84134	(06111524)	631694.85	4175987.07	243.18765	(05112506)
631675.47	4175986.92	276.54699	(06013008)	631656.09	4175986.77	329.56257	(06013008)
631636.70	4175986.62	344.90804	(06013008)	631617.32	4175986.46	274.06404	(08091907)
631597.94	4175986.31	199.38223	(04083006)	631578.55	4175986.16	199.69736	(08091907)
631559.17	4175986.01	199.30786	(08091907)	631539.79	4175985.86	193.57504	(08091907)
631520.40	4175985.71	187.96709	(04022021)	631501.02	4175985.56	185.60380	(04022021)
631481.64	4175985.40	180.12436	(07021218)	631462.25	4175985.25	177.58896	(07021218)
631442.87	4175985.10	170.88933	(08122718)	631423.49	4175984.95	172.89913	(07122917)
631404.10	4175984.80	167.10031	(07122917)	631384.72	4175984.65	162.74832	(07012719)
631365.34	4175984.50	160.42280	(06041524)	631345.95	4175984.35	162.92387	(04120908)

631326.57 4175984.19 159.35843 (04120908) 631307.19 4175984.04 152.79527 (04121223)
631287.80 4175983.89 148.78293 (04120903)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***
INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	111.36792	(05011521)	632304.44	4174354.52	63.88813	(04122822)
632192.15	4174956.32	114.52414	(05011520)	632420.62	4175510.15	136.58602	(07010217)
632418.97	4175552.92	131.09812	(04022224)	631187.00	4175727.00	235.82982	(04110818)
631166.00	4175729.00	229.43071	(04110818)	631121.00	4175719.00	205.72945	(04110818)
631035.00	4174830.00	91.65948	(05012117)	631106.00	4174825.00	92.30187	(06011021)
631937.00	4174528.00	88.95106	(07011417)	631322.00	4174522.00	77.32368	(06121420)
629800.63	4173850.44	25.63227	(04012317)	630150.63	4173850.44	32.68983	(07011517)
630500.63	4173850.44	44.85075	(05012117)	630850.63	4173850.44	38.51861	(06102817)
631200.63	4173850.44	46.41472	(06121420)	631550.63	4173850.44	40.65271	(05021805)
631900.63	4173850.44	49.14840	(07012317)	632250.63	4173850.44	47.94972	(07011417)
632600.63	4173850.44	40.46787	(04122822)	632950.63	4173850.44	35.44087	(05011521)
633300.63	4173850.44	31.80922	(04022018)	629800.63	4174200.44	32.33015	(06121421)
630150.63	4174200.44	33.20060	(04012317)	630500.63	4174200.44	49.62001	(07011517)
630850.63	4174200.44	54.09094	(06011021)	631200.63	4174200.44	60.62279	(08022002)
631550.63	4174200.44	53.05973	(05021805)	631900.63	4174200.44	62.36848	(07020623)
632250.63	4174200.44	57.88369	(06020105)	632600.63	4174200.44	46.51726	(05020818)
632950.63	4174200.44	42.13655	(04022018)	633300.63	4174200.44	32.64801	(05021018)
629800.63	4174550.44	34.39944	(07020624)	630150.63	4174550.44	44.83947	(06121421)
630500.63	4174550.44	47.95982	(04012317)	630850.63	4174550.44	71.39773	(05012117)
631200.63	4174550.44	70.65150	(07111022)	631550.63	4174550.44	70.76941	(05021805)
631900.63	4174550.44	88.15677	(05021804)	632250.63	4174550.44	80.27272	(04122822)
632600.63	4174550.44	60.80436	(05011520)	632950.63	4174550.44	45.70150	(08030618)
633300.63	4174550.44	46.63868	(06011617)	629800.63	4174900.44	36.92311	(05022818)
630150.63	4174900.44	52.37888	(04011017)	630500.63	4174900.44	67.48342	(06121421)
630850.63	4174900.44	80.24492	(07121217)	631200.63	4174900.44	110.91874	(06102817)
631550.63	4174900.44	96.85488	(05021805)	631900.63	4174900.44	114.72958	(07110824)
632250.63	4174900.44	106.93585	(05011520)	632600.63	4174900.44	74.51713	(08030618)
632950.63	4174900.44	55.75153	(06011617)	633300.63	4174900.44	46.52077	(06120617)
629800.63	4175250.44	44.17322	(04022207)	630150.63	4175250.44	52.85951	(05122617)
630500.63	4175250.44	71.50489	(06120217)	630850.63	4175250.44	103.96919	(04101819)
631200.63	4175250.44	172.57172	(06011109)	631550.63	4175250.44	216.48382	(06040124)
631900.63	4175250.44	171.25933	(06072804)	632250.63	4175250.44	134.97266	(07021118)
632600.63	4175250.44	100.84575	(06120617)	632950.63	4175250.44	62.47895	(05021801)
633300.63	4175250.44	52.23216	(07010217)	629800.63	4175600.44	42.83112	(04121304)
630150.63	4175600.44	54.51688	(08012221)	630500.63	4175600.44	80.24042	(08012221)
630850.63	4175600.44	130.70399	(04022207)	631200.63	4175600.44	228.53322	(04022118)
631550.63	4175600.44	553.40640	(07030618)	631900.63	4175600.44	445.48912	(06052002)

632250.63	4175600.44	165.37693	(04022224)	632600.63	4175600.44	99.38304	(06011618)
632950.63	4175600.44	65.78862	(05122223)	633300.63	4175600.44	50.27522	(05121217)
629800.63	4175950.44	43.88875	(05122618)	630150.63	4175950.44	52.05215	(05122618)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	79.08407	(06011024)	630850.63	4175950.44	128.48606	(06011024)
631200.63	4175950.44	258.86523	(07071004)	631550.63	4175950.44	783.38616	(07030418)
631900.63	4175950.44	260.23486	(06111908)	632250.63	4175950.44	149.46390	(06012918)
632600.63	4175950.44	94.52372	(07012418)	632950.63	4175950.44	64.74408	(07012318)
633300.63	4175950.44	50.53566	(07012318)	629800.63	4176300.44	38.39813	(05030324)
630150.63	4176300.44	52.34750	(07120622)	630500.63	4176300.44	76.29470	(07120404)
630850.63	4176300.44	135.18927	(04021520)	631200.63	4176300.44	219.94129	(04081204)
631550.63	4176300.44	181.11068	(07030418)	631900.63	4176300.44	166.02043	(06062806)
632250.63	4176300.44	112.28703	(08021808)	632600.63	4176300.44	84.50349	(04121024)
632950.63	4176300.44	61.54956	(05011322)	633300.63	4176300.44	48.13637	(08010924)
629800.63	4176650.44	38.41120	(07120622)	630150.63	4176650.44	53.94190	(06122121)
630500.63	4176650.44	73.02365	(04021521)	630850.63	4176650.44	104.90976	(04121223)
631200.63	4176650.44	142.20181	(08091907)	631550.63	4176650.44	109.28841	(05122505)
631900.63	4176650.44	100.87817	(05021722)	632250.63	4176650.44	88.27055	(07120405)
632600.63	4176650.44	72.58295	(08121517)	632950.63	4176650.44	58.51220	(05011818)
633300.63	4176650.44	45.31530	(04121024)	629800.63	4177000.44	38.99860	(04021520)
630150.63	4177000.44	48.57603	(04021521)	630500.63	4177000.44	62.57420	(04120903)
630850.63	4177000.44	80.78269	(08122718)	631200.63	4177000.44	94.49886	(06013008)
631550.63	4177000.44	81.43682	(07121903)	631900.63	4177000.44	78.49804	(04121819)
632250.63	4177000.44	70.74090	(06010522)	632600.63	4177000.44	60.15143	(07122918)
632950.63	4177000.44	52.84538	(08021908)	633300.63	4177000.44	47.03779	(08021808)
629800.63	4177350.44	34.98995	(04021521)	630150.63	4177350.44	41.53738	(04120903)
630500.63	4177350.44	49.53336	(07012719)	630850.63	4177350.44	61.00094	(04022021)
631200.63	4177350.44	68.75587	(07021108)	631550.63	4177350.44	62.31322	(07121903)
631900.63	4177350.44	60.79120	(07021206)	632250.63	4177350.44	56.52781	(05022620)
632600.63	4177350.44	49.70644	(04121820)	632950.63	4177350.44	43.22005	(08122905)
633300.63	4177350.44	42.64839	(08021908)	631670.70	4175493.59	380.16793	(07090905)
631669.80	4175641.41	786.79956	(04101820)	631665.32	4175796.39	166.61741	(04083003)
631417.17	4175826.85	456.96266	(06011024)	631417.17	4175673.66	216.02440	(05030118)
631422.55	4175484.63	234.78984	(07100818)	631268.42	4175983.74	339.55420	(05051801)
631275.69	4175523.99	267.59399	(04012317)	631345.65	4175419.50	270.77326	(06011109)
631384.72	4175441.30	169.22407	(05050802)	631491.93	4175442.21	191.76943	(05122422)
631491.93	4175414.95	183.41891	(05122422)	631385.63	4175413.14	179.03568	(05091918)
631358.37	4175395.87	240.79463	(06011109)	631409.25	4175336.81	248.84671	(06102817)
631567.35	4175235.96	245.97744	(06040124)	631756.33	4175028.80	139.05313	(05021804)
631807.22	4175003.36	138.63878	(07011417)	631867.18	4174987.91	127.36790	(07110824)

631849.92	4175988.28	249.12674	(05072806)	631268.74	4175963.75	346.89428	(05071703)
631269.05	4175943.76	342.79092	(06111517)	631269.37	4175923.77	309.53317	(06111517)
631269.68	4175903.78	298.49185	(05030321)	631270.00	4175883.79	313.45099	(05050805)
631270.32	4175863.81	283.63400	(05050805)	631270.63	4175843.82	264.45915	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	242.59040	(05030402)	631271.26	4175803.84	278.26397	(05030402)
631271.58	4175783.85	300.66899	(04101719)	631271.90	4175763.86	299.25268	(04110818)
631272.21	4175743.87	295.74416	(06121422)	631272.53	4175723.88	297.53826	(04041821)
631272.85	4175703.89	296.90409	(07110617)	631273.16	4175683.90	291.26274	(07110617)
631273.48	4175663.91	277.05535	(04022118)	631273.79	4175643.92	276.26143	(04022118)
631274.11	4175623.94	271.12257	(05122619)	631274.43	4175603.95	267.53670	(05122619)
631274.74	4175583.96	246.50507	(05122619)	631275.06	4175563.97	238.48179	(06120517)
631275.37	4175543.98	261.95566	(04012317)	631285.68	4175509.06	274.27160	(04012317)
631295.68	4175494.14	255.95210	(04012317)	631305.67	4175479.21	224.64877	(04012317)
631315.67	4175464.28	197.59687	(04012317)	631325.66	4175449.35	204.93269	(05030118)
631335.66	4175434.43	282.26592	(06011109)	631358.67	4175426.77	226.10960	(06102817)
631371.70	4175434.03	250.87641	(06102817)	631402.59	4175441.45	193.24620	(07100818)
631420.46	4175441.60	226.51353	(07100818)	631438.33	4175441.76	276.79349	(07100818)
631456.19	4175441.91	265.60640	(08081805)	631474.06	4175442.06	230.08896	(05050803)
631491.93	4175428.58	187.74536	(05122422)	631474.21	4175414.65	222.92842	(05050803)
631456.50	4175414.35	256.75936	(08081805)	631438.78	4175414.05	217.80917	(08022002)
631421.06	4175413.74	243.64671	(07100818)	631403.35	4175413.44	195.08422	(07100818)
631372.00	4175404.51	234.21597	(06011109)	631371.09	4175381.11	195.95114	(06011109)
631383.81	4175366.34	258.75524	(06102817)	631396.53	4175351.58	253.94079	(06102817)
631425.06	4175326.73	238.24211	(06102817)	631440.87	4175316.64	216.92061	(07100818)
631456.68	4175306.56	207.00997	(07100818)	631472.49	4175296.47	203.08653	(05021806)
631488.30	4175286.39	203.61749	(05021806)	631504.11	4175276.30	176.90560	(07100818)
631519.92	4175266.22	154.16328	(05050803)	631535.73	4175256.13	179.88186	(06040124)
631551.54	4175246.05	216.91279	(06040124)	631579.95	4175222.15	172.51632	(06040124)
631592.55	4175208.34	164.27276	(06040124)	631605.15	4175194.53	162.59634	(06040124)
631617.74	4175180.72	157.14313	(06040124)	631630.34	4175166.91	157.68121	(07112117)
631642.94	4175153.10	155.79644	(07112117)	631655.54	4175139.29	152.56542	(04102617)
631668.14	4175125.47	149.70735	(04102617)	631680.74	4175111.66	147.09037	(07101005)
631693.34	4175097.85	144.06262	(07101005)	631705.94	4175084.04	141.34648	(07020623)
631718.53	4175070.23	139.99983	(07020623)	631731.13	4175056.42	140.69178	(05112422)
631743.73	4175042.61	140.39803	(05112422)	631773.29	4175020.32	139.53549	(05021804)
631790.26	4175011.84	137.88197	(07011417)	631822.21	4174999.50	137.08465	(04022218)
631837.20	4174995.64	135.34786	(04022218)	631852.19	4174991.77	130.60484	(04022218)
631866.84	4175007.53	129.47150	(06020105)	631866.50	4175027.14	133.84578	(06020105)
631866.16	4175046.76	137.44715	(06020105)	631865.83	4175066.37	140.11619	(06020105)

631865.49	4175085.99	144.14267	(06051924)	631865.15	4175105.60	149.31068	(06051924)
631864.81	4175125.22	153.34759	(06051924)	631864.47	4175144.83	156.01580	(06051924)
631864.13	4175164.45	157.10263	(06051924)	631863.80	4175184.06	157.40659	(04122822)
631863.46	4175203.68	166.03613	(04122822)	631863.12	4175223.29	172.69755	(04122822)
631862.78	4175242.91	184.52193	(04122822)	631862.44	4175262.52	190.77445	(05020818)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK6 ***

INCLUDING SOURCE(S): STCK6 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	203.33552	(05020818)	631861.77	4175301.75	237.59934	(06072804)
631861.43	4175321.37	297.61197	(06072804)	631861.09	4175340.98	297.09030	(07111021)
631860.75	4175360.60	307.90394	(06112217)	631860.41	4175380.21	303.93327	(06112217)
631860.07	4175399.83	292.77835	(08081622)	631859.73	4175419.44	288.17983	(08081804)
631859.40	4175439.06	280.19227	(08090902)	631859.06	4175458.67	273.32730	(07062005)
631858.72	4175478.29	263.65404	(08090906)	631858.38	4175497.90	259.62393	(08090906)
631858.04	4175517.52	252.29552	(08030618)	631857.70	4175537.13	256.29978	(05110817)
631857.37	4175556.75	255.32677	(05110817)	631857.03	4175576.36	280.00277	(05081503)
631856.69	4175595.98	274.62609	(05081503)	631856.35	4175615.59	229.57275	(06052002)
631856.01	4175635.21	269.14169	(04110905)	631855.67	4175654.82	347.51923	(04110905)
631855.33	4175674.44	423.50842	(04110905)	631855.00	4175694.05	497.88853	(04101518)
631854.66	4175713.67	561.28509	(04101518)	631854.32	4175733.28	592.07759	(04101518)
631853.98	4175752.90	324.47426	(07102822)	631853.64	4175772.51	373.97683	(07102822)
631853.30	4175792.13	377.91894	(06111521)	631852.97	4175811.74	374.75374	(08112505)
631852.63	4175831.36	369.87739	(04081303)	631852.29	4175850.97	323.40205	(06121502)
631851.95	4175870.59	318.44699	(06121502)	631851.61	4175890.20	308.58919	(08010919)
631851.27	4175909.82	302.55929	(06111908)	631850.94	4175929.43	294.40052	(06111908)
631850.60	4175949.05	270.36692	(06111908)	631850.26	4175968.66	261.50564	(05072806)
631830.54	4175988.13	256.61573	(07112517)	631811.15	4175987.98	265.10427	(07092306)
631791.77	4175987.83	277.48323	(06052306)	631772.39	4175987.67	293.78859	(06052306)
631753.00	4175987.52	304.36725	(06052306)	631733.62	4175987.37	318.20640	(06052306)
631714.24	4175987.22	346.21685	(06062806)	631694.85	4175987.07	365.74704	(06062806)
631675.47	4175986.92	366.90878	(06062806)	631656.09	4175986.77	356.99122	(08091905)
631636.70	4175986.62	362.43887	(05082502)	631617.32	4175986.46	375.89261	(07102901)
631597.94	4175986.31	387.05310	(05072006)	631578.55	4175986.16	393.79677	(05072006)
631559.17	4175986.01	423.90782	(07030418)	631539.79	4175985.86	485.12697	(07030418)
631520.40	4175985.71	502.19918	(05112506)	631501.02	4175985.56	558.30727	(08091907)
631481.64	4175985.40	593.58428	(08091907)	631462.25	4175985.25	545.50263	(07090905)
631442.87	4175985.10	541.81913	(05122507)	631423.49	4175984.95	507.42977	(07012721)
631404.10	4175984.80	474.17954	(07092301)	631384.72	4175984.65	472.27399	(05122508)
631365.34	4175984.50	445.46077	(05122508)	631345.95	4175984.35	423.05571	(07080202)
631326.57	4175984.19	409.92192	(04081205)	631307.19	4175984.04	392.26964	(05110620)
631287.80	4175983.89	374.24172	(05051801)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	124.31097	(05011520)	632304.44	4174354.52	68.27135	(04122822)
632192.15	4174956.32	112.66304	(08090902)	632420.62	4175510.15	139.62808	(06011618)
632418.97	4175552.92	141.95151	(06011618)	631187.00	4175727.00	314.04551	(04101604)
631166.00	4175729.00	296.05893	(04101604)	631121.00	4175719.00	232.68627	(04101604)
631035.00	4174830.00	105.12782	(06011109)	631106.00	4174825.00	97.66132	(05012117)
631937.00	4174528.00	90.67477	(07011417)	631322.00	4174522.00	78.75240	(08022002)
629800.63	4173850.44	26.14619	(04012317)	630150.63	4173850.44	32.91775	(07121217)
630500.63	4173850.44	45.11250	(05012117)	630850.63	4173850.44	40.54869	(05010318)
631200.63	4173850.44	47.68870	(06121420)	631550.63	4173850.44	43.15925	(05021805)
631900.63	4173850.44	48.95242	(07012317)	632250.63	4173850.44	47.07040	(04022218)
632600.63	4173850.44	42.13697	(04122822)	632950.63	4173850.44	36.49545	(05011520)
633300.63	4173850.44	33.49270	(04022018)	629800.63	4174200.44	34.42354	(06121421)
630150.63	4174200.44	34.48379	(04012317)	630500.63	4174200.44	49.10936	(07011517)
630850.63	4174200.44	58.54699	(06011021)	631200.63	4174200.44	63.88921	(08022002)
631550.63	4174200.44	56.38919	(05021805)	631900.63	4174200.44	64.86202	(07020623)
632250.63	4174200.44	55.75057	(06020105)	632600.63	4174200.44	52.46853	(05011521)
632950.63	4174200.44	46.45155	(04022018)	633300.63	4174200.44	31.59586	(08030618)
629800.63	4174550.44	38.72707	(07020624)	630150.63	4174550.44	45.74632	(06121421)
630500.63	4174550.44	51.96935	(04012317)	630850.63	4174550.44	71.73011	(07011517)
631200.63	4174550.44	81.30083	(06102817)	631550.63	4174550.44	74.99785	(05021805)
631900.63	4174550.44	91.21156	(07011417)	632250.63	4174550.44	80.85947	(05020818)
632600.63	4174550.44	70.29152	(04022018)	632950.63	4174550.44	48.41560	(07021118)
633300.63	4174550.44	42.38409	(06011617)	629800.63	4174900.44	40.41963	(06121217)
630150.63	4174900.44	54.26514	(06120217)	630500.63	4174900.44	60.98238	(06121421)
630850.63	4174900.44	91.77104	(04012317)	631200.63	4174900.44	115.05717	(06102817)
631550.63	4174900.44	102.29789	(05021805)	631900.63	4174900.44	121.00725	(06051924)
632250.63	4174900.44	106.13138	(04022018)	632600.63	4174900.44	91.34318	(06011617)
632950.63	4174900.44	61.10223	(06120617)	633300.63	4174900.44	45.21165	(04022223)
629800.63	4175250.44	48.36615	(04022207)	630150.63	4175250.44	56.83228	(04022207)
630500.63	4175250.44	79.75882	(06121217)	630850.63	4175250.44	123.89628	(07020624)
631200.63	4175250.44	171.22630	(04012317)	631550.63	4175250.44	218.98157	(04102623)
631900.63	4175250.44	188.41475	(08081804)	632250.63	4175250.44	147.37908	(05020802)
632600.63	4175250.44	103.38194	(05021801)	632950.63	4175250.44	75.12221	(07010217)
633300.63	4175250.44	47.97981	(07020218)	629800.63	4175600.44	50.11314	(04121304)
630150.63	4175600.44	63.31303	(04121304)	630500.63	4175600.44	87.60793	(04121224)
630850.63	4175600.44	140.12326	(06051906)	631200.63	4175600.44	278.66029	(04041821)
631550.63	4175600.44	791.24764	(07030618)	631900.63	4175600.44	582.07096	(05071701)
632250.63	4175600.44	197.49706	(05122223)	632600.63	4175600.44	110.60691	(05121217)
632950.63	4175600.44	65.51387	(05121217)	633300.63	4175600.44	49.58506	(05011522)
629800.63	4175950.44	43.29494	(06011024)	630150.63	4175950.44	61.04998	(06011024)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	81.11391	(06011024)	630850.63	4175950.44	150.14359	(04041820)
631200.63	4175950.44	269.95090	(05122621)	631550.63	4175950.44	448.53311	(07030418)
631900.63	4175950.44	226.54628	(04011018)	632250.63	4175950.44	154.90682	(05011322)
632600.63	4175950.44	99.57704	(06012918)	632950.63	4175950.44	66.15458	(06121320)
633300.63	4175950.44	50.32201	(07012418)	629800.63	4176300.44	37.98313	(07120621)
630150.63	4176300.44	58.58998	(07120622)	630500.63	4176300.44	83.15164	(06122121)
630850.63	4176300.44	126.88736	(04021521)	631200.63	4176300.44	147.99368	(06041021)
631550.63	4176300.44	148.39230	(05122221)	631900.63	4176300.44	133.00790	(08021819)
632250.63	4176300.44	110.43189	(06122320)	632600.63	4176300.44	87.01233	(05011818)
632950.63	4176300.44	61.54846	(05011418)	633300.63	4176300.44	48.11200	(05122401)
629800.63	4176650.44	38.45172	(06122121)	630150.63	4176650.44	52.61254	(04021520)
630500.63	4176650.44	70.55132	(04021521)	630850.63	4176650.44	93.31269	(04120908)
631200.63	4176650.44	108.19424	(08091907)	631550.63	4176650.44	97.91167	(05122505)
631900.63	4176650.44	94.42291	(06012820)	632250.63	4176650.44	86.06245	(06062806)
632600.63	4176650.44	77.58118	(08021908)	632950.63	4176650.44	61.02242	(08021808)
633300.63	4176650.44	44.12998	(04121022)	629800.63	4177000.44	36.56312	(04021520)
630150.63	4177000.44	43.90287	(04021521)	630500.63	4177000.44	54.59460	(04121223)
630850.63	4177000.44	70.99537	(07021218)	631200.63	4177000.44	77.43873	(06013008)
631550.63	4177000.44	74.91798	(07121903)	631900.63	4177000.44	73.39968	(05021302)
632250.63	4177000.44	67.13800	(06120218)	632600.63	4177000.44	61.82450	(07022408)
632950.63	4177000.44	56.21608	(08021908)	633300.63	4177000.44	47.38476	(08021808)
629800.63	4177350.44	31.29300	(04021521)	630150.63	4177350.44	37.71012	(04120903)
630500.63	4177350.44	47.70852	(07122917)	630850.63	4177350.44	52.79239	(07012720)
631200.63	4177350.44	61.89354	(07021108)	631550.63	4177350.44	58.13089	(07121903)
631900.63	4177350.44	57.52027	(05122402)	632250.63	4177350.44	53.68048	(06013004)
632600.63	4177350.44	47.98147	(06010521)	632950.63	4177350.44	44.91292	(07022408)
633300.63	4177350.44	42.85001	(08021908)	631670.70	4175493.59	255.64533	(04101820)
631669.80	4175641.41	898.70025	(08081602)	631665.32	4175796.39	255.10218	(06102818)
631417.17	4175826.85	796.46145	(04110906)	631417.17	4175673.66	1159.34416	(04041821)
631422.55	4175484.63	182.26583	(07100818)	631268.42	4175983.74	270.93093	(05051803)
631275.69	4175523.99	286.62688	(04022118)	631345.65	4175419.50	372.08612	(06011109)
631384.72	4175441.30	384.76136	(08121017)	631491.93	4175442.21	211.02768	(07030618)
631491.93	4175414.95	201.26245	(07030618)	631385.63	4175413.14	224.18798	(04012317)
631358.37	4175395.87	384.88478	(06011109)	631409.25	4175336.81	340.52014	(06102817)
631567.35	4175235.96	232.18876	(04102617)	631756.33	4175028.80	142.51677	(08071405)
631807.22	4175003.36	144.31664	(05011817)	631867.18	4174987.91	136.47844	(06051924)
631849.92	4175988.28	241.00665	(06052306)	631268.74	4175963.75	285.07928	(04022119)
631269.05	4175943.76	296.75863	(07010318)	631269.37	4175923.77	307.77456	(05122621)
631269.68	4175903.78	332.28350	(05122621)	631270.00	4175883.79	339.71068	(07120623)

631270.32 4175863.81 348.98903 (04022924) 631270.63 4175843.82 397.52501 (05110619)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***
INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	429.77344	(07071004)	631271.26	4175803.84	412.38645	(06011217)
631271.58	4175783.85	465.10896	(06011217)	631271.90	4175763.86	450.14958	(06011217)
631272.21	4175743.87	404.33270	(06111024)	631272.53	4175723.88	415.23559	(04101604)
631272.85	4175703.89	346.94511	(05030402)	631273.16	4175683.90	416.06452	(04101719)
631273.48	4175663.91	417.54495	(04110818)	631273.79	4175643.92	402.64137	(04110818)
631274.11	4175623.94	362.20663	(06121422)	631274.43	4175603.95	361.97561	(07110617)
631274.74	4175583.96	353.81222	(07110617)	631275.06	4175563.97	321.86716	(07110617)
631275.37	4175543.98	304.43026	(04022118)	631285.68	4175509.06	279.72523	(05072102)
631295.68	4175494.14	274.99099	(04012317)	631305.67	4175479.21	273.78218	(06120517)
631315.67	4175464.28	286.62430	(04012317)	631325.66	4175449.35	288.98344	(04012317)
631335.66	4175434.43	342.32752	(06011109)	631358.67	4175426.77	390.40453	(06011109)
631371.70	4175434.03	359.08406	(04012317)	631402.59	4175441.45	363.34476	(08121017)
631420.46	4175441.60	199.59863	(07100818)	631438.33	4175441.76	283.53356	(07100818)
631456.19	4175441.91	279.78890	(08081805)	631474.06	4175442.06	212.19554	(05050803)
631491.93	4175428.58	206.20044	(07030618)	631474.21	4175414.65	212.72248	(05050803)
631456.50	4175414.35	279.29598	(08081805)	631438.78	4175414.05	287.99074	(07100818)
631421.06	4175413.74	264.89357	(08121017)	631403.35	4175413.44	305.79525	(08121017)
631372.00	4175404.51	392.38961	(06011109)	631371.09	4175381.11	314.08246	(06011109)
631383.81	4175366.34	316.56741	(05030118)	631396.53	4175351.58	324.85628	(06102817)
631425.06	4175326.73	344.17003	(06102817)	631440.87	4175316.64	312.87097	(06102817)
631456.68	4175306.56	262.89678	(07100818)	631472.49	4175296.47	266.33896	(07100818)
631488.30	4175286.39	263.39575	(08081805)	631504.11	4175276.30	228.83509	(07100818)
631519.92	4175266.22	174.81127	(05050803)	631535.73	4175256.13	196.80023	(04102623)
631551.54	4175246.05	214.43822	(04102623)	631579.95	4175222.15	203.83332	(08102618)
631592.55	4175208.34	217.19055	(08102618)	631605.15	4175194.53	182.06055	(04102617)
631617.74	4175180.72	182.28544	(04102617)	631630.34	4175166.91	180.70450	(04102617)
631642.94	4175153.10	177.47113	(04102617)	631655.54	4175139.29	172.84518	(04102617)
631668.14	4175125.47	167.07962	(04102617)	631680.74	4175111.66	160.41920	(04102617)
631693.34	4175097.85	155.00646	(05112422)	631705.94	4175084.04	154.89410	(05112422)
631718.53	4175070.23	152.84118	(05112422)	631731.13	4175056.42	149.88784	(08071405)
631743.73	4175042.61	146.85911	(08071405)	631773.29	4175020.32	143.65961	(05011817)
631790.26	4175011.84	144.80583	(05011817)	631822.21	4174999.50	143.19414	(05011817)
631837.20	4174995.64	140.70580	(05011817)	631852.19	4174991.77	138.00179	(08071406)
631866.84	4175007.53	140.87755	(06051924)	631866.50	4175027.14	144.26184	(06051924)
631866.16	4175046.76	146.44638	(06051924)	631865.83	4175066.37	147.24851	(06051924)
631865.49	4175085.99	146.52123	(06051924)	631865.15	4175105.60	151.87476	(04122822)
631864.81	4175125.22	156.80522	(04122822)	631864.47	4175144.83	161.22875	(06041222)
631864.13	4175164.45	164.99889	(06041222)	631863.80	4175184.06	170.87169	(05061704)

631863.46	4175203.68	175.67191	(05061704)	631863.12	4175223.29	180.15718	(08031018)
631862.78	4175242.91	190.33442	(06112217)	631862.44	4175262.52	199.44268	(06112217)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK7 ***

INCLUDING SOURCE(S): STCK7 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	207.44855	(05011521)	631861.77	4175301.75	220.08205	(05011520)
631861.43	4175321.37	354.91854	(05011317)	631861.09	4175340.98	335.94505	(04081924)
631860.75	4175360.60	485.11347	(06051904)	631860.41	4175380.21	407.20088	(08090906)
631860.07	4175399.83	466.64742	(07102905)	631859.73	4175419.44	408.79406	(08090519)
631859.40	4175439.06	427.85899	(07102905)	631859.06	4175458.67	453.95534	(07102905)
631858.72	4175478.29	458.99517	(05102522)	631858.38	4175497.90	450.24054	(05112917)
631858.04	4175517.52	516.11825	(06052002)	631857.70	4175537.13	558.70703	(06052002)
631857.37	4175556.75	564.53253	(06052002)	631857.03	4175576.36	548.51004	(07080303)
631856.69	4175595.98	768.74736	(06111919)	631856.35	4175615.59	730.30725	(06111919)
631856.01	4175635.21	740.51308	(04101518)	631855.67	4175654.82	752.25007	(04030118)
631855.33	4175674.44	765.04132	(04030118)	631855.00	4175694.05	712.78613	(04030118)
631854.66	4175713.67	614.75539	(06100506)	631854.32	4175733.28	675.19024	(04030118)
631853.98	4175752.90	484.72124	(04030118)	631853.64	4175772.51	406.54626	(05080806)
631853.30	4175792.13	454.85127	(07121418)	631852.97	4175811.74	366.99430	(05072806)
631852.63	4175831.36	335.96216	(06111908)	631852.29	4175850.97	305.97544	(06111908)
631851.95	4175870.59	284.95235	(05072806)	631851.61	4175890.20	270.96351	(04011018)
631851.27	4175909.82	262.35805	(04011018)	631850.94	4175929.43	255.07974	(06052306)
631850.60	4175949.05	258.78255	(06052306)	631850.26	4175968.66	253.60875	(06052306)
631830.54	4175988.13	235.61842	(06052306)	631811.15	4175987.98	250.69882	(06062806)
631791.77	4175987.83	270.41869	(06062806)	631772.39	4175987.67	282.57089	(06062806)
631753.00	4175987.52	285.23449	(06062806)	631733.62	4175987.37	277.56497	(06062806)
631714.24	4175987.22	363.84905	(06062806)	631694.85	4175987.07	368.99134	(06081406)
631675.47	4175986.92	368.91401	(06081406)	631656.09	4175986.77	355.81135	(07102901)
631636.70	4175986.62	353.67182	(06080603)	631617.32	4175986.46	337.28325	(06080603)
631597.94	4175986.31	347.42404	(05072006)	631578.55	4175986.16	333.54789	(04111519)
631559.17	4175986.01	308.56937	(04111519)	631539.79	4175985.86	284.65923	(07030418)
631520.40	4175985.71	291.52481	(07030418)	631501.02	4175985.56	283.48379	(07080306)
631481.64	4175985.40	283.51030	(05112506)	631462.25	4175985.25	306.43836	(08091907)
631442.87	4175985.10	311.95015	(08091907)	631423.49	4175984.95	299.23998	(08091907)
631404.10	4175984.80	283.80453	(07090905)	631384.72	4175984.65	283.98096	(05122507)
631365.34	4175984.50	289.57092	(04022205)	631345.95	4175984.35	289.11553	(04022205)
631326.57	4175984.19	277.02361	(04022205)	631307.19	4175984.04	272.95386	(05122508)
631287.80	4175983.89	270.18399	(05122508)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	123.96880	(05011317)	632304.44	4174354.52	68.22283	(05020818)
632192.15	4174956.32	118.62501	(06040119)	632420.62	4175510.15	148.12129	(05121217)
632418.97	4175552.92	130.64040	(05121217)	631187.00	4175727.00	322.98756	(06011217)
631166.00	4175729.00	311.07453	(06011217)	631121.00	4175719.00	288.30348	(06011217)
631035.00	4174830.00	119.08691	(06011109)	631106.00	4174825.00	124.02478	(06011109)
631937.00	4174528.00	88.09479	(04022218)	631322.00	4174522.00	87.60716	(08022002)
629800.63	4173850.44	25.83254	(04012317)	630150.63	4173850.44	31.83127	(07121217)
630500.63	4173850.44	42.94143	(05012117)	630850.63	4173850.44	42.57703	(06011021)
631200.63	4173850.44	50.80142	(08022002)	631550.63	4173850.44	46.03018	(05021805)
631900.63	4173850.44	49.67177	(07020623)	632250.63	4173850.44	46.89102	(06020105)
632600.63	4173850.44	43.36057	(05020818)	632950.63	4173850.44	37.99134	(05011520)
633300.63	4173850.44	32.51225	(06122122)	629800.63	4174200.44	33.12986	(06121421)
630150.63	4174200.44	34.29964	(04012317)	630500.63	4174200.44	48.90432	(07121217)
630850.63	4174200.44	65.66905	(05012117)	631200.63	4174200.44	66.91546	(08022002)
631550.63	4174200.44	60.41308	(05021805)	631900.63	4174200.44	67.29034	(04122824)
632250.63	4174200.44	57.36556	(04122822)	632600.63	4174200.44	53.94281	(05011521)
632950.63	4174200.44	44.51902	(06122122)	633300.63	4174200.44	38.21831	(06011617)
629800.63	4174550.44	40.82788	(06120217)	630150.63	4174550.44	40.42959	(07020624)
630500.63	4174550.44	52.89227	(04012317)	630850.63	4174550.44	81.86771	(07011517)
631200.63	4174550.44	93.58740	(06102817)	631550.63	4174550.44	80.60455	(05021805)
631900.63	4174550.44	92.26361	(07011417)	632250.63	4174550.44	76.86526	(05011521)
632600.63	4174550.44	66.67848	(06122122)	632950.63	4174550.44	59.77388	(06011617)
633300.63	4174550.44	42.13807	(05020802)	629800.63	4174900.44	39.59325	(05122617)
630150.63	4174900.44	51.36024	(05022818)	630500.63	4174900.44	77.86594	(07020624)
630850.63	4174900.44	100.41622	(04012317)	631200.63	4174900.44	124.62866	(06011109)
631550.63	4174900.44	114.52180	(05110722)	631900.63	4174900.44	120.74752	(06051924)
632250.63	4174900.44	109.01902	(05021018)	632600.63	4174900.44	83.13603	(06011617)
632950.63	4174900.44	63.09601	(06120617)	633300.63	4174900.44	45.56244	(05021801)
629800.63	4175250.44	41.83517	(08012221)	630150.63	4175250.44	63.78725	(04022207)
630500.63	4175250.44	79.98755	(06041224)	630850.63	4175250.44	139.29162	(07111023)
631200.63	4175250.44	225.23962	(04012317)	631550.63	4175250.44	245.71679	(04102623)
631900.63	4175250.44	215.41827	(05112916)	632250.63	4175250.44	158.39101	(04022223)
632600.63	4175250.44	112.71786	(07010217)	632950.63	4175250.44	64.29446	(07020218)
633300.63	4175250.44	48.74447	(06011618)	629800.63	4175600.44	46.48843	(05122618)
630150.63	4175600.44	60.13584	(05122618)	630500.63	4175600.44	81.67702	(05122618)
630850.63	4175600.44	125.49193	(04010517)	631200.63	4175600.44	269.59644	(04101719)
631550.63	4175600.44	0.00000	(00000000)	631900.63	4175600.44	416.10591	(07102804)
632250.63	4175600.44	182.57733	(06011619)	632600.63	4175600.44	93.00712	(06011619)
632950.63	4175600.44	64.26995	(06011619)	633300.63	4175600.44	49.99156	(06011619)
629800.63	4175950.44	47.22882	(06011024)	630150.63	4175950.44	54.72458	(06011024)

*** AERMOD - VERSION 19191 *** *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22

*** AERMET - VERSION 18081 *** *** *** 12:14:02

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	79.90263	(04041820)	630850.63	4175950.44	136.03395	(05030322)
631200.63	4175950.44	198.89682	(05051803)	631550.63	4175950.44	320.40116	(07030418)
631900.63	4175950.44	222.18905	(06052306)	632250.63	4175950.44	159.99814	(04121024)
632600.63	4175950.44	107.92377	(05122401)	632950.63	4175950.44	68.14683	(08010924)
633300.63	4175950.44	49.77040	(05012018)	629800.63	4176300.44	43.73879	(07120622)
630150.63	4176300.44	49.30584	(04120824)	630500.63	4176300.44	78.96555	(04021520)
630850.63	4176300.44	101.76282	(04010518)	631200.63	4176300.44	121.21059	(06102618)
631550.63	4176300.44	128.55487	(05122221)	631900.63	4176300.44	126.53409	(06010520)
632250.63	4176300.44	117.34869	(08021908)	632600.63	4176300.44	90.48879	(08122903)
632950.63	4176300.44	63.66008	(04121024)	633300.63	4176300.44	47.11701	(05020719)
629800.63	4176650.44	40.54783	(06122121)	630150.63	4176650.44	48.35895	(04021520)
630500.63	4176650.44	64.30682	(04010518)	630850.63	4176650.44	78.38194	(07012719)
631200.63	4176650.44	91.64805	(08091907)	631550.63	4176650.44	90.79845	(05122505)
631900.63	4176650.44	92.30508	(04020619)	632250.63	4176650.44	83.24389	(05121423)
632600.63	4176650.44	74.55808	(08021908)	632950.63	4176650.44	63.88798	(08021808)
633300.63	4176650.44	45.31148	(05011818)	629800.63	4177000.44	34.34810	(04021521)
630150.63	4177000.44	43.33560	(04010518)	630500.63	4177000.44	53.33610	(04120908)
630850.63	4177000.44	61.93460	(07021218)	631200.63	4177000.44	72.26671	(08011009)
631550.63	4177000.44	70.22643	(07121903)	631900.63	4177000.44	69.36680	(05021719)
632250.63	4177000.44	66.28693	(06010520)	632600.63	4177000.44	57.81365	(06120518)
632950.63	4177000.44	51.40237	(08021908)	633300.63	4177000.44	41.22937	(08021808)
629800.63	4177350.44	32.01887	(04010518)	630150.63	4177350.44	36.36260	(04120908)
630500.63	4177350.44	44.08335	(07122917)	630850.63	4177350.44	46.52470	(07012720)
631200.63	4177350.44	57.77244	(07021108)	631550.63	4177350.44	54.76761	(07121903)
631900.63	4177350.44	55.35120	(05122402)	632250.63	4177350.44	51.67331	(05021722)
632600.63	4177350.44	46.54335	(07010323)	632950.63	4177350.44	44.87402	(07022408)
633300.63	4177350.44	38.81203	(08021908)	631670.70	4175493.59	303.25584	(08110218)
631669.80	4175641.41	721.13101	(07110617)	631665.32	4175796.39	256.80710	(06062806)
631417.17	4175826.85	428.97283	(04081204)	631417.17	4175673.66	819.08288	(07102702)
631422.55	4175484.63	849.19178	(06051905)	631268.42	4175983.74	198.67151	(04022205)
631275.69	4175523.99	403.35712	(04041821)	631345.65	4175419.50	363.96231	(06120517)
631384.72	4175441.30	807.15284	(04012317)	631491.93	4175442.21	319.78932	(08121017)
631491.93	4175414.95	259.23054	(08121017)	631385.63	4175413.14	466.11378	(04012317)
631358.37	4175395.87	417.14507	(06011109)	631409.25	4175336.81	449.33091	(05030118)
631567.35	4175235.96	266.19543	(04102617)	631756.33	4175028.80	167.14941	(05011817)
631807.22	4175003.36	157.87007	(08071406)	631867.18	4174987.91	131.50359	(08071406)
631849.92	4175988.28	251.56117	(06062806)	631268.74	4175963.75	202.57673	(04022205)
631269.05	4175943.76	205.21591	(05122508)	631269.37	4175923.77	218.14637	(05122508)
631269.68	4175903.78	227.55523	(05122508)	631270.00	4175883.79	238.40936	(04022119)
631270.32	4175863.81	253.02883	(04022119)	631270.63	4175843.82	262.77770	(07010318)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	284.32770	(05122621)	631271.26	4175803.84	304.46811	(05122621)
631271.58	4175783.85	311.85916	(05122621)	631271.90	4175763.86	319.34973	(04022924)
631272.21	4175743.87	349.70187	(05110619)	631272.53	4175723.88	374.02371	(07071004)
631272.85	4175703.89	406.73021	(06011217)	631273.16	4175683.90	443.65243	(06011217)
631273.48	4175663.91	437.49352	(06011217)	631273.79	4175643.92	443.73065	(06111024)
631274.11	4175623.94	448.52117	(04101604)	631274.43	4175603.95	368.34156	(04101604)
631274.74	4175583.96	425.32969	(04101719)	631275.06	4175563.97	423.23214	(04110818)
631275.37	4175543.98	402.93086	(04110818)	631285.68	4175509.06	444.88622	(07110617)
631295.68	4175494.14	453.08503	(07110617)	631305.67	4175479.21	420.61423	(07110617)
631315.67	4175464.28	412.96464	(04022118)	631325.66	4175449.35	390.04874	(05072102)
631335.66	4175434.43	369.29236	(05072102)	631358.67	4175426.77	379.50917	(06120517)
631371.70	4175434.03	693.86041	(04012317)	631402.59	4175441.45	748.72691	(08121017)
631420.46	4175441.60	669.09285	(05111717)	631438.33	4175441.76	580.62923	(05111717)
631456.19	4175441.91	478.88679	(05111717)	631474.06	4175442.06	381.85982	(08121017)
631491.93	4175428.58	290.59699	(08121017)	631474.21	4175414.65	328.36251	(08121017)
631456.50	4175414.35	394.47283	(08121017)	631438.78	4175414.05	448.27859	(08121017)
631421.06	4175413.74	549.77818	(07121217)	631403.35	4175413.44	802.81837	(04012317)
631372.00	4175404.51	489.78677	(06011109)	631371.09	4175381.11	366.73456	(06011109)
631383.81	4175366.34	358.47979	(05030118)	631396.53	4175351.58	415.24264	(05030118)
631425.06	4175326.73	466.77920	(06102817)	631440.87	4175316.64	456.48412	(06102817)
631456.68	4175306.56	375.77683	(06102817)	631472.49	4175296.47	350.47579	(07100818)
631488.30	4175286.39	353.80722	(07100818)	631504.11	4175276.30	295.12416	(07100818)
631519.92	4175266.22	233.65309	(05021806)	631535.73	4175256.13	222.03863	(04102623)
631551.54	4175246.05	243.53098	(04102623)	631579.95	4175222.15	239.47945	(08102618)
631592.55	4175208.34	254.48906	(08102618)	631605.15	4175194.53	221.25751	(04102617)
631617.74	4175180.72	217.03115	(04102617)	631630.34	4175166.91	210.73666	(04102617)
631642.94	4175153.10	202.55432	(04102617)	631655.54	4175139.29	192.98451	(04102617)
631668.14	4175125.47	182.46056	(04102617)	631680.74	4175111.66	171.35411	(04102617)
631693.34	4175097.85	171.80160	(05011817)	631705.94	4175084.04	172.76000	(05011817)
631718.53	4175070.23	172.64456	(05011817)	631731.13	4175056.42	171.58912	(05011817)
631743.73	4175042.61	169.71852	(05011817)	631773.29	4175020.32	165.04933	(05011817)
631790.26	4175011.84	162.14948	(08071406)	631822.21	4174999.50	153.08789	(08071406)
631837.20	4174995.64	146.91859	(08071406)	631852.19	4174991.77	139.63203	(08071406)
631866.84	4175007.53	134.54159	(04122822)	631866.50	4175027.14	139.15882	(06041222)
631866.16	4175046.76	147.39982	(08031018)	631865.83	4175066.37	155.56938	(08031018)
631865.49	4175085.99	163.19492	(08031018)	631865.15	4175105.60	170.02095	(08031018)
631864.81	4175125.22	175.78060	(08031018)	631864.47	4175144.83	180.17193	(08031018)
631864.13	4175164.45	182.90274	(08031018)	631863.80	4175184.06	183.67888	(08031018)
631863.46	4175203.68	189.49512	(05011317)	631863.12	4175223.29	203.61649	(05011317)
631862.78	4175242.91	215.32847	(05011317)	631862.44	4175262.52	223.64493	(05011317)

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK8 ***

INCLUDING SOURCE(S): STCK8 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	240.29009	(05112916)	631861.77	4175301.75	256.08359	(05112916)
631861.43	4175321.37	268.28550	(05112916)	631861.09	4175340.98	357.18179	(05011417)
631860.75	4175360.60	586.24274	(05110817)	631860.41	4175380.21	509.97388	(07111901)
631860.07	4175399.83	624.25637	(08022004)	631859.73	4175419.44	592.80359	(08012218)
631859.40	4175439.06	638.94861	(07102701)	631859.06	4175458.67	802.49422	(07080303)
631858.72	4175478.29	621.96946	(07080303)	631858.38	4175497.90	628.33052	(04081304)
631858.04	4175517.52	621.16252	(05071701)	631857.70	4175537.13	581.88984	(05071701)
631857.37	4175556.75	653.87220	(04030118)	631857.03	4175576.36	830.24504	(04030118)
631856.69	4175595.98	640.16390	(04030118)	631856.35	4175615.59	660.77023	(04030118)
631856.01	4175635.21	565.84792	(08112619)	631855.67	4175654.82	659.17537	(08112619)
631855.33	4175674.44	705.46507	(08112619)	631855.00	4175694.05	735.97903	(06111908)
631854.66	4175713.67	773.34216	(06111908)	631854.32	4175733.28	755.22690	(06111908)
631853.98	4175752.90	736.07542	(06111908)	631853.64	4175772.51	562.08451	(05072806)
631853.30	4175792.13	728.50044	(06110305)	631852.97	4175811.74	576.55560	(05072806)
631852.63	4175831.36	612.55840	(04121019)	631852.29	4175850.97	454.45451	(06052306)
631851.95	4175870.59	477.39787	(07020318)	631851.61	4175890.20	263.80611	(06052306)
631851.27	4175909.82	254.72865	(06062806)	631850.94	4175929.43	260.61409	(06062806)
631850.60	4175949.05	262.10765	(06062806)	631850.26	4175968.66	258.98087	(06062806)
631830.54	4175988.13	253.24999	(06062806)	631811.15	4175987.98	247.69497	(06062806)
631791.77	4175987.83	234.91238	(06062806)	631772.39	4175987.67	215.65353	(06062806)
631753.00	4175987.52	204.65994	(07010322)	631733.62	4175987.37	204.17225	(06081406)
631714.24	4175987.22	247.50451	(08102318)	631694.85	4175987.07	375.14349	(06081406)
631675.47	4175986.92	350.81566	(07102901)	631656.09	4175986.77	359.35185	(06080603)
631636.70	4175986.62	336.07880	(06080603)	631617.32	4175986.46	308.26195	(04020106)
631597.94	4175986.31	308.91550	(05072006)	631578.55	4175986.16	296.00994	(04111519)
631559.17	4175986.01	268.10629	(04111519)	631539.79	4175985.86	231.53198	(04111519)
631520.40	4175985.71	219.17147	(07030418)	631501.02	4175985.56	217.50897	(07080306)
631481.64	4175985.40	215.81812	(07080306)	631462.25	4175985.25	214.64634	(07020208)
631442.87	4175985.10	222.03656	(08091907)	631423.49	4175984.95	231.73596	(08091907)
631404.10	4175984.80	235.00428	(08091907)	631384.72	4175984.65	227.78542	(08091907)
631365.34	4175984.50	211.59110	(08091907)	631345.95	4175984.35	203.59522	(05122507)
631326.57	4175984.19	205.29656	(05122507)	631307.19	4175984.04	200.93543	(07012721)
631287.80	4175983.89	201.20016	(04022205)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP:

STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
632121.21	4174952.36	126.05848	(05011417)	632304.44	4174354.52	64.93323	(05020818)
632192.15	4174956.32	117.74427	(05011417)	632420.62	4175510.15	126.55917	(06011619)
632418.97	4175552.92	143.08336	(07012318)	631187.00	4175727.00	216.62551	(07120623)
631166.00	4175729.00	207.29603	(07120623)	631121.00	4175719.00	199.19086	(05110619)
631035.00	4174830.00	130.95043	(07121217)	631106.00	4174825.00	158.06329	(06011109)
631937.00	4174528.00	91.63755	(05011817)	631322.00	4174522.00	97.76845	(08022002)
629800.63	4173850.44	30.23217	(06121421)	630150.63	4173850.44	31.60570	(04012317)
630500.63	4173850.44	48.11804	(07011517)	630850.63	4173850.44	49.91634	(06011021)
631200.63	4173850.44	55.69856	(08022002)	631550.63	4173850.44	49.46188	(05021805)
631900.63	4173850.44	54.00630	(07020623)	632250.63	4173850.44	50.10571	(06020105)
632600.63	4173850.44	43.68410	(05020818)	632950.63	4173850.44	36.85040	(04022018)
633300.63	4173850.44	32.48542	(05021018)	629800.63	4174200.44	30.89351	(07020624)
630150.63	4174200.44	41.99338	(06121421)	630500.63	4174200.44	46.98030	(07121217)
630850.63	4174200.44	75.61427	(05012117)	631200.63	4174200.44	69.59664	(08022002)
631550.63	4174200.44	65.65476	(05021805)	631900.63	4174200.44	70.40829	(05021804)
632250.63	4174200.44	64.22974	(04122822)	632600.63	4174200.44	55.07280	(05011520)
632950.63	4174200.44	43.72346	(05021018)	633300.63	4174200.44	43.62598	(06011617)
629800.63	4174550.44	38.75226	(06120217)	630150.63	4174550.44	50.29727	(07020624)
630500.63	4174550.44	66.84410	(06121421)	630850.63	4174550.44	89.42718	(07121217)
631200.63	4174550.44	109.84547	(06102817)	631550.63	4174550.44	88.92917	(05021805)
631900.63	4174550.44	95.03333	(05011817)	632250.63	4174550.44	82.49373	(05011521)
632600.63	4174550.44	63.35914	(08030618)	632950.63	4174550.44	57.14379	(06011617)
633300.63	4174550.44	44.61302	(06120617)	629800.63	4174900.44	39.49442	(04022208)
630150.63	4174900.44	53.98784	(06121217)	630500.63	4174900.44	85.16675	(06120217)
630850.63	4174900.44	125.79595	(06121421)	631200.63	4174900.44	189.20143	(06011109)
631550.63	4174900.44	135.50645	(05110722)	631900.63	4174900.44	130.54662	(08031018)
632250.63	4174900.44	105.76528	(05011417)	632600.63	4174900.44	81.93123	(06121106)
632950.63	4174900.44	61.09143	(05021801)	633300.63	4174900.44	50.24527	(07010217)
629800.63	4175250.44	41.05734	(08012221)	630150.63	4175250.44	57.48951	(08012221)
630500.63	4175250.44	93.79614	(04022207)	630850.63	4175250.44	142.27187	(04022208)
631200.63	4175250.44	281.20740	(07020624)	631550.63	4175250.44	299.94049	(04102623)
631900.63	4175250.44	219.11876	(04012318)	632250.63	4175250.44	144.32544	(07010217)
632600.63	4175250.44	96.07903	(07020218)	632950.63	4175250.44	64.14324	(06011618)
633300.63	4175250.44	49.11254	(05122223)	629800.63	4175600.44	47.75229	(05122618)
630150.63	4175600.44	59.74260	(05122618)	630500.63	4175600.44	75.67888	(05122618)
630850.63	4175600.44	137.11785	(07042002)	631200.63	4175600.44	299.05341	(05030324)
631550.63	4175600.44	806.50867	(06111518)	631900.63	4175600.44	819.61217	(04111603)
632250.63	4175600.44	199.46018	(07012418)	632600.63	4175600.44	107.94135	(07012318)
632950.63	4175600.44	67.23729	(07012318)	633300.63	4175600.44	49.99097	(07011518)
629800.63	4175950.44	40.40782	(06011024)	630150.63	4175950.44	51.28899	(04041820)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
630500.63	4175950.44	83.98219	(07120622)	630850.63	4175950.44	114.61491	(06041301)
631200.63	4175950.44	156.20345	(04022205)	631550.63	4175950.44	237.35499	(07030418)
631900.63	4175950.44	242.04946	(06062806)	632250.63	4175950.44	158.28257	(08122903)
632600.63	4175950.44	101.97267	(05011418)	632950.63	4175950.44	69.49370	(05122401)
633300.63	4175950.44	49.74872	(08010924)	629800.63	4176300.44	42.05932	(07120622)
630150.63	4176300.44	53.79686	(06122121)	630500.63	4176300.44	67.85393	(04021520)
630850.63	4176300.44	90.66079	(04120903)	631200.63	4176300.44	119.02654	(08091907)
631550.63	4176300.44	118.94983	(06111518)	631900.63	4176300.44	143.49550	(07091007)
632250.63	4176300.44	116.27104	(07122918)	632600.63	4176300.44	95.70842	(08021808)
632950.63	4176300.44	63.69951	(05011818)	633300.63	4176300.44	47.14013	(04011021)
629800.63	4176650.44	38.36683	(04021520)	630150.63	4176650.44	47.56222	(04021521)
630500.63	4176650.44	60.67891	(04120903)	630850.63	4176650.44	73.42152	(07122917)
631200.63	4176650.44	79.16718	(08091907)	631550.63	4176650.44	86.78441	(07121903)
631900.63	4176650.44	114.09186	(07091007)	632250.63	4176650.44	86.17050	(07010323)
632600.63	4176650.44	71.66315	(08122905)	632950.63	4176650.44	55.29378	(07021220)
633300.63	4176650.44	45.24810	(08021808)	629800.63	4177000.44	35.72293	(04021521)
630150.63	4177000.44	41.60350	(04120903)	630500.63	4177000.44	48.68001	(07012719)
630850.63	4177000.44	58.75517	(04022021)	631200.63	4177000.44	68.49938	(08011009)
631550.63	4177000.44	66.90453	(07121903)	631900.63	4177000.44	66.46450	(07021206)
632250.63	4177000.44	64.56699	(06122319)	632600.63	4177000.44	56.74935	(04121820)
632950.63	4177000.44	46.22197	(05010604)	633300.63	4177000.44	41.30500	(08021908)
629800.63	4177350.44	31.16400	(04010518)	630150.63	4177350.44	36.14983	(04120908)
630500.63	4177350.44	42.06932	(08122718)	630850.63	4177350.44	45.10631	(07012722)
631200.63	4177350.44	53.88034	(07021108)	631550.63	4177350.44	52.06229	(07121903)
631900.63	4177350.44	53.15010	(05122402)	632250.63	4177350.44	49.47834	(06012820)
632600.63	4177350.44	45.03668	(06010522)	632950.63	4177350.44	40.82694	(07022408)
633300.63	4177350.44	33.65853	(05010604)	631670.70	4175493.59	454.64152	(07021102)
631669.80	4175641.41	490.89771	(05111717)	631665.32	4175796.39	214.14176	(06081406)
631417.17	4175826.85	207.73167	(05042719)	631417.17	4175673.66	269.89976	(08091907)
631422.55	4175484.63	637.18916	(04041821)	631268.42	4175983.74	159.75389	(05122507)
631275.69	4175523.99	388.26920	(04101604)	631345.65	4175419.50	535.58890	(07110617)
631384.72	4175441.30	650.17148	(07110617)	631491.93	4175442.21	1486.41161	(05072102)
631491.93	4175414.95	1081.76564	(05111717)	631385.63	4175413.14	645.99757	(04022118)
631358.37	4175395.87	567.62890	(04022118)	631409.25	4175336.81	501.99217	(04012317)
631567.35	4175235.96	318.91633	(04102617)	631756.33	4175028.80	185.35082	(08071406)
631807.22	4175003.36	157.32081	(08071406)	631867.18	4174987.91	155.01301	(08031018)
631849.92	4175988.28	194.35513	(06062806)	631268.74	4175963.75	164.22745	(05122507)
631269.05	4175943.76	167.95595	(07012721)	631269.37	4175923.77	171.60358	(04022205)
631269.68	4175903.78	179.28914	(04022205)	631270.00	4175883.79	185.27660	(04022205)
631270.32	4175863.81	189.04714	(04022205)	631270.63	4175843.82	190.41741	(05122508)

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631270.95	4175823.83	202.38673	(05122508)	631271.26	4175803.84	211.26743	(05122508)
631271.58	4175783.85	216.16183	(04022119)	631271.90	4175763.86	229.36737	(04022119)
631272.21	4175743.87	238.15916	(07010318)	631272.53	4175723.88	279.91795	(04110906)
631272.85	4175703.89	260.66382	(05122621)	631273.16	4175683.90	267.35326	(05122621)
631273.48	4175663.91	273.24501	(07120623)	631273.79	4175643.92	291.63832	(06033021)
631274.11	4175623.94	304.98822	(08081602)	631274.43	4175603.95	323.38021	(06011217)
631274.74	4175583.96	355.66278	(05030324)	631275.06	4175563.97	370.94837	(06072906)
631275.37	4175543.98	379.95349	(06111024)	631285.68	4175509.06	368.38802	(04101604)
631295.68	4175494.14	344.43980	(06032819)	631305.67	4175479.21	398.61951	(06032819)
631315.67	4175464.28	400.06944	(04110818)	631325.66	4175449.35	446.85043	(04022207)
631335.66	4175434.43	508.95870	(07101502)	631358.67	4175426.77	571.23100	(07110617)
631371.70	4175434.03	609.40652	(07110617)	631402.59	4175441.45	710.48028	(07110617)
631420.46	4175441.60	951.44057	(08081806)	631438.33	4175441.76	1112.04213	(08081806)
631456.19	4175441.91	1737.09080	(05072102)	631474.06	4175442.06	1696.49524	(05072102)
631491.93	4175428.58	1173.00619	(05111717)	631474.21	4175414.65	1479.50890	(05072102)
631456.50	4175414.35	1288.74963	(05111717)	631438.78	4175414.05	1269.10358	(08081806)
631421.06	4175413.74	822.58337	(06041020)	631403.35	4175413.44	913.27174	(06041020)
631372.00	4175404.51	604.63677	(04022118)	631371.09	4175381.11	536.99401	(05072102)
631383.81	4175366.34	489.76454	(05122619)	631396.53	4175351.58	492.17062	(06120517)
631425.06	4175326.73	528.83548	(05030118)	631440.87	4175316.64	577.11515	(06102817)
631456.68	4175306.56	535.74200	(06102817)	631472.49	4175296.47	477.55249	(07100818)
631488.30	4175286.39	513.99030	(07100818)	631504.11	4175276.30	412.11977	(07100818)
631519.92	4175266.22	322.72877	(08081805)	631535.73	4175256.13	293.43541	(08081805)
631551.54	4175246.05	297.08153	(04102623)	631579.95	4175222.15	290.19443	(04102617)
631592.55	4175208.34	282.59492	(04102617)	631605.15	4175194.53	270.66166	(04102617)
631617.74	4175180.72	257.15617	(04102617)	631630.34	4175166.91	241.67312	(04102617)
631642.94	4175153.10	224.82744	(04102617)	631655.54	4175139.29	220.82987	(05011817)
631668.14	4175125.47	220.09283	(05011817)	631680.74	4175111.66	217.60302	(05011817)
631693.34	4175097.85	213.70267	(05011817)	631705.94	4175084.04	208.69689	(05011817)
631718.53	4175070.23	202.98051	(08071406)	631731.13	4175056.42	197.61387	(08071406)
631743.73	4175042.61	191.68484	(08071406)	631773.29	4175020.32	177.52486	(08071406)
631790.26	4175011.84	168.00958	(08071406)	631822.21	4174999.50	148.78500	(08031018)
631837.20	4174995.64	152.24176	(08031018)	631852.19	4174991.77	154.29771	(08031018)
631866.84	4175007.53	161.18742	(08031018)	631866.50	4175027.14	166.41397	(08031018)
631866.16	4175046.76	170.42947	(08031018)	631865.83	4175066.37	172.94588	(08031018)
631865.49	4175085.99	173.69048	(08031018)	631865.15	4175105.60	179.34220	(05011317)
631864.81	4175125.22	191.53401	(05011317)	631864.47	4175144.83	201.51061	(05011317)
631864.13	4175164.45	208.45191	(05011317)	631863.80	4175184.06	212.51467	(05011417)
631863.46	4175203.68	224.73531	(05011417)	631863.12	4175223.29	232.10011	(05011417)
631862.78	4175242.91	233.34505	(05011417)	631862.44	4175262.52	240.12450	(05110817)

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: STCK9 ***

INCLUDING SOURCE(S): STCK9 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
631862.10	4175282.14	243.07414	(04012318)	631861.77	4175301.75	247.13813	(08022004)
631861.43	4175321.37	260.00653	(08021718)	631861.09	4175340.98	278.32245	(04022019)
631860.75	4175360.60	287.74812	(04022019)	631860.41	4175380.21	314.61564	(08021718)
631860.07	4175399.83	352.33405	(08012218)	631859.73	4175419.44	360.43786	(06111919)
631859.40	4175439.06	421.08865	(04081304)	631859.06	4175458.67	557.30525	(05020803)
631858.72	4175478.29	717.44548	(05020803)	631858.38	4175497.90	848.22516	(05020803)
631858.04	4175517.52	996.51020	(08041119)	631857.70	4175537.13	1021.75055	(04082203)
631857.37	4175556.75	1023.21693	(07091005)	631857.03	4175576.36	837.28363	(06081403)
631856.69	4175595.98	580.65642	(06111908)	631856.35	4175615.59	615.57251	(06111908)
631856.01	4175635.21	610.25126	(06111908)	631855.67	4175654.82	565.73819	(06111908)
631855.33	4175674.44	485.42895	(06102818)	631855.00	4175694.05	481.11088	(06092519)
631854.66	4175713.67	489.25438	(06092419)	631854.32	4175733.28	460.99013	(06092419)
631853.98	4175752.90	452.27732	(06052306)	631853.64	4175772.51	464.43332	(06052306)
631853.30	4175792.13	461.61357	(06052306)	631852.97	4175811.74	450.19301	(06110304)
631852.63	4175831.36	429.96170	(06110304)	631852.29	4175850.97	425.53623	(06062806)
631851.95	4175870.59	460.33969	(07020318)	631851.61	4175890.20	305.40142	(06062806)
631851.27	4175909.82	282.09242	(06062806)	631850.94	4175929.43	260.19485	(06062806)
631850.60	4175949.05	238.24691	(06062806)	631850.26	4175968.66	216.19351	(06062806)
631830.54	4175988.13	191.20441	(05102804)	631811.15	4175987.98	192.58516	(06120218)
631791.77	4175987.83	203.71260	(07091007)	631772.39	4175987.67	231.39232	(07091007)
631753.00	4175987.52	256.82121	(07091007)	631733.62	4175987.37	278.19766	(07091007)
631714.24	4175987.22	293.80643	(07091007)	631694.85	4175987.07	312.33869	(07091007)
631675.47	4175986.92	386.09955	(07091007)	631656.09	4175986.77	402.31731	(07091007)
631636.70	4175986.62	377.45479	(07091007)	631617.32	4175986.46	344.05101	(07091007)
631597.94	4175986.31	302.65256	(07091007)	631578.55	4175986.16	265.26075	(04111519)
631559.17	4175986.01	239.31414	(04111519)	631539.79	4175985.86	207.92347	(04111519)
631520.40	4175985.71	177.29306	(06080606)	631501.02	4175985.56	175.55963	(07030418)
631481.64	4175985.40	174.26150	(07080306)	631462.25	4175985.25	172.07157	(07080306)
631442.87	4175985.10	172.96887	(07010319)	631423.49	4175984.95	171.72956	(07020208)
631404.10	4175984.80	185.90867	(08091907)	631384.72	4175984.65	193.86781	(08091907)
631365.34	4175984.50	194.76959	(08091907)	631345.95	4175984.35	188.89481	(08091907)
631326.57	4175984.19	177.20064	(08091907)	631307.19	4175984.04	161.08519	(08091907)
631287.80	4175983.89	158.96161	(05122507)				

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

NETWORK

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
SLINE1	1ST HIGHEST VALUE IS	44.60841 AT (631861.77, 4175301.75, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	44.35599 AT (631861.43, 4175321.37, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	44.22139 AT (631862.10, 4175282.14, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	43.49104 AT (631862.44, 4175262.52, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	43.08757 AT (631861.09, 4175340.98, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	42.95218 AT (631491.93, 4175442.21, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	41.48004 AT (631860.75, 4175360.60, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	40.30381 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	39.97217 AT (631474.06, 4175442.06, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	39.58140 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00) DC
SLINE2	1ST HIGHEST VALUE IS	107.65204 AT (631423.49, 4175984.95, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	106.54758 AT (631404.10, 4175984.80, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	106.37902 AT (631442.87, 4175985.10, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	104.83644 AT (631384.72, 4175984.65, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	102.93031 AT (631365.34, 4175984.50, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	100.96499 AT (631345.95, 4175984.35, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	98.92712 AT (631326.57, 4175984.19, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	97.00289 AT (631307.19, 4175984.04, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	95.12138 AT (631287.80, 4175983.89, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	93.28892 AT (631268.42, 4175983.74, 158.00, 158.00, 0.00) DC
SLINE3	1ST HIGHEST VALUE IS	80.45729 AT (631849.92, 4175988.28, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	79.90610 AT (631830.54, 4175988.13, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	79.34489 AT (631811.15, 4175987.98, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	78.77247 AT (631791.77, 4175987.83, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	78.12619 AT (631772.39, 4175987.67, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	77.51980 AT (631753.00, 4175987.52, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	76.88980 AT (631733.62, 4175987.37, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	76.23165 AT (631714.24, 4175987.22, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	75.53735 AT (631694.85, 4175987.07, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	74.79579 AT (631675.47, 4175986.92, 158.00, 158.00, 0.00) DC
SLINE4	1ST HIGHEST VALUE IS	68.33518 AT (631849.92, 4175988.28, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	25.91760 AT (632250.63, 4175950.44, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	25.61356 AT (632600.63, 4175950.44, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	15.73965 AT (631900.63, 4175950.44, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	15.28804 AT (631850.26, 4175968.66, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	14.51995 AT (631830.54, 4175988.13, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	8.31317 AT (631850.60, 4175949.05, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	8.01996 AT (632950.63, 4175950.44, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	6.71086 AT (631811.15, 4175987.98, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	5.66821 AT (631850.94, 4175929.43, 158.00, 158.00, 0.00) DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE GRID-ID
SLINE5	1ST HIGHEST VALUE IS	97.14841 AT (631462.25, 4175985.25, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	95.88661 AT (631423.49, 4175984.95, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	95.37476 AT (631404.10, 4175984.80, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	95.22375 AT (631753.00, 4175987.52, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	94.77535 AT (631384.72, 4175984.65, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	94.17501 AT (631365.34, 4175984.50, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	93.66128 AT (631345.95, 4175984.35, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	93.58945 AT (631694.85, 4175987.07, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	93.09967 AT (631617.32, 4175986.46, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	93.04582 AT (631772.39, 4175987.67, 158.00, 158.00, 0.00)	DC
STCK1	1ST HIGHEST VALUE IS	38.47248 AT (631852.97, 4175811.74, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	29.20670 AT (631853.30, 4175792.13, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	23.96028 AT (631852.63, 4175831.36, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	18.04640 AT (631852.29, 4175850.97, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	14.96747 AT (631851.95, 4175870.59, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	11.48198 AT (631851.61, 4175890.20, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	9.80118 AT (631851.27, 4175909.82, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	8.12587 AT (631853.64, 4175772.51, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	7.84236 AT (631850.94, 4175929.43, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	6.19877 AT (631850.60, 4175949.05, 158.00, 158.00, 0.00)	DC
STCK10	1ST HIGHEST VALUE IS	17.16308 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	16.94317 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	16.48178 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	16.01653 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	15.54194 AT (631860.75, 4175360.60, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	14.16411 AT (631861.09, 4175340.98, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	13.62577 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	12.51444 AT (631861.43, 4175321.37, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	10.82440 AT (631861.77, 4175301.75, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	10.78339 AT (631491.93, 4175414.95, 158.00, 158.00, 0.00)	DC
STCK11	1ST HIGHEST VALUE IS	45.79931 AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	27.01346 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	25.97704 AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	11.91044 AT (631417.17, 4175826.85, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	10.71469 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	10.62011 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	10.58721 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	10.28048 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	10.27816 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	10.16858 AT (631665.32, 4175796.39, 158.00, 158.00, 0.00)	DC

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*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE GRID-ID
STCK12	1ST HIGHEST VALUE IS	135.87124	AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	31.30458	AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	24.26039	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	15.31483	AT (631670.70, 4175493.59, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	11.69526	AT (631491.93, 4175442.21, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	10.50218	AT (631857.03, 4175576.36, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	10.42959	AT (631856.69, 4175595.98, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	10.37106	AT (631857.37, 4175556.75, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	10.17480	AT (631856.35, 4175615.59, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	10.02039	AT (631857.70, 4175537.13, 158.00, 158.00, 0.00)	DC
STCK13	1ST HIGHEST VALUE IS	76.09948	AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	27.41590	AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	23.73647	AT (631272.53, 4175723.88, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	23.32171	AT (631272.85, 4175703.89, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	22.56734	AT (631272.21, 4175743.87, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	20.84602	AT (631273.16, 4175683.90, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	19.06022	AT (631271.90, 4175763.86, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	17.42970	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	16.48820	AT (631273.48, 4175663.91, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	15.90604	AT (631271.58, 4175783.85, 158.00, 158.00, 0.00)	DC
STCK14	1ST HIGHEST VALUE IS	55.50322	AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	16.92300	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	16.75059	AT (631274.43, 4175603.95, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	16.66788	AT (631274.74, 4175583.96, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	15.85179	AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	14.87789	AT (631491.93, 4175442.21, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	14.68014	AT (631474.06, 4175442.06, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	14.37319	AT (631275.06, 4175563.97, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	13.72654	AT (631274.11, 4175623.94, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	12.15859	AT (631275.37, 4175543.98, 158.00, 158.00, 0.00)	DC
STCK15	1ST HIGHEST VALUE IS	68.68354	AT (631852.97, 4175811.74, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	54.87852	AT (631853.30, 4175792.13, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	36.11460	AT (631852.63, 4175831.36, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	23.56994	AT (631852.29, 4175850.97, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	18.11573	AT (631851.95, 4175870.59, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	13.32598	AT (631851.61, 4175890.20, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	12.81883	AT (631853.64, 4175772.51, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	11.05391	AT (631851.27, 4175909.82, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	8.80238	AT (631850.94, 4175929.43, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	6.90889	AT (631850.60, 4175949.05, 158.00, 158.00, 0.00)	DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	NETWORK OF TYPE GRID-ID
STCK16	1ST HIGHEST VALUE IS	121.59003 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	117.29148 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	66.81704 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	58.29163 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	34.28283 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	30.81879 AT (631853.98, 4175752.90, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	17.54707 AT (631853.64, 4175772.51, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	17.28785 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	14.88154 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	12.92290 AT (631853.30, 4175792.13, 158.00, 158.00, 0.00)	DC
STCK17	1ST HIGHEST VALUE IS	159.37853 AT (631856.69, 4175595.98, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	106.59129 AT (631856.35, 4175615.59, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	97.12828 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	87.40733 AT (631900.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	56.38339 AT (631857.37, 4175556.75, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	46.68333 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	40.42467 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	36.48170 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	25.70592 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	24.44585 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00)	DC
STCK18	1ST HIGHEST VALUE IS	140.43305 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	109.56955 AT (631858.72, 4175478.29, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	91.16003 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	79.83697 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	54.34537 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	42.56515 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	39.12984 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	38.10954 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	32.91539 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	25.88334 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00)	DC
STCK19	1ST HIGHEST VALUE IS	96.52970 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	82.03993 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	61.01911 AT (631860.75, 4175360.60, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	46.82771 AT (631861.09, 4175340.98, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	43.58331 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	38.37840 AT (631861.43, 4175321.37, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	26.34210 AT (631861.77, 4175301.75, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	23.21199 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00)	DC

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
STCK2	1ST HIGHEST VALUE IS	87.55917 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	85.73752 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	53.21937 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	48.35829 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	29.82631 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	26.50261 AT (631853.98, 4175752.90, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	15.71327 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	14.99369 AT (631853.64, 4175772.51, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	12.98264 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	10.77699 AT (631853.30, 4175792.13, 158.00, 158.00, 0.00) DC
STCK20	1ST HIGHEST VALUE IS	18.01802 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	16.20738 AT (631853.30, 4175792.13, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	15.90091 AT (631852.97, 4175811.74, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	15.54189 AT (631853.64, 4175772.51, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	14.60697 AT (631852.63, 4175831.36, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	14.58934 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	14.11964 AT (631853.98, 4175752.90, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	12.60748 AT (631852.29, 4175850.97, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	11.16098 AT (631665.32, 4175796.39, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	10.88062 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC
STCK21	1ST HIGHEST VALUE IS	32.72942 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	32.04081 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	32.02370 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	30.36142 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	28.52582 AT (631856.35, 4175615.59, 158.00, 158.00, 0.00) DC
	6TH HIGHEST VALUE IS	26.67967 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC
	7TH HIGHEST VALUE IS	23.38247 AT (631856.69, 4175595.98, 158.00, 158.00, 0.00) DC
	8TH HIGHEST VALUE IS	22.23635 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC
	9TH HIGHEST VALUE IS	18.83234 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00) DC
	10TH HIGHEST VALUE IS	17.75795 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC
STCK22	1ST HIGHEST VALUE IS	34.40100 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC
	2ND HIGHEST VALUE IS	27.52499 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC
	3RD HIGHEST VALUE IS	26.58801 AT (631856.69, 4175595.98, 158.00, 158.00, 0.00) DC
	4TH HIGHEST VALUE IS	25.79135 AT (631857.37, 4175556.75, 158.00, 158.00, 0.00) DC
	5TH HIGHEST VALUE IS	22.91834 AT (631856.35, 4175615.59, 158.00, 158.00, 0.00) DC

6TH HIGHEST VALUE IS 19.70016 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 18.84490 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00) DC
8TH HIGHEST VALUE IS 18.69294 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 17.88264 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 16.69720 AT (631858.72, 4175478.29, 158.00, 158.00, 0.00) DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE	NETWORK GRID-ID
STCK23	1ST HIGHEST VALUE IS	44.35984 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00) DC	
	2ND HIGHEST VALUE IS	29.35119 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00) DC	
	3RD HIGHEST VALUE IS	27.90446 AT (631857.37, 4175556.75, 158.00, 158.00, 0.00) DC	
	4TH HIGHEST VALUE IS	27.58204 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00) DC	
	5TH HIGHEST VALUE IS	24.24605 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00) DC	
	6TH HIGHEST VALUE IS	21.21219 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC	
	7TH HIGHEST VALUE IS	20.84353 AT (631858.72, 4175478.29, 158.00, 158.00, 0.00) DC	
	8TH HIGHEST VALUE IS	18.45750 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00) DC	
	9TH HIGHEST VALUE IS	16.93631 AT (631491.93, 4175442.21, 158.00, 158.00, 0.00) DC	
	10TH HIGHEST VALUE IS	16.51266 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00) DC	
STCK24	1ST HIGHEST VALUE IS	17.54030 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00) DC	
	2ND HIGHEST VALUE IS	17.32053 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00) DC	
	3RD HIGHEST VALUE IS	16.81296 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00) DC	
	4TH HIGHEST VALUE IS	16.38301 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00) DC	
	5TH HIGHEST VALUE IS	15.80337 AT (631860.75, 4175360.60, 158.00, 158.00, 0.00) DC	
	6TH HIGHEST VALUE IS	14.86206 AT (631491.93, 4175414.95, 158.00, 158.00, 0.00) DC	
	7TH HIGHEST VALUE IS	14.36354 AT (631861.09, 4175340.98, 158.00, 158.00, 0.00) DC	
	8TH HIGHEST VALUE IS	13.91292 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00) DC	
	9TH HIGHEST VALUE IS	12.67787 AT (631861.43, 4175321.37, 158.00, 158.00, 0.00) DC	
	10TH HIGHEST VALUE IS	11.16415 AT (631491.93, 4175428.58, 158.00, 158.00, 0.00) DC	
STCK25	1ST HIGHEST VALUE IS	53.70963 AT (631417.17, 4175673.66, 158.00, 158.00, 0.00) DC	
	2ND HIGHEST VALUE IS	29.34453 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC	
	3RD HIGHEST VALUE IS	29.16184 AT (631550.63, 4175600.44, 158.00, 158.00, 0.00) DC	
	4TH HIGHEST VALUE IS	13.01970 AT (631417.17, 4175826.85, 158.00, 158.00, 0.00) DC	
	5TH HIGHEST VALUE IS	11.31110 AT (631665.32, 4175796.39, 158.00, 158.00, 0.00) DC	
	6TH HIGHEST VALUE IS	11.28040 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00) DC	
	7TH HIGHEST VALUE IS	11.17797 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC	
	8TH HIGHEST VALUE IS	11.15063 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00) DC	
	9TH HIGHEST VALUE IS	10.88176 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC	
	10TH HIGHEST VALUE IS	10.76873 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC	
STCK26	1ST HIGHEST VALUE IS	179.67875 AT (631550.63, 4175600.44, 158.00, 158.00, 0.00) DC	
	2ND HIGHEST VALUE IS	35.80115 AT (631417.17, 4175673.66, 158.00, 158.00, 0.00) DC	

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID		AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE GRID-ID
STCK27	1ST HIGHEST VALUE IS	83.98880	AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	29.16895	AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	28.19009	AT (631272.53, 4175723.88, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	27.87743	AT (631272.85, 4175703.89, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	26.57681	AT (631272.21, 4175743.87, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	24.94755	AT (631273.16, 4175683.90, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	22.19423	AT (631271.90, 4175763.86, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	19.51150	AT (631273.48, 4175663.91, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	18.34279	AT (631271.58, 4175783.85, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	17.57994	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
STCK28	1ST HIGHEST VALUE IS	57.58289	AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	21.45340	AT (631274.43, 4175603.95, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	21.45314	AT (631274.74, 4175583.96, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	18.64767	AT (631417.17, 4175673.66, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	18.20460	AT (631275.06, 4175563.97, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	17.30775	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	16.83669	AT (631274.11, 4175623.94, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	15.83328	AT (631491.93, 4175442.21, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	15.73379	AT (631474.06, 4175442.06, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	15.14943	AT (631275.37, 4175543.98, 158.00, 158.00, 0.00)	DC
STCK3	1ST HIGHEST VALUE IS	118.38626	AT (631856.69, 4175595.98, 158.00, 158.00, 0.00)	DC
	2ND HIGHEST VALUE IS	81.64816	AT (631856.35, 4175615.59, 158.00, 158.00, 0.00)	DC
	3RD HIGHEST VALUE IS	78.55349	AT (631857.03, 4175576.36, 158.00, 158.00, 0.00)	DC
	4TH HIGHEST VALUE IS	69.19602	AT (631900.63, 4175600.44, 158.00, 158.00, 0.00)	DC
	5TH HIGHEST VALUE IS	49.28817	AT (631857.37, 4175556.75, 158.00, 158.00, 0.00)	DC
	6TH HIGHEST VALUE IS	39.63827	AT (631856.01, 4175635.21, 158.00, 158.00, 0.00)	DC
	7TH HIGHEST VALUE IS	35.07432	AT (631669.80, 4175641.41, 158.00, 158.00, 0.00)	DC
	8TH HIGHEST VALUE IS	32.34582	AT (631857.70, 4175537.13, 158.00, 158.00, 0.00)	DC
	9TH HIGHEST VALUE IS	22.97847	AT (631858.04, 4175517.52, 158.00, 158.00, 0.00)	DC
	10TH HIGHEST VALUE IS	21.33316	AT (631855.67, 4175654.82, 158.00, 158.00, 0.00)	DC

STCK4 1ST HIGHEST VALUE IS 103.62968 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00) DC
2ND HIGHEST VALUE IS 88.62533 AT (631858.72, 4175478.29, 158.00, 158.00, 0.00) DC
3RD HIGHEST VALUE IS 70.31358 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00) DC
4TH HIGHEST VALUE IS 69.15486 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00) DC
5TH HIGHEST VALUE IS 47.56123 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00) DC
6TH HIGHEST VALUE IS 33.66356 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 33.39683 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00) DC
8TH HIGHEST VALUE IS 32.04930 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 29.02112 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 22.87187 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00) DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

STCK5 1ST HIGHEST VALUE IS 62.60845 AT (631860.07, 4175399.83, 158.00, 158.00, 0.00) DC
2ND HIGHEST VALUE IS 58.78541 AT (631860.41, 4175380.21, 158.00, 158.00, 0.00) DC
3RD HIGHEST VALUE IS 50.29488 AT (631860.75, 4175360.60, 158.00, 158.00, 0.00) DC
4TH HIGHEST VALUE IS 41.11948 AT (631861.09, 4175340.98, 158.00, 158.00, 0.00) DC
5TH HIGHEST VALUE IS 34.77788 AT (631861.43, 4175321.37, 158.00, 158.00, 0.00) DC
6TH HIGHEST VALUE IS 29.60531 AT (631859.73, 4175419.44, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 24.08532 AT (631861.77, 4175301.75, 158.00, 158.00, 0.00) DC
8TH HIGHEST VALUE IS 20.80322 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 17.26183 AT (631862.10, 4175282.14, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 13.72538 AT (631862.44, 4175262.52, 158.00, 158.00, 0.00) DC

STCK6 1ST HIGHEST VALUE IS 17.58606 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00) DC
2ND HIGHEST VALUE IS 15.78339 AT (631853.30, 4175792.13, 158.00, 158.00, 0.00) DC
3RD HIGHEST VALUE IS 15.45452 AT (631852.97, 4175811.74, 158.00, 158.00, 0.00) DC
4TH HIGHEST VALUE IS 15.18750 AT (631853.64, 4175772.51, 158.00, 158.00, 0.00) DC
5TH HIGHEST VALUE IS 14.23327 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC
6TH HIGHEST VALUE IS 14.20427 AT (631852.63, 4175831.36, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 13.84060 AT (631853.98, 4175752.90, 158.00, 158.00, 0.00) DC
8TH HIGHEST VALUE IS 12.27492 AT (631852.29, 4175850.97, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 10.57841 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 10.41440 AT (631665.32, 4175796.39, 158.00, 158.00, 0.00) DC

STCK7 1ST HIGHEST VALUE IS 31.15243 AT (631855.67, 4175654.82, 158.00, 158.00, 0.00) DC
2ND HIGHEST VALUE IS 30.37946 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC
3RD HIGHEST VALUE IS 29.69476 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC
4TH HIGHEST VALUE IS 29.15111 AT (631855.33, 4175674.44, 158.00, 158.00, 0.00) DC
5TH HIGHEST VALUE IS 27.07434 AT (631856.35, 4175615.59, 158.00, 158.00, 0.00) DC
6TH HIGHEST VALUE IS 25.93604 AT (631855.00, 4175694.05, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 22.31205 AT (631856.69, 4175595.98, 158.00, 158.00, 0.00) DC

8TH HIGHEST VALUE IS 21.80781 AT (631854.66, 4175713.67, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 18.54790 AT (631854.32, 4175733.28, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 16.92147 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC

STCK8 1ST HIGHEST VALUE IS 31.57105 AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC
2ND HIGHEST VALUE IS 26.80137 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC
3RD HIGHEST VALUE IS 25.98617 AT (631856.69, 4175595.98, 158.00, 158.00, 0.00) DC
4TH HIGHEST VALUE IS 25.22231 AT (631857.37, 4175556.75, 158.00, 158.00, 0.00) DC
5TH HIGHEST VALUE IS 22.49612 AT (631856.35, 4175615.59, 158.00, 158.00, 0.00) DC
6TH HIGHEST VALUE IS 19.35751 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00) DC
7TH HIGHEST VALUE IS 18.36456 AT (631856.01, 4175635.21, 158.00, 158.00, 0.00) DC
8TH HIGHEST VALUE IS 18.29762 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00) DC
9TH HIGHEST VALUE IS 17.14202 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00) DC
10TH HIGHEST VALUE IS 16.22002 AT (631900.63, 4175600.44, 158.00, 158.00, 0.00) DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE	NETWORK GRID-ID
STCK9	1ST HIGHEST VALUE IS	40.29938 AT (631670.70, 4175493.59, 158.00, 158.00, 0.00) DC	
	2ND HIGHEST VALUE IS	27.84799 AT (631857.70, 4175537.13, 158.00, 158.00, 0.00) DC	
	3RD HIGHEST VALUE IS	26.54224 AT (631858.04, 4175517.52, 158.00, 158.00, 0.00) DC	
	4TH HIGHEST VALUE IS	26.19544 AT (631857.37, 4175556.75, 158.00, 158.00, 0.00) DC	
	5TH HIGHEST VALUE IS	23.66494 AT (631858.38, 4175497.90, 158.00, 158.00, 0.00) DC	
	6TH HIGHEST VALUE IS	20.56445 AT (631858.72, 4175478.29, 158.00, 158.00, 0.00) DC	
	7TH HIGHEST VALUE IS	19.89462 AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC	
	8TH HIGHEST VALUE IS	18.31262 AT (631859.06, 4175458.67, 158.00, 158.00, 0.00) DC	
	9TH HIGHEST VALUE IS	16.39219 AT (631859.40, 4175439.06, 158.00, 158.00, 0.00) DC	
	10TH HIGHEST VALUE IS	14.27064 AT (631491.93, 4175442.21, 158.00, 158.00, 0.00) DC	

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)	OF TYPE	GRID-ID
SLINE1	HIGH 1ST HIGH VALUE IS	514.90866	ON 07011417: AT (631384.72, 4175441.30, 158.00, 158.00, 0.00)	DC	
SLINE2	HIGH 1ST HIGH VALUE IS	1130.92896	ON 05121217: AT (631442.87, 4175985.10, 158.00, 158.00, 0.00)	DC	
SLINE3	HIGH 1ST HIGH VALUE IS	833.40243	ON 04121304: AT (631849.92, 4175988.28, 158.00, 158.00, 0.00)	DC	
SLINE4	HIGH 1ST HIGH VALUE IS	1383.55531	ON 04121304: AT (631849.92, 4175988.28, 158.00, 158.00, 0.00)	DC	
SLINE5	HIGH 1ST HIGH VALUE IS	1016.43548	ON 08011019: AT (631753.00, 4175987.52, 158.00, 158.00, 0.00)	DC	
STCK1	HIGH 1ST HIGH VALUE IS	1675.10273	ON 06062806: AT (631851.95, 4175870.59, 158.00, 158.00, 0.00)	DC	
STCK10	HIGH 1ST HIGH VALUE IS	861.20813	ON 06011109: AT (631488.30, 4175286.39, 158.00, 158.00, 0.00)	DC	
STCK11	HIGH 1ST HIGH VALUE IS	1152.42675	ON 05061703: AT (631270.95, 4175823.83, 158.00, 158.00, 0.00)	DC	
STCK12	HIGH 1ST HIGH VALUE IS	2427.14569	ON 05012118: AT (631550.63, 4175600.44, 158.00, 158.00, 0.00)	DC	
STCK13	HIGH 1ST HIGH VALUE IS	1915.64087	ON 05111817: AT (631272.53, 4175723.88, 158.00, 158.00, 0.00)	DC	
STCK14	HIGH 1ST HIGH VALUE IS	1770.18135	ON 05071702: AT (631274.43, 4175603.95, 158.00, 158.00, 0.00)	DC	
STCK15	HIGH 1ST HIGH VALUE IS	1960.47008	ON 06062806: AT (631851.95, 4175870.59, 158.00, 158.00, 0.00)	DC	
STCK16	HIGH 1ST HIGH VALUE IS	2691.70471	ON 06111908: AT (631854.32, 4175733.28, 158.00, 158.00, 0.00)	DC	
STCK17	HIGH 1ST HIGH VALUE IS	2800.14303	ON 04030118: AT (631856.69, 4175595.98, 158.00, 158.00, 0.00)	DC	
STCK18	HIGH 1ST HIGH VALUE IS	2955.08296	ON 06052002: AT (631859.06, 4175458.67, 158.00, 158.00, 0.00)	DC	
STCK19	HIGH 1ST HIGH VALUE IS	1957.54720	ON 05111917: AT (631860.75, 4175360.60, 158.00, 158.00, 0.00)	DC	
STCK2	HIGH 1ST HIGH VALUE IS	1891.31800	ON 06111908: AT (631854.32, 4175733.28, 158.00, 158.00, 0.00)	DC	

STCK20 HIGH 1ST HIGH VALUE IS 809.43033 ON 07030418: AT (631550.63, 4175950.44, 158.00, 158.00, 0.00) DC

STCK21 HIGH 1ST HIGH VALUE IS 1431.10108 ON 04041821: AT (631417.17, 4175673.66, 158.00, 158.00, 0.00) DC

STCK22 HIGH 1ST HIGH VALUE IS 1033.93356 ON 04030118: AT (631857.03, 4175576.36, 158.00, 158.00, 0.00) DC

STCK23 HIGH 1ST HIGH VALUE IS 1897.87781 ON 05072102: AT (631456.19, 4175441.91, 158.00, 158.00, 0.00) DC

STCK24 HIGH 1ST HIGH VALUE IS 1231.00298 ON 08081806: AT (631670.70, 4175493.59, 158.00, 158.00, 0.00) DC

STCK25 HIGH 1ST HIGH VALUE IS 1429.18391 ON 05061703: AT (631270.95, 4175823.83, 158.00, 158.00, 0.00) DC

STCK26 HIGH 1ST HIGH VALUE IS 3524.82683 ON 05020803: AT (631550.63, 4175600.44, 158.00, 158.00, 0.00) DC

STCK27 HIGH 1ST HIGH VALUE IS 2630.38096 ON 04041821: AT (631273.16, 4175683.90, 158.00, 158.00, 0.00) DC

*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** THE SUMMARY OF HIGHEST 1-HR RESULTS ***

** CONC OF OTHER IN MICROGRAMS/M**3 **

GROUP ID	AVERAGE CONC	DATE (YYMMDDHH)	NETWORK RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID

STCK28 HIGH 1ST HIGH VALUE IS 2457.59634 ON 05071702: AT (631274.43, 4175603.95, 158.00, 158.00, 0.00) DC

STCK3 HIGH 1ST HIGH VALUE IS 1741.02451 ON 04030118: AT (631856.69, 4175595.98, 158.00, 158.00, 0.00) DC

STCK4 HIGH 1ST HIGH VALUE IS 2237.09373 ON 06052002: AT (631859.06, 4175458.67, 158.00, 158.00, 0.00) DC

STCK5 HIGH 1ST HIGH VALUE IS 1486.33672 ON 04042519: AT (631860.75, 4175360.60, 158.00, 158.00, 0.00) DC

STCK6 HIGH 1ST HIGH VALUE IS 786.79956 ON 04101820: AT (631669.80, 4175641.41, 158.00, 158.00, 0.00) DC

STCK7 HIGH 1ST HIGH VALUE IS 1159.34416 ON 04041821: AT (631417.17, 4175673.66, 158.00, 158.00,

0.00) DC

STCK8   HIGH   1ST HIGH VALUE IS   849.19178 ON 06051905: AT (631422.55, 4175484.63,   158.00,   158.00,
0.00) DC

STCK9   HIGH   1ST HIGH VALUE IS   1737.09080 ON 05072102: AT (631456.19, 4175441.91,   158.00,   158.00,
0.00) DC

*** RECEPTOR TYPES: GC = GRIDCART
GP = GRIDPOLR
DC = DISCCART
DP = DISCPOLR
*** AERMOD - VERSION 19191 ***   *** C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy C *** 06/06/22
*** AERMET - VERSION 18081 ***   *** *** 12:14:02
PAGE 364
*** MODELOPTs: NonDFAULT CONC FLAT RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

--------- Summary of Total Messages --------

A Total of 0 Fatal Error Message(s)
A Total of 15 Warning Message(s)
A Total of 375 Informational Message(s)

A Total of 43848 Hours Were Processed

A Total of 375 Calm Hours Identified

A Total of 0 Missing Hours Identified (0.00 Percent)

******** FATAL ERROR MESSAGES ********
*** NONE ***

******** WARNING MESSAGES ********

SO W320	4660	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4661	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4662	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4663	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4664	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4665	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4666	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4667	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4668	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4669	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4670	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4671	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4672	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
SO W320	4673	PPARM: Input Parameter May Be Out-of-Range for Parameter	VS
ME W187	6403	MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET	

****

*** AERMOD Finishes Successfully ***
****

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Appendix 4 – HARP2 Output File:

HARP2 - HRACalc (dated 21081) 6/8/2022 6:35:57 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: NCAcute
Calculation Method: Derived

****
EXPOSURE DURATION PARAMETERS FOR CANCER
Exposure duration are only adjusted for cancer assessments

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
NOTE: Exposure duration (i.e., start age, end age, ED, & FAH) are only adjusted for cancer assessments.

****
TIER 2 SETTINGS
Tier2 not used.

****

Calculating acute risk

Acute risk breakdown by pollutant and receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\AcuteNCAcuteRisk.csv
Acute risk total by receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\AcuteNCAcuteRiskSumByRec.csv
HRA ran successfully

HARP2 - HRACalc (dated 21081) 6/8/2022 6:35:40 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: NCChronic
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER
Exposure duration are only adjusted for cancer assessments

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: False
Dermal: False
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
NOTE: Exposure duration (i.e., start age, end age, ED, & FAH) are only adjusted for cancer assessments.

****
TIER 2 SETTINGS
Tier2 not used.

****

Calculating chronic risk

Chronic risk breakdown by pollutant and receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\ChronicNCChronicRisk.csv
Chronic risk total by receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\ChronicNCChronicRiskSumByRec.csv
HRA ran successfully

HARP2 - HRACalc (dated 21081) 6/8/2022 6:18:15 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Resident
Scenario: Cancer
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: -0.25
Total Exposure Duration: 70

Exposure Duration Bin Distribution
3rd Trimester Bin: 0.25
0<2 Years Bin: 2
2<9 Years Bin: 0
2<16 Years Bin: 14
16<30 Years Bin: 0
16 to 70 Years Bin: 54

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: True
Water: True
Fish: True
Homegrown crops: True
Beef: True
Dairy: True
Pig: True
Chicken: True
Egg: True

****
INHALATION

Daily breathing rate: LongTerm24HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: ON

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
WATER PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0
Fraction from contaminated source: 0

****
HOMEGROWN CROP PATHWAY SETTINGS

Household type: HouseholdsthatGarden
Fraction leafy: 0.137
Fraction exposed: 0.137
Fraction protected: 0.137
Fraction root: 0.137

****
FISH PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0
Fraction from contaminated source: 0

****
BEEF & DAIRY PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0

Beef
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated grazing: 0.5

Dairy
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated grazing: 0.5

****
PIG, CHICKEN, & EGG PATHWAY SETTINGS

Surface area (m^2): 0
Volume (kg): 0
Volume changes per year: 0

Pig
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Chicken
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

Egg
Fraction consumed from contaminated water source: 0
Fraction consumed of contaminated leafy crop: 0.25
Fraction consumed of contaminated exposed crop: 0.25
Fraction consumed of contaminated protected crop: 0.25
Fraction consumed of contaminated root crop: 0.25

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\Residential CancerCancerRisk.csv
Cancer risk total by receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\Residential CancerCancerRiskSumByRec.csv
HRA ran successfully

HARP2 - HRACalc (dated 21081) 6/8/2022 6:29:33 PM - Output Log

GLCs loaded successfully
Pollutants loaded successfully
Pathway receptors loaded successfully
****
RISK SCENARIO SETTINGS

Receptor Type: Worker
Scenario: Cancer
Calculation Method: HighEnd

****
EXPOSURE DURATION PARAMETERS FOR CANCER

Start Age: 16
Total Exposure Duration: 40

Exposure Duration Bin Distribution
3rd Trimester Bin: 0
0<2 Years Bin: 0
2<9 Years Bin: 0
2<16 Years Bin: 0
16<30 Years Bin: 0
16 to 70 Years Bin: 40

****
PATHWAYS ENABLED

NOTE: Inhalation is always enabled and used for all assessments. The remaining pathways are only used for cancer and noncancer chronic assessments.

Inhalation: True
Soil: True
Dermal: True
Mother's milk: False
Water: False
Fish: False
Homegrown crops: False
Beef: False
Dairy: False
Pig: False
Chicken: False
Egg: False

****
INHALATION

Daily breathing rate: Moderate8HR

Worker Adjustment Factors
Worker adjustment factors enabled: NO

Fraction at time at home
3rd Trimester to 16 years: OFF
16 years to 70 years: OFF

****
SOIL & DERMAL PATHWAY SETTINGS

Deposition rate (m/s): 0.05
Soil mixing depth (m): 0.01
Dermal climate: Mixed

****
TIER 2 SETTINGS

Tier2 adjustments were used in this assessment. Please see the input file for details.
Tier2 - What was changed: ED or start age changed|
Calculating cancer risk
Cancer risk breakdown by pollutant and receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\Workplace CancerCancerRisk.csv
Cancer risk total by receptor saved to: C:\Users\Smith\Dropbox\My PC (DESKTOP-977GSBU)\Documents\HRA\Tracy Costco DepotV2\HARP2\TRACYV2\hra\Workplace CancerCancerRiskSumByRec.csv
HRA ran successfully

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APPENDIX B.4

Analysis of Models and Tools to Correlate Project-Generated Pollutants to Health End Points

APPENDIX B

Appendix B of the Draft EIR includes additional information regarding models and tools for correlating project-generated criteria pollutant emissions to health end points. The following table is an addition to Appendix B.

ANALYSIS OF MODELS AND TOOLS TO CORRELATE PROJECT-GENERATED CRITERIA POLLUTANT EMISSIONS TO HEALTH END POINTS

TOOL	CREATED BY	DESCRIPTION	RESOLUTION	POLLUTANTS ANALYZED	PROJECT-LEVEL CEQA APPLICABILITY
AERMOD Modeling System[1,2]	AERMIC	A steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. The modeling system incorporates air dispersion based on a planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}, NH_3	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
AirCounts[3]	Abt Assoc.	Online tool that helps large and medium-sized cities quickly estimate the health benefits of $PM_{2.5}$ emission reductions and economic value of those benefits. The tool estimates the number of deaths (mortality) avoided and economic value related to user-specified regional, annual $PM_{2.5}$ emissions reduction.	City-level	Primary $PM_{2.5}$	This tool is only illustrative, as it is limited to certain cities and does not target specific sectors. The tool is not sector specific, and includes limited California data. It cannot provide results at a project-level. Therefore, the tool is not recommended for project-level CEQA analysis.
Air Pollution Emission Experiments and Policy analysis (APEEP) model[4]	Mueller and Mendelsohn2006, 2009	The Air Pollution Emission Experiments and Policy (APEEP) analysis model (Muller and Mendelsohn 2006, 2009) is a traditional integrated assessment model. Like other integrated assessment models, APEEP connects emissions of air pollution through air-quality modeling to exposures, physical effects, and monetary damages. Making these links requires the use of findings reported in the peer-reviewed literature across several scientific disciplines. The air-quality models in APEEP use the emission data provided by EPA to estimate corresponding ambient concentrations in each county in the coterminous states.	National or county-level	SO_2, ROG, NO_x, Ozone, $PM_{2.5}$, PM_{10}	The model operates at the national scale but may be applied at the county-level (although it is not clear how this adjustment should be made). It cannot provide results at a project-level. The tool is also not commercially available. Therefore, the tool is not recommended for project-level CEQA analysis.

[1] See: https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models

[2] Note: May require additional software to estimate the level of each specific pollutant at the modeled receptors.

[3] See: https://www.abtassociates.com/tools

[4] See: https://public.tepper.cmu.edu/nmuller/APModel.aspx

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
CALINE3/ CAL3QHC/ CAL3QHCR[1, 2]	USEPA	A steady-state Gaussian dispersion model designed to determine air pollution concentrations at receptor locations downwind of highways located in relatively uncomplicated terrain. CALINE3 is incorporated into the more refined CAL3QHC and CAL3QHCR models. CAL3QHCR is a more refined version based on CAL3QHC that requires local meteorological data.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Complex Terrain Dispersion Model Plus Algorithms for Unstable Situations (CTDMPLUS)[1, 2]	USEPA	A refined point source gaussian air quality model for use in all stability conditions for complex terrain. The purpose of the model is to provide a practical, refined plum model for elevated point sources near complex terrain.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Co-Benefits Risk Assessment (COBRA)[5]	USEPA	Preliminary screening tool that contains baseline emission estimates of a variety of air pollutants for a single year. COBRA is targeted to state and local governments as a screening assessment for clean energy policies. EPA's CO–Benefits Risk Assessment (COBRA) screening model is a free tool that helps state and local governments: • Explore how changes in air pollution from clean energy policies and programs; • Estimate the economic value of the health benefits associated with clean energy policies and programs to compare against program costs; • Map and visually represent the air quality, human health, and health-related economic benefits from reductions in emissions of particulate matter ($PM_{2.5}$), sulfur dioxide ($S0_2$), nitrogen oxides (NO_X), ammonia (NH_3), and volatile organic compounds (VOCs) that result from clean energy policies and programs.	National, regional, state, or county-levels	$PM_{2.5}$, SO_2, NO_x, NH_3, and ROG	COBRA is a preliminary screening tool only and cannot be used at sub-county resolution. It cannot provide results at a project-level. It also does not account for secondary emission changes resulting from market responses. Accordingly, the tool is not recommended for project-level CEQA analysis.

[5] See: https://www.epa.gov/statelocalenergy/co-benefits-risk-assessment-cobra-health-impacts-screening-and-mapping-tool

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
Environmental Benefits and Mapping Program-Community Edition (BenMAP-CE)[6]	USEPA	The USEPA's detailed model for estimating the health impacts from air pollution. It relies on input concentrations and applies concentration-response (C-R) health impact functions, which relate a change in the concentration of a pollutant with a change in the incidence of a health endpoint, including premature mortality, heart attacks, chronic respiratory illnesses, asthma exacerbation and other adverse health effects. Detailed inputs are required for air quality changes (concentrations from AERMOD), population, baseline incidence rates, and effect estimates.	National, County, City, and sub-regional levels	Ozone, PM, NO_2, SO_2, CO	This tool is not well suited to analyze small or localized changes in pollutant concentrations associated with individual projects. Although this tool is under consideration by some California air districts for use towards project-level analysis, no air district in California has promulgated a methodology (using this tool or any other) that would correlate the expected air quality emissions of projects to the likely health consequences of the increased emissions. Accordingly, the tool is not recommended.
Fast Scenario Screening Tool (TM5-FASST)[7]	Joint Research Centre (Italy)	A tool that allows users to evaluate how air pollutant emissions affect large scale pollutant concentrations and their impact on human health (mortality and years of life lost) and crop yield from national to regional air quality policies, such as climate policies. The target policy domains are national to regional air quality policies, or air pollutant scenarios linked to other policy domains (e.g. climate policy). The tool is web-based and does not require coding or modelling. Users must gain access through publishers.	Global and national-levels	$PM_{2.5}$, Ozone, NO_x, NH_3, CO, ROG, CH_4, SO_2	This tool is applicable at national to global scales. It cannot provide results a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.
Long-range Energy Alternatives Planning System-Integrated Benefits Calculator (LEAP-IBC)[8]	Climate and Clean Air Coalition (CCAC)	A calculator that allows users to rapidly estimate the impacts of reducing emissions on health, climate, and agriculture. The tool uses sensitivity coefficients that link gridded emissions of air pollutants and precursors to health, climate and agricultural impacts at a national level. The tool is primarily used for policy analysis. The tool is currently Excel-based and is available through the developers only. A web-based interface is currently under development.	National-level	$PM_{2.5}$, Ozone, NO_2	This tool is applicable at national scale. Accordingly, the tool is not recommended for project-level CEQA analysis.
Methodology for Estimating Premature Deaths Associated with Long-Term Exposure to Fine Airborne Particulate Matter in California[9]	California Air Resources Board	The staff report identifies a relative risk of premature death associated with $PM_{2.5}$ exposure based on a review of all relevant scientific literature, and a new relative risk factor was developed. This new factor is a 10% increase in risk of premature death per 10 $\mu g/m^3$ increase in exposure to $PM_{2.5}$ concentrations (uncertainty interval: 3% to 20%)	National	$PM_{2.5}$	The primary author of the CARB staff report notes that the analysis method is not suited for small projects and may yield unreliable results due to various uncertainties. The tool also cannot provide results on a project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[6] See: https://www.epa.gov/benmap

[7] See: http://tm5-fasst.jrc.ec.europa.eu/

[8] See: https://www.ccacoalition.org/en/resources/long-range-energy-alternatives-planning-integrated-benefits-calculator-leap-ibc-factsheet

[9] See: https://ww3.arb.ca.gov/research/health/pm-mort/pmmortalityreportfinalr10-24-08.pdf

Tool	Created by	Description	Resolution	Pollutants Analyzed	Project-level CEQA Applicability
Multi-Pollutant Evaluation Method (MPEM)[10]	BAAQMD	Estimates the impacts of control measures on pollutant concentration, population exposures, and health outcomes for criteria, toxic, and GHG pollutants. Monetizes the value of total health benefits from reductions in $PM_{2.5}$, ozone, and certain carcinogens, and the social value of GHG reductions. MPEM was designed for development of a Clean Air Plan for the San Francisco Bay Area. The inputs are specific to the SF region and are not appropriate for projects outside BAAQMD.	Regional level in the SFBAAB	Ozone, PM, air toxics, GHG	This tool is designed to support the BAAQMD in regional planning and emissions analysis within the San Francisco Bay Area Air Basin (SFBAAB). The model applies changes in pollutant concentrations over a four-square kilometer grid. The tool also cannot provide results on a project-level. Additionally, this tool is only applicable for the SFBAAB. Accordingly, the tool is not recommended for project-level CEQA analysis.
Offshore and Coastal Dispersion Model Version 5 (OCD)[1, 2]	USEPA	A straight-line Gaussian model developed to determine the impact of offshore emissions from point, area or line sources on the air quality of coastal regions. OCD incorporates overwater plume transport and dispersion as well as changes that occur as the plume crosses the shoreline. Hourly meteorological data are needed from both offshore and onshore locations.	Project-level	SO_2, ROG, NO_2, Lead, $PM_{2.5}$, PM_{10}	This model operates at the project-level and provides air dispersion modeling for a project's emissions on the surrounding environment. However, even with supplementary (i.e. additional software), the model cannot estimate specific health effects on receptors from the air dispersion modeling. Moreover, it cannot model the (complex) chemical reactions that occur between the ozone precursors (e.g. NOx and ROG) that generate ozone. Therefore, this model is not recommended for project-level CEQA analysis.
Response Surface Model (RSM)-based Benefit-per-Ton Estimates[11]	USEPA	Consists of tables reporting the monetized $PM_{2.5}$-related health benefits from reducing $PM_{2.5}$ precursors from certain source types nationally and for 9 US cities/regions. Applying these estimates simply involves multiplying the emissions reduction by the relevant benefit per-ton metric. The resulting value is the PM mortality risk estimate at a 3% discount rate.	National or regional (San Joaquin County only) levels	SOx, VOC, NH_3, NO_x	RSM includes regional values specific to San Joaquin County. The values are also dated. Accordingly, the tool is not recommended for project-level CEQA analysis.
Sector-based Benefit-per-Ton Estimates[12]	USEPA	Two specific sets of Benefit-per-ton (BPT) estimates for 17 key source categories are available. Both are a reduced-form approach based on BenMAP modeling. Applying these factors involves multiplying the emissions reduction (in tons) by the relevant benefit (economic value) or incidence (rates of mortality and morbidity) per-ton metric. The resulting value is the economics, mortality, and morbidity of direct and indirect $PM_{2.5}$ emissions.	National-scale	$PM_{2.5}$, SO_2, NO_x	The BPT estimates do not account for project-specific emissions or receptor locations, local dispersion characteristics, or regional photochemistry. The resultant health effects are therefore reflective of national averages and may not be accurate when applied to the project-level. Accordingly, the tool is not recommended for project-level CEQA analysis.

[10] See: http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/mpem_nov_dec_2016-pdf.pdf?la=en

[11] See: https://www.epa.gov/benmap/response-surface-model-rsm-based-benefit-ton-estimates

[12] See: https://www.epa.gov/benmap/sector-based-pm25-benefit-ton-estimates. The updated Technical Support Document (February 2018) is available at: https://www.epa.gov/sites/production/files/2018-02/documents/sourceapportionmentbpttsd_2018.pdf

APPENDIX C

Geotechnical Review

April 20, 2018
Project No. 20190182.001A

Costco Wholesale
999 Lake Drive
Issaquah, Washington 98027

Attention: Mr. Peter Kahn
Director of Real Estate Development

Subject: Geotechnical Review
Proposed Costco E-Commerce Facility
Tracy Hom Trust Property
16000 West Schulte Road
Tracy, California
CW# 17-0267

Dear Mr. Kahn

This letter presents the results of Kleinfelder's geotechnical review for the proposed Costco E-Commerce facility to be located within the Tracy Hom Trust Property site (APN Parcel ID: 209-230-02) at 16000 W. Schulte Road in Tracy, California. The purpose of our services was to review readily-available geotechnical and geologic information for the project site to apprise Costco of potential geotechnical-related risks that may affect the cost and long-term performance of the proposed project. A review of the environmental-related risks, which include a Limited Phase II Environmental Site Assessment (ESA), is currently being performed by Kleinfelder and the results will be submitted in a separate report.

PROJECT INFORMATION

The Tracy Hom Trust Property site is approximately 103 acres and is bound by the Delta Mendota channel to the south, W. Schulte Road to the north and private roads to the east and west. We understand the proposed E-Commerce facility will include the construction of an E-Commerce building with office and warehouse space. Like the proposed E-commerce development to the west, minor ancillary structures, such as a new guard booth and pump room are anticipated. Based on conversations with Costco, the E-Commerce facility will occupy approximately 400,000 to 500,000-square-feet of the Tracy Hom Trust Property. We anticipate the new facility will consist of single-story, concrete tilt-up structures and that the building's surroundings will include parking areas with loading docks, landscaping and drainage basins. Parking lots and drive aisles are typically paved with either Portland cement concrete or asphalt concrete.

Conceptual grading plans were not available at this time. Based on the existing topography, we anticipate the building pads may be raised up to 5 feet. We understand that fill material generated during grading of the overall development may be used to raise the Costco site and/or import fill may be needed.

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EXISTING SITE CONDITIONS

The Tracy Hom Trust Property site comprises of approximately 103-acres and is located north of the Highway 580 and Delta Mendota channel in Tracy, California. On April 18, 2018, a Kleinfelder engineering professional visited the site to observe the existing conditions. The site is vacant and undeveloped with perimeter dirt roads, some graded areas, and sparse scrub vegetation in thick grasses. Based on historical aerial photographs, the entire Tracy Hom Trust Property site was previously used for agriculture and farming (i.e. a former orchard).

The northern portion of the site, near W. Schulte Road is topographically higher than the south end of the site which is bounded by the Delta Mendota channel; the site generally grades from low to high toward the northeast. The Delta-Mendota channel overflow spillway structure is approximately located in the center of the southern boundary of the site. The spillway's orientation is northeast and trends down toward the south portion of the site. The Delta-Mendota Channel banks slope up towards the south to the top of the concrete channel. We anticipate the proposed Costco facility will be in the southern portion of the Tracy Hom Trust Property site; however, the precise location and orientation of the facility are unknown.

In addition, there are two existing features within the northeast corner of site consisting of an existing PG&E gas line running northwest and a large depressed area possibly used as a drainage basin or detention pond during previous agricultural use. The depth of the basin is up to approximately 10 feet below the surrounding grades at its center. Details regarding the depth and size of the gas line are currently not currently known.

The fieldwork for the Limited Phase II ESA is currently being performed. Representative soil samples have been taken at various locations across the site. The soil samples are comprised of shallow near surface samples up to a depth of 12 inches below ground surface. The results of the testing will be available in a few weeks and presented in a separate report. The description of the near surface cover soils is typical of the agricultural region and consists of moderate vegetation (in the form of thick grasses) and clay rich top soil.

SUBSURFACE CONDITIONS

Based on our review of available geotechnical and geologic information from two reports by Kleinfelder for the surrounding properties, we anticipate subsurface conditions consist of topsoil over native basin deposits underlain and interbedded with alluvial fan deposits. We anticipate the basin deposits will consists of stiff to hard, lean to fat clay and silt and extend up to a depth of about 50 feet bgs. Alluvial soils generally interbed with basin deposits below a depth of about 5 to 10 feet and primarily consist of medium to very dense silty and clayey sand and sand with varying amounts of gravel. Based on available groundwater data and maps, we anticipate the groundwater level is generally greater than 40 to 50 feet bgs. Neighboring geotechnical field studies indicate near surface basin deposits within the upper 5 feet exhibit medium to high expansion characteristics and are moderately compressible.

FINDINGS

Based on the results of our geotechnical review, it is our professional opinion that the proposed project is geotechnically feasible. We identified the following key geotechnical considerations.

On previous IPC projects we have suggested attempting to "surgically" strip off near surface expansive clays to expose a uniform non to low-expansive subgrade for the he near surface clays

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may exhibit medium to high expansion characteristics. Based on our understanding of the site topography and subsurface information, we anticipate grading will expose expansive clays. Therefore, expansive soil mitigation measures will be required. Mitigation measures may include importing non-expansive fill for placement over the subgrade (in fill areas), removing and replacing with non-expansive fill at subgrade level, or using cement or lime treating the upper 12 to 18 inches of the subgrade. In addition, due to the tendency of expansive clays to swell and heave, site drainage should be directed away from building footprints to minimize moisture and volume change underneath floor slabs or foundations.

- Assuming expansive soils and deleterious materials are overexcavated/removed and structural fill or stabilized (i.e., lime treated), the proposed Costco depot buildings may be supported on a conventional shallow foundation system. If footing excavations bear in native expansive soils, footing embedment up to 30 inches below the lowest adjacent subgrade may be required. Foundations should be supported below the critical zone of seasonal moisture fluctuations where soil shrink-swell cycles are most severe.
- Conceptual grading plans were not available at this time; however, we anticipate fills up to 5 feet may be placed to construct the building pads. The native near surface clay is considered expansive and should not be used in structural fills unless they have been stabilized. As an alternative, relatively non-expansive import fills may be used in structural fills. Based on our experience in the area and typical Costco building loads, static settlements should be within tolerable levels. However, if fills greater than about 5 feet are placed to create the building pads, excessive settlements may occur. Depending on the height of fill placed, pre-loading or surcharging may be required.
- A PG&E gas line easement is located within the northeast corner of the site. Details regarding depth and size of the gas line are not known at this time. The direction of the gas line runs from the northwest through W. Schulte Road and towards the southeast through the eastern site boundary. The facility development should consider setbacks from the easement. If setbacks are not an option and the facility development plans to encroach onto the easement or the gas line, the impacted of the proposed construction should evaluated in detail.
- Just north of the existing PG&E easement south of W. Schulte Road is a large depressed area, which was possibly a drainage basin or detention pond during previous agricultural use. The depth of the basin is about 8 to 10 feet deep at its center and the length is about 200 feet. The history and use of this depression and construction implications to bring this area up to subgrade should evaluated. Backfill material should follow and be placed in accordance with current Costco standards.
- Near surface expansive clays do not have favorable drainage conditions (low permeability) for shallow infiltration systems (i.e., bioswale or infiltration basins) and therefore, will not infiltrate effectively. Infiltration Best Management Practices (BMPs) are not considered a viable option for use at this site.
- Corrosion testing results on the neighboring sites indicated near surface soils may be highly corrosive to corrosive towards ferrous metals. In general at these sites, sulfate and chloride results do not indicate corrosivity impacts; however one isolated sample north of the site indicated the evaluation of special provisions for selecting cement type. Special provisions for the selection of cement type may need to be considered if building pads and footings are bearing in native soils. In general, corrosion protection for future buried utilities and concrete foundations should be considered.

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CLOSURE

This work was performed in a manner consistent with that level of care and skill ordinarily exercised by other members of Kleinfelder's profession practicing in the same locality, under similar conditions, and at the date the services are provided. Our conclusions, opinions, and recommendations are based on a limited number of observations and data. It is possible that conditions could vary between or beyond the data evaluated. Kleinfelder makes no other representation, guarantee, or warranty, express or implied, regarding the services, communication (oral or written), report, opinion, or instrument of service provided.

We appreciate the opportunity to provide geotechnical engineering services to you on this project. If you have any questions regarding this report or if we can be of further service, please do not hesitate to contact the project manager Andrea Traum at 408.595.3275, or Andy Franks, Kleinfelder's Client Account Manager for Costco, at 480.650.4905.

Respectfully submitted,

KLEINFLDER, INC.

Gabriel J. Alcantar, PE
Project Engineer



Brian E. Crystal, PE, GE
Principal Geotechnical Engineer



Attachments: References

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REFERENCES

David Babcock + Associates, 2016, Hom Trust Regional Aerial, Preliminary Concept Plan, Sheet 1 of 3, Tracy, CA, dated August 23, 2016.

Kleinfelder, 2017, Geotechnical Study, Proposed E-Commerce Building and Wet Depot Expansion, Costco Tracy, CA Depot (CW# 14-0171), 25862 W. Schulte Road, Tracy, California, dated August 23, 2017.

Kleinfelder, 2017, Geotechnical Services Report, International Park of Commerce (IPC) Building 23, Tracy, California, dated May 4, 2017.

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APPENDIX D

Phase I Environmental Site Assessment

KLEINFELDER
Bright People. Right Solutions.

April 27, 2018
Kleinfelder Project No. 20190071.001A

Costco Wholesale
999 Lake Drive
Issaquah, Washington 98027

Attention: Mr. Peter Kahn
AVP, Real Estate Development

SUBJECT: Phase I Environmental Site Assessment
Proposed Costco E-Commerce Facility
16000 West Schulte Road
Tracy, California
CW# 17-0267

Dear Mr. Kahn:

Enclosed is the Phase I Environmental Site Assessment (ESA) report for the above-referenced property. We trust the information presented in this report meets your needs at this time.

An executive summary is provided. However, we recommend that the report be read in its entirety for a comprehensive understanding of the items contained therein.

We appreciate the opportunity to provide these services to Costco Wholesale. If you have questions regarding this report or if we can be of further service, please do not hesitate to contact Paolo Dizon at 949.727.4466 or Andy Franks, Kleinfelder's Client Account Manager for Costco, at 480.650.4905.

Sincerely,

KLEINFELDER

Paolo Dizon
Project Manager

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PHASE I ENVIRONMENTAL SITE ASSESSMENT PROPOSED COSTCO E-COMMERCE FACILITY 16000 WEST SCHULTE ROAD TRACY, CALIFORNIA KLEINFELDER PROJECT NO. 20190071.001A

APRIL 27, 2018

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ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

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A Report Prepared for:

Costco Wholesale
999 Lake Drive
Issaquah, Washington 98027

PHASE I ENVIRONMENTAL SITE ASSESSMENT PROPOSED COSTCO E-COMMERCE CENTER 16000 WEST SCHULTE ROAD TRACY, CALIFORNIA

Margaret R. Carroll
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April 27, 2018
Kleinfelder Project No. 20190071.001A

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1 EXECUTIVE SUMMARY

This report documents results of a Phase I Environmental Site Assessment (ESA) performed by Kleinfelder, Inc. (Kleinfelder) for Costco Wholesale Corporation (Costco / Client), of the proposed location of a Costco e-commerce facility at 16000 West Schulte Road (Site) in the City of Tracy, San Joaquin County, California. Kleinfelder understands the Client has requested a Phase I ESA be performed prior to purchasing the Site for redevelopment as an e-commerce facility.

This report was prepared using the ASTM International Designation E 1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process* (the "Standard Practice"), the All Appropriate Inquiry (AAI) section of the Small Business Liability Relief and Revitalization Act (the Federal Brownfields Law), and Costco's Development Requirements, Version 2014, revised June 13, 2014. The Phase I ESA findings include the following:

- The Site comprises a 103-acre parcel of land identified by the San Joaquin County Assessor as Assessor's Parcel Number (APN) 209-230-020-000. Currently, the Site is used for agricultural purposes.
- The Site was historically used for agricultural purposes (both agricultural fields and orchards) since at least 1937 through the present. Kleinfelder performed soil sampling throughout the Site to assess for the presence of pesticides and arsenic in shallow soil at the Site as a result of historical and current agricultural activities. Based on the analytical laboratory results, pesticides were not detected in shallow soil, and arsenic was detected at concentrations consistent with naturally-occurring background. Thus, the former agricultural use is not considered an environmental concern.
- A retention basin is located in the northeastern corner of the Site. A corrugated metal pipe culvert is present at the base of the retention basin. Irrigation-related standpipes were noted in the southeastern Site corner. These stand pipes appear to be gate valves for Site irrigation. Irrigation-related pipes were also noted along the southwestern Site border.
- Crimson Pipeline, L.P. operates a crude oil pipeline, and Pacific, Gas and Electric (PG&E) operates two natural gas pipelines, which run generally southeast-northwest across the northeastern portion of the Site (see Figure 2). No incidental/accidental releases were reported along the pipelines in the vicinity of the Site. However, the presence of the pipelines on Site, along with the potential for undocumented leaks to have occurred, represents a recognized environmental condition (REC).

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- Discarded oil and paint thinner containers, and an empty discarded propane tank, were noted in a concrete box culvert near the southwestern border of the Site, near the Delta Mendota Canal. Debris and general household trash was noted along the northern and southern borders of the Site, and in the southeastern corner of the Site. No evidence of stained soil was noted in the vicinity of the discarded items or debris/trash.
- No off-Site facilities are considered likely to have affected soil, soil vapor or groundwater beneath the Site.

This assessment has revealed no evidence of RECs or controlled RECs (CRECs) associated with the Site, with the exception of the following:

- The presence of natural gas pipelines and the potential for undocumented leaks to have occurred from the crude oil pipeline, which run through the northeastern portion of the Site represents a REC. However, should subsurface contamination be detected in the future as a result of leaks from this pipeline, Crimson Pipeline, L.P. (or current operator at that time) would be responsible for cleanup.

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2 INTRODUCTION

This report is a summary of work performed using the guidelines set forth in the Standard Practice, the AAI section of the Federal Brownfields Law, Costco's Development Requirements, Version 2014, revised June 13, 2014. This report also generally conforms to the Standard Practice's suggested table of contents. Minor format modifications have been made to the Standard Practice's suggested table of contents to assist in better reading and understanding the report findings.

2.1 PURPOSE

The purpose of this Phase I ESA is to identify, to the extent feasible pursuant to the scope of services defined in our Proposal No. MPCOSTCO.001C/IRV18P76351, dated April 6, 2018, the scope defined in the Standard Practice, and limitations discussed in this report, RECs and other environmental issues related to the Site.

As defined in the Standard Practice, an REC is:

> *"The presence or likely presence of any hazardous substances or petroleum products in, on or at a property: (1) due to a 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."*

As defined in the Standard Practice, a de minimis condition is:

> *"A condition that generally does 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."*

The 2013 Standard Practice also introduced the designation of CREC. As defined in the Standard Practice, a CREC is:

> *"… 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*

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implementation of required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).”

The 2013 Standard Practice defines an 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 environmental controls.”

The final decision regarding whether a past release is an HREC rests with the environmental professional (EP) and will be influenced by the current impact (if any) of the past release to the Site.

This report describes Kleinfelder’s assessment methodology and documents its findings, subject to the limitations presented in Section 2.5 of this report.

2.2 DETAILED SCOPE OF SERVICES

The following sections describe Kleinfelder’s work scope:

- Section 2, **Introduction**, includes a discussion of the purpose/reason for performing the Phase I ESA, additional services requested by the Client (e.g., an evaluation of business environmental risk factors associated with the Site), significant assumptions (e.g., property boundaries if not marked in the field), limitations, exceptions, special terms and conditions (e.g., contractual), and user reliance parameters.
- Section 3, **Site Description**, is a compilation of information concerning the Site location, legal description (if provided by the Client), current and proposed use of the Site, a description of structures and improvements on the Site at the time of Kleinfelder’s assessment, and adjoining property use.
- Section 4, **Records Review**, is a compilation of Kleinfelder’s review of several databases available from Federal, State, and local regulatory agencies regarding hazardous substance use, storage, or disposal at the Site; and for off-Site facilities within the search distances specified by the Standard Practice. Records provided by the Client are summarized, and copies of relevant documents are included in the appendices of this report. Physical setting sources (including topography and soil and groundwater

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conditions) and typical Client-provided information (e.g., title records, environmental liens, specialized knowledge, valuation reduction for environmental issues, and owner, property manager, and occupant information) are also summarized. Other interviews with people knowledgeable about the Site (including the Client) are included in Section 7.

- Section 5, **History of the Site**, summarizes the history of the Site and adjoining properties. This Site history is based on various sources, which may include a review of historical aerial photographs, Sanborn Fire Insurance Maps, city or suburban directories, historical topographic maps, building department records, and results of previous Site assessments (if any and reasonably ascertainable).
- Section 6, **Site Reconnaissance**, describes Kleinfelder's observations during the Site reconnaissance. The methodology used and limiting conditions are also described.
- Section 7, **Interviews**, is a summary of telephone and personal interviews performed with "Key Site Managers" that may include the Site owner/manager, occupants/tenants, local government officials, and the Client. Additional interview sources may be contacted if Key Site Managers were not available prior to production of this report and may include adjoining landowners and people with historical knowledge of the area.
- Section 8**, Limited Phase II ESA**, presents rationale and findings of shallow soil sampling conducted as part of a Phase II ESA to evaluate agricultural use of the Site.
- Section 9, **Evaluation**, is a presentation of findings and opinions regarding the information provided in Sections 3 through 7 and presents the conclusions regarding the presence of RECs connected with the Site, and Kleinfelder's recommendations.
- Section 10, **References**, is a summary listing of the resources used to compile this report.

A statement of qualifications of the signatories of this report is provided in Appendix A of this report, and pertinent documentation regarding the Site is included in Appendices B through E.

2.3 ADDITIONAL SERVICES

Kleinfelder's scope of services as part of this Phase I ESA did not include Standard Practice non-scope evaluations of cultural, historic, and archaeological resources; and environmental regulatory compliance that may be required for a Phase I ESA pursuant to Costco's Development Requirements publication (revised June 13, 2014). In addition, the Phase I ESA did not include an assessment for asbestos-containing materials (ACMs), radon, lead-based paint (LBP), lead in

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drinking water, molds and mildews, indoor air quality, industrial hygiene, health and safety, and other Standard Practice non-scope considerations not described herein.

The Phase I ESA did, however, include evaluations of wetlands and surface water; and threatened, endangered, and other protected species that are required for a Phase I ESA pursuant to Costco's Development Requirements. These evaluations have not been received at the time of publication of this report, and will therefore, be submitted under separate cover. No other additional services were provided by Kleinfelder for this Phase I ESA.

2.4 SIGNIFICANT ASSUMPTIONS

Kleinfelder does not guarantee the accuracy of information supplied by its sources, but reserves the right to rely on the information in forming a professional opinion regarding the potential for contamination at the Site. It is assumed the Client provided Kleinfelder all applicable and available environmental records and specialized knowledge in its possession regarding the Site. Kleinfelder has not made other significant assumptions during the performance of this Phase I ESA.

2.5 LIMITATIONS AND EXCEPTIONS

Phase I ESAs are non-comprehensive by nature and may not identify all environmental problems, and will not eliminate all risk. This report is a qualitative assessment. Kleinfelder offers a range of investigative and engineering services to suit the needs of its clients, including more quantitative investigations. Although risk can never be eliminated, more detailed and extensive investigations yield more information, which may help the Client understand and better manage risks. Since such detailed services involve greater expense, Kleinfelder asks its clients to participate in identifying the level of service that will provide them with an acceptable level of risk. Please contact the signatories of this report if you would like to discuss this issue of risk further.

Kleinfelder performed this Phase I ESA consistent with the guidelines set forth in the Standard Practice; Costco's Development Requirements, Version 2014 (revised June 13, 2014); and the proposed scope of services subsequently approved by Costco. No other warranty, either express or implied, is made. Environmental issues not specifically addressed in this report were beyond the scope of Kleinfelder's services and not included in the evaluation.

This report may be used only by Costco and only for the purposes stated within a reasonable time from its issuance, but in no event later than one year from the date of the report. Land or facility use, on- and off-Site conditions, regulations, or other factors may change over time, and additional

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work may be required with the passage of time. Since Site activities and regulations beyond Kleinfelder's control may change at any time after the completion of this report, the observations, findings, and opinions provided herein are considered valid only as of the date of the Site visit. Pursuant to Section 4.6 of the Standard Practice, this report should not be relied upon after 180 days from the date of its oldest component. Any party other than the Client who wishes to use this report shall notify Kleinfelder of such intended use. Based on the intended use of the report, Kleinfelder may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the Client or anyone else will release Kleinfelder from any liability resulting from the use of this report by any unauthorized party, but only to the extent of any such non-compliance by the Client.

The Phase I ESA has been conducted in accordance with and conforms to the Costco Wholesale Development Requirements Document and the latest edition of ASTM E 1527. This assessment has been prepared for the sole use of Costco Wholesale Corporation. Its contents should not be relied upon by other parties without the express written consent of Costco Wholesale Corporation.

2.6 SPECIAL TERMS AND CONDITIONS

No special terms and conditions were agreed to by the Client and Kleinfelder.

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3 SITE DESCRIPTION

The Site description is presented in this section and describes the condition of the Site at the time of the Phase I ESA. The Site location is shown on Figure 1. Tables 3-1 through 3-4 summarize the physical characteristics of the Site and adjoining properties.

3.1 LOCATION AND LEGAL DESCRIPTION

The information presented in Table 3-1 denotes the physical location and legal description of the Site. This information was obtained from review of various maps (such as topographic maps and tax assessor maps), aerial photographs, public records at City and/or County offices, interviews, and/or information provided by the Client.

TABLE 3-1

Location and Legal Description

PARAMETER	INFORMATION/COMMENTS
LOCATION	The Site is located south of West Schulte Road, approximately 750 feet east of the intersection of West Schulte Road and Hansen Road (see Figure 1 – Site Location Map).
LEGAL DESCRIPTION	The legal description of the Site is presented in the EDR Environmental Lien and AUL Search report (EDR, 2018a) provided in Appendix C.
ASSESSOR'S PARCEL NUMBER	The Site is situated on one parcel of land identified by the San Joaquin Assessor as APN 209-230-020-000.
ADDRESS	The Site is associated with the street address of 16000 West Schulte Road, City of Tracy, California.
SECTION, TOWNSHIP, AND RANGE	Township 2 South, Range 4 East, Section 35, Mt. Diablo Base and Meridian.
ZONING	Based on Kleinfelder's review of online property information available on the San Joaquin County Assessor (http://sjmap.org/website/DistrictViewer/Viewer.asp), the Site is zoned "AG-40" for agricultural use.

3.2 CURRENT / PROPOSED USE OF THE PROPERTY

At the time of Kleinfelder's assessment, the Site was developed with agricultural land (low-lying crops) and associated irrigation infrastructure. Current and proposed Site uses are described in Table 3-2.

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TABLE 3-2

Current and Proposed Uses

PARAMETER	GENERAL OBSERVATIONS
CURRENT USE	Agricultural land (low-lying crops).
PROPOSED USE	Costco e-commerce facility.

3.3 DESCRIPTION OF STRUCTURES / IMPROVEMENTS

Structures and/or improvements observed on the Site at the time of Kleinfelder's reconnaissance are described in Table 3-3.

TABLE 3-3

Structures and Improvements

PARAMETER	GENERAL OBSERVATIONS
STRUCTURES	No structures are located on the Site.
IMPROVEMENTS	Irrigation piping/infrastructure; Retention basin with associated corrugated metal pipe at base; Pipeline markers indicating the presence of below grade pipelines.

3.4 CURRENT USES OF ADJOINING PROPERTIES

Kleinfelder performed a brief drive-by survey of the properties immediately adjoining to the Site on April 17, 2018. A summary of the observations regarding the surrounding properties is presented in Table 3-4 and shown on Figure 2, Site Vicinity Map.

TABLE 3-4

Adjoining Properties

DIRECTION	LAND USE DESCRIPTION
NORTH	West Schulte Road and a parcel of land associated with the address of 5902 Hopkins Road. This land appeared to be under construction (e.g., graded) at the time of the Site reconnaissance.
EAST	Two parcels of land associated with the addresses 15580 and 15178 West Schulte Road, used for agricultural purposes (fields).

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Table 3-4 (Continued)

Adjoining Properties

DIRECTION	LAND USE DESCRIPTION
SOUTH; SOUTHWEST	Delta Mendota Canal and a parcel of land associated with the address 26301 South Hansen Road, used for agricultural purposes (orchards). A box culvert and canal flume are located along the southwestern Site border.
WEST	Two parcels of land associated with the addresses 16310 and 16286 West Schulte Road adjoin the Site to the west. The property identified as 16310 West Schulte Road adjoins the northwestern corner of the Site and appeared to be developed with a communications facility. The property identified as 16286 West Schulte Road adjoins the remaining portions and consisted of agricultural (fields) with farm-related structures.

Properties surrounding the Site appeared to be used for agricultural purposes. Farm-related structures are located west of the Site, on the property that is north of the Delta Mendota Canal. Various aboveground storage tanks (ASTs) were visible on the property to the west of the Site; some appeared empty, while others appeared to be in use. However, these ASTs did not appear immediately adjacent to the western Site boundary and are not considered to be an environmental concern to the Site. Discarded oil and paint thinner containers were noted in the concrete box culvert near the canal flume adjacent to the southwestern Site boundary. In addition, a discarded propane tank was noted just east of the box culvert. No evidence of soil staining was observed beneath these discarded items. A possible backup generator was noted approximately 120 feet west of the Site, associated with the adjoining communications facility to the west. No associated fuel tank was noted to be associated with this generator. No other indications of obvious or suspect RECs were apparent on the adjoining properties at the time of Kleinfelder's Site reconnaissance that are considered likely to affect soil, soil vapor or groundwater beneath the Site.

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4 RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

The purpose of the records review is to obtain and review records that would help to evaluate RECs in connection with the Site and bordering properties. Federal, State, and local regulatory agencies publish databases or "lists" of businesses and properties that handle hazardous materials or hazardous waste, or are the known location of a release of hazardous substances to soil and/or groundwater. These databases are available for review and/or purchase at the regulatory agencies, or the information may be obtained through a commercial database service. Kleinfelder contracted a commercial database service, EDR, of Shelton, Connecticut, to perform the government database search for listings within the appropriate Standard Practice minimum search distance of the Site, and the distances set forth in Costco's Development Requirements, Version 2014, revised June 13, 2014. Kleinfelder provided EDR with a Site map to incorporate the search distances from the Site boundary. Included in the EDR Radius Map™ Report with GeoCheck® (EDR, 2018b) is a listing of specific databases outlined by the Standard Practice. If required, the search distances included an extended radius from those specified by the Standard Practice. A listing of the search distances, databases evaluated, dates the databases were last updated, and types of information contained in each database are included in the regulatory database search report provided in Appendix B of this report.

EDR utilizes a geographical information system to plot the locations of reported spills, leaks, incidents, etc. Kleinfelder reviews this information to help establish if the Site or nearby properties are listed in the databases and lists. Each of the listings was reviewed by Kleinfelder to assess whether the corresponding property details included in EDR's report revealed a potential environmental impact to the Site. Many listings in the report were concluded not to have the potential to impact the Site based on the following, or a combination thereof:

- The listed property is located at a distance where the facility is unlikely to impact the Site based on Kleinfelder's evaluation of the relevant data in EDR's report and knowledge of the Site vicinity.
- The listed property is located in a down-gradient or cross-gradient direction from the Site, based on the anticipated direction of groundwater flow (northeast) at the property being evaluated, and is located at a distance such that it is unlikely to impact the Site. Note that the groundwater flow direction is estimated to be to the northeast, based on review of

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available information, and judgements as to down- or cross-gradient direction are best made if groundwater flow direction information is available for a specific property.

- The listed property is identified in the underground storage tank (UST) or Small Quantity Generator (SQG) databases and does not immediately adjoin the Site. The property is furthermore not listed in other databases that report a release of a hazardous substance or petroleum product and/or is not listed as having environmental violations. The listing of a facility in these databases alone is not indicative of an unauthorized release.
- The listing for the facility suggested a short-term release occurred (e.g., from incidental traffic accidents or involving limited quantities of chemicals from illegal drug labs found at residences), with associated response actions completed.
- The quantity of the hazardous substances or petroleum product released from an off-Site, non-adjoining facility was not judged to have resulted in contamination above the most stringent criteria requiring regulatory action. Therefore, no impact to the Site is anticipated.
- The listed property record indicates that the property was characterized, the reported release affected soil only, the listed property was not on or adjacent to the Site, and the release was not recognized as indicative of area-wide conditions or was characterized as a soil removal action only.
- The listed property record indicates that contamination on the property is limited to relatively non-mobile contaminants, including polyaromatic hydrocarbons and metals, in soil only, on a non-adjacent property.
- The listed property record indicates that the case for the property has been closed to the satisfaction of the designated lead regulatory agency, and residual contamination, if present, is not considered likely to affect the Site based on one or more of the criteria mentioned in the bulleted items above (a condition referred to by the Standard Practice as an HREC).

Based on these criteria indicating no material threat of a release that affected the Site and/or no release that could require future regulatory agency oversight, the listings concluded not to have the potential to impact the Site were not evaluated further and are not discussed in the following sections.

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4.2 RESULTS OF DATABASE SEARCH

The remaining property listings were reviewed to assess whether these properties had environmental releases that may have resulted in RECs in relation to the Site. If the listed properties had a reported release which may have resulted in an REC, the property was further assessed by performing a review of agency files available via the GeoTracker™ website (http://geotracker.waterboards.ca.gov/) of the State Water Resources Control Board (SWRCB) and/or other relevant regulatory agency websites to evaluate whether the listed release represents a potential impact to the Site.

4.2.1 Site Listings

The Site was not listed in databases searched by EDR.

4.2.2 Off-Site Listings

Three off-Site properties were listed in standard Federal, State, and local lists within the Standard Practice search distances and the distances set forth in Costco's Development Requirements, Version 2014, revised June 13, 2014. Kleinfelder reviewed the listing information to assess the potential for impacts to soil, soil vapor, and groundwater beneath the Site. The following summarizes the information for these facilities.

- *"Shell Pipeline Co LP Location No. 805248 Drum Location" and "Shell Oil Company" (West Schulte Road and Hansen Road)* – These listings represent one facility. It was listed as a SQG of hazardous waste in the year 2012, having disposed of ignitable, "benzene" waste. No violations were reported for this facility. The facility was also listed in the Spills, Leaks, Investigations, and Cleanup (SLIC) database as having had a reported release of total petroleum hydrocarbons ("TPH"). Details were not provided in the database listing information. However, based on information obtained from the SWRCB GeoTracker™ database, the release associated with this facility occurred over 3,500 feet to the north of the Site. Soil and groundwater impacts associated with a crude oil release from pipelines appear to be limited in extent, and based on the distance of this release to the Site, this listing is not considered likely to have impacted soil, soil vapor or groundwater beneath the Site.
- *"Tracy Youth Sports Park" (15178 Schulte Road)* – This facility partially adjoins the Site to the east. It is listed in the SLIC database as having had a release (substance not reported)

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that affected soil. A link to the SWRCB GeoTracker™ case for this facility was provided in the EDR database report (see Section 4.3.3 for further discussion).

4.2.3 Orphan List

Facilities not plotted by EDR due to poor or inadequate address information are referred to as orphan sites. No unmapped orphan sites are listed in the EDR report.

4.3 OTHER RECORDS REVIEWED / AGENCIES CONTACTED

The following additional sources of environmental records were reviewed during this Phase I ESA for the purposes of meeting the Standard Practice. Local regulatory agencies were contacted for reasonably ascertainable and practically reviewable documentation regarding RECs present at the Site and adjoining facilities. Summaries of interviews with local regulatory agency representatives, when performed, are included in Section 7 of this report (with interview documentation included in Appendix C). The following agencies (if marked with an "X") were contacted for documentation:

- ☒ San Joaquin County Environmental Health Department (SJCEHD)
- ☒ City of Tracy, Building Safety Division
- ☒ State Water Resources Control Board (SWRCB) / GeoTracker™ Database
- ☒ Pipeline and Hazardous Materials Safety Administration (PHMSA), National Pipeline Mapping System (NPMS)
- ☒ State Department of Toxic Substances Control (DTSC) / EnviroStor Database
- ☒ San Joaquin Valley Air Pollution Control District (SJVAPCD)

Information obtained from these agencies is summarized below.

4.3.1 San Joaquin County Environmental Health Department

Kleinfelder submitted a written request to the SJCEHD on April 16, 2018 for information pertaining to hazardous materials usage and storage, including AST and UST records for the Site. Based on an April 17, 2018 email from Dom Martorella, Office Assistant Specialist with the SJEHD, no records are on file associated with the Site. A copy of the SJCEHD response is provided in Appendix C.

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4.3.2 City of Tracy, Building Safety Division

Since no structures have historically been present on the Site, a review building permits at the City of Tracy, Building Safety Division was not performed as part of this Phase I ESA. EDR provided an EDR Building Permit Report (EDR, 2018g) for the Site. A search of building permit information by EDR did not identify building permits for the Site. A copy of the EDR Building Permit Report is provided in Appendix C.

4.3.3 State Water Resources Control Board / GeoTracker™ Database

Kleinfelder reviewed the SWRCB GeoTracker™ website (http://geotracker.waterboards.ca.gov/) on April 16, 2018 for information associated with releases of hazardous materials or substances at the Site. No listings associated with the Site were included in databases maintained by the SWRCB. One listing was noted for an adjoining property. A summary is provided below.

"Tracy Youth Sports Park" (15178 Schulte Road) – This property partially adjoins the Site to the east. A July 24, 2013 "No Further Action Required Letter" was prepared by the Central Valley Regional Water Quality Control Board (RWQCB), which indicated the RWQCB had no files associated with this case. The letter stated that in June 2006, the City of Tracy prepared an Environmental Impact Report to evaluate the potential environmental impacts from a proposed development of a youth sports park (e.g., baseball, softball, soccer fields, sports/football stadium, and a recreation area) at this location. Environmental impacts noted included increased traffic and regional air quality impacts, and the presence of two PG&E transmission pipelines and one Chevron crude oil pipeline beneath the property. The proposed sports park development was rejected by the City in December 2007. The case for this facility was reportedly open in GeoTracker™ on September 1, 2007 following receipt of the Environmental Impact Report. However, the RWQCB indicated it would not be activating the case and considers the case closed.

Based on the information provided in the SWRCB GeoTracker™ database, the listing associated with the Tracy Youth Sports Park is not considered an environmental concern to the Site. Information associated with this facility is provided in Appendix C.

4.3.4 Pipeline and Hazardous Materials Safety Administration, National Pipeline Mapping System

Pipeline information is available at the PHMSA's online NPMS website (https://www.npms.phmsa.dot.gov). Kleinfelder researched pipeline information on the website on

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April 16, 2018 for the Site. Based on Kleinfelder's review of the NPMS website, the following pipelines are present beneath the Site.

- Crimson Pipeline, L.P. operates a crude oil pipeline, identified as Los Medanos Pipeline ID 499, which runs generally southeast-northwest across the northeastern portion of the Site. The NPMS database does not list accidental releases along this pipeline near the Site. Kleinfelder also forwarded a request to Crimson Pipeline, L.P. for information regarding potential accidental releases or incidents along their pipeline beneath the Site. A response has not been received as of the date of this report.
- PG&E operates two natural gas pipelines, identified as Pipeline IDs 002_481377 and 401-1422906, which run generally southeast-northwest across the northeastern portion of the Site. No incidents were reported along these natural gas pipelines.

These pipelines appear to pass through the northeastern portion of the Site within and near a PG&E easement depicted on the San Joaquin County Assessor's parcel map (see Figure 2). Although releases were not reported along Crimson Pipeline, L.P.'s crude oil pipeline, the potential exists for undocumented releases to have occurred, which represents a REC. A copy of the NPMS map is included in Appendix C.

4.3.5 State Department of Toxic Substances Control / EnviroStor

Kleinfelder reviewed the DTSC EnviroStor website (http://www.envirostor.dtsc.ca.gov/) on April 16, 2018 for information pertaining to the Site and adjoining properties. Based on Kleinfelder's review of the website, no listings were found pertaining to the Site or for properties immediately adjoining to the Site.

4.3.6 San Joaquin Valley Air Pollution Control District

Kleinfelder submitted a written request for information pertaining to the Site to the SJVAPCD on April 16, 2018. Based on a response from Ms. Theresa Haywood, Senor Office Assistant with the SJVAPCD, no records are available for the Site. A copy of the SJVAPCD response is provided in Appendix C.

4.4 PHYSICAL SETTING SOURCE(S)

Table 4-2 presents information concerning the physical setting of the Site. The information was primarily obtained from published maps.

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TABLE 4-2

Physical Setting

DATA	GENERAL INFORMATION
USGS TOPOGRAPHIC QUADRANGLE	Based on the United States Geological Survey (USGS) Midway Quadrangle 7.5-Minute Series (Topographic) Map, dated 1980, the Site elevation ranges from approximately 185 feet above Mean Sea Level (MSL) near the southwest portion of the Site, to 150 feet above MSL at the northeastern corner of the Site. Topography in the vicinity of the Site slopes to the northeast.
SOIL TYPE	The Site is located within the Tracy Subbasin, which is comprised of continental deposits of Late Tertiary to Quaternary age. These deposits include the Tulare Formation (semi-consolidated, poorly-sorted, discontinuous deposits of clay, silt and gravel), Older Alluvium (loosely- to moderately-compacted sand, silt and gravel deposited in alluvial fans), Flood Basin Deposits (silts and clays, with occasional interbeds of gravel), and Younger Alluvium (unconsolidated silt, fine-to medium-grained sand, and gravel) (California Department of Water Resources [CDWR], 2006).
OIL AND GAS WELLS	Information concerning oil and gas fields was obtained by Kleinfelder from published maps available for download on the Division of Oil, Gas, and Geothermal Resources (DOGGR)'s internet web site (http://maps.conservation.ca.gov/doggr/index.html). Kleinfelder researched oil well information on the DOGGR website on April 16, 2018 for the Site and Site vicinity. Based on Kleinfelder's review, no oil wells are located on the Site or in the immediate Site vicinity. The nearest well is located approximately 1,500 feet northeast of the Site.

Table 4-3 presents information concerning regional geology and hydrogeology. The information was obtained from published maps and other sources.

TABLE 4-3

Regional Geology and Hydrogeology

PHYSICAL PARAMETER	INFORMATION/COMMENTS
REGIONAL PHYSIOGRAPHY AND GEOLOGY	The Site is located in Great Valley Geomorphic Province of California, which is a broad structural trough bound by the Sierra Nevada on the east and the Coast Ranges on the west. The Great Valley is a trough in which sediments have been deposited almost continuously since the Jurassic (California Geological Survey [CGS], 2002).
REGIONAL HYDROGEOLOGY	The Site is located in the San Joaquin Valley Groundwater Basin, Tracy Subbasin, which is defined by the areal extent of unconsolidated to semi-consolidated sedimentary deposits that are bound by the Diablo Range on the west, the Mokelumne and San Joaquin Rivers on the north, the San Joaquin River to the east, and the San Joaquin-Stanislaus County line on the south. The Subbasin is drained by the San Joaquin River and one of its major westside tributaries – Corral Hollow Creek. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta and discharges into the San Francisco Bay (CDWR, 2006).

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TABLE 4-3 (Continued)

Regional Geology and Hydrogeology

PHYSICAL PARAMETER	INFORMATION/COMMENTS
DEPTH TO GROUNDWATER DIRECTION OF ANTICIPATED FLOW [1]	Based on a Contour Map of Spring 2005 Unconfined Aquifer Groundwater Levels dated January 2007, depth to groundwater is indicated to be approximately 50 to 55 feet above MSL (approximately 130 feet to 95 feet below ground surface) and is anticipated to flow generally to the northeast beneath the Site (City of Tracy, 2007).
REGIONAL GROUNDWATER QUALITY PROBLEMS	Groundwater quality in the City of Tracy is considered of decent quality with some local problem constituents including total dissolved solids, nitrates, boron, chloride, and sulfate (City of Tracy, 2007). Regional groundwater quality problems were not identified beneath the Site.
WATER SUPPLY	The well search performed by EDR indicated no private or public water supply wells are located on the Site, or within ¼-mile of the Site (EDR, 2018b).
FLOOD ZONE DESIGNATION	According to The EDR Radius Map™ Report with GeoCheck®, the Site is not located within a 100-year or 500-year flood zone (EDR, 2018b).

[1] Groundwater flow direction is based on regional information sources. Site-specific conditions may vary due to a variety of factors including geologic anomalies, utilities, nearby pumping wells (if present), and others.

4.5 USER PROVIDED INFORMATION

According to the Client, the purpose for performing this Phase I ESA is to evaluate the potential for RECs at the Site prior to purchasing the Site for redevelopment as an e-commerce facility. Information regarding the current owners/occupants of the Site is summarized in Table 4-4.

TABLE 4-4

Owner and Occupant Information

ENTITY	NAME
OWNER	Based on the EDR Environmental Lien and AUL Search report (EDR, 2018a), the Site is vested in “Allen E Hom Trustee”.
OCCUPANT(S)	The Site is an agricultural field.

Summaries of interviews of key individuals with knowledge of the Site (“Key Site Managers”) are provided in Section 7. The following sections present information provided to Kleinfelder by the Client.

4.6 TITLE RECORDS

Chain-of-title information was not provided by the Client. Therefore, a review of a chain-of-title report was not reviewed as part of this Phase I ESA.

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4.7 ENVIRONMENTAL LIENS AND USAGE LIMITATIONS

According to information provided in EDR's regulatory agency database search report (EDR, 2018b), there are no liens pertaining to the Site listed in the Federal superfund liens list maintained by the United States Environmental Protection Agency (US EPA), nor known recorded land-use environmental deed restrictions pertaining to the Site listed in the State Liens Database. Kleinfelder's review of the EDR Environmental Lien and AUL Search report (EDR, 2018a) for the Site indicates there are no environmental liens or activity and use limitations (AULs) associated with the Site.

4.8 VALUE REDUCTION

As part of the Standard Practice process, information is to be gathered regarding the prospective purchase price of the Site relative to its fair market value. If there appears to be a value reduction, that reduction must be identified with respect to whether the difference may be attributed to environmental degradation of the property. Based on a questionnaire completed by Mr. Peter Kahn of Costco on April 11, 2018, the purchase price of the property reflects the fair market value. A copy of the completed questionnaire is provided in Appendix C.

4.9 OTHER INFORMATION / DOCUMENTS PROVIDED

Information and other documents pertaining to the Site were not available for review.

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5 SITE HISTORY

The history of the Site was researched to identify obvious uses. Historical land use was researched to the first developed use, or back to 1940, whichever was earlier or readily available. Table 5-1 summarizes the availability of information reviewed during this assessment.

TABLE 5-1

Historical Information Sources

SOURCE	YEARS REVIEWED	SOURCE / AVAILABILITY
SANBORN FIRE INSURANCE MAPS	Not available	EDR, 2018c
AERIAL PHOTOGRAPHS	1937, 1940, 1949, 1957, 1963, 1968, 1975, 1982, 1993, 2006, 2010, 2014	EDR, 2018d
CITY DIRECTORIES	1959 – 2014 (select years)	EDR, 2018e
HISTORICAL TOPOGRAPHIC MAP REPORT	1907, 1916, 1922, 1942, 1943, 1947, 1953, 1968, 1980, 2012	EDR, 2018f
BUILDING DEPARTMENT	Not available	EDR, 2018g
PREVIOUS ASSESSMENT(S)	Not applicable	Not available

5.1 SANBORN FIRE INSURANCE MAPS

Sanborn Fire Insurance Maps provide historical land use information for some metropolitan areas and small, established towns. Kleinfelder requested EDR to search its library of Sanborn Fire Insurance Maps for maps of the Site. EDR responded that Sanborn Fire Insurance Maps were not available for the Site (EDR, 2018c).

5.2 AERIAL PHOTOGRAPHS

A review of historical aerial photography may indicate past activities at a property that may not be documented by other means or observed during a reconnaissance visit. The effectiveness of this technique depends on the scale and quality of the photographs and the available coverage. Aerial photographs were obtained from several historical photograph collections through EDR (2018d) and span a period of 77 years. A tabulation of the aerial photographs reviewed by Kleinfelder is

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presented in Table 5-2. Copies of the aerial photographs provided by EDR are included in Appendix D.

TABLE 5-2

Historical Aerial Photographs Reviewed

YEAR	APPROXIMATE SCALE	SUMMARY
1937	1" = 500'	**Site:** The Site appeared to be used for agricultural purposes (possibly orchards). A natural drainage was apparent passing through the central portion of the Site in a general southwest-northeast direction. **Surrounding Area:** West Schulte Road was apparent adjoining to the north of the Site. Several residential or farm-related structures are apparent adjoining to the west of the Site. Remaining adjoining properties appeared to be used for agricultural purposes.
1940	1" = 500'	**Site:** The Site appeared to be used for agricultural purposes, although orchards were not apparent. **Surrounding Area:** Adjoining properties appeared to be used for agricultural purposes, with residential or farm-related structures apparent on the property to the west.
1949 1957 1963	1" = 500'	**Site:** The Site may have been vacant in 1949, but in the 1957 and 1963 aerial photographs, agricultural use was apparent. A possible small retention pond is apparent in the northeast corner of the Site in the 1957 and 1963 aerial photographs. **Surrounding Area:** The Delta Mendota Canal, including an apparent canal flume, were apparent adjoining the southwestern Site boundary. Adjoining properties appeared to remain developed for agricultural purposes, except for the property southwest of the Site, beyond the canal, which appeared vacant. Structures remained apparent on the property that adjoined to the west.
1968	1" = 500'	**Site:** The Site appeared to be developed for agricultural purposes (orchards). The natural drainage was not apparent. **Surrounding Area:** The surrounding properties appeared similar to that shown in the previously-reviewed aerial photographs.
1975 1982	1" = 500'	**Site:** The Site appeared the same as in the 1968 aerial photograph. However, an unimproved road appears to pass through the northeastern corner of the Site, in the approximate location of the pipeline right-of-way previously discussed. **Surrounding Area:** The surrounding properties appeared generally the same as on the previously-reviewed aerial photograph.

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TABLE 5-2 (Continued)

Historical Aerial Photographs Reviewed

YEAR	APPROXIMATE SCALE	SUMMARY
1993	1" = 500'	**Site:** The Site appeared to remain agricultural, although the Site appears to consist of low-lying crop fields. Construction along the unimproved road (pipeline alignment) through the northeastern corner of the Site was apparent in the 1993 aerial photograph. Sections of piping, heavy equipment, excavated soils, and what appeared to be material staging areas were visible. **Surrounding Area:** The surrounding properties appeared generally the same as on the previously-reviewed aerial photographs, with the exception of apparent pipeline construction activities along the alignment, similar to that taking place at the Site.
2006 2010 2012	1" = 500'	**Site:** The Site appeared the same as on the previously-reviewed aerial photographs. However, the unimproved road and construction through the northeastern corner of the Site was no longer apparent. **Surrounding Area:** The surrounding properties appeared generally the same as on the previously-reviewed aerial photographs, with little to no visible indication of the pipeline alignment.
Note: Aerial photographs only provide information concerning indications of land use, and no conclusions regarding the release of hazardous substances or petroleum products can be drawn from the review of photographs alone.		

Although not considered a REC pursuant to the Standard Practice, residual pesticides may be present in shallow soil beneath the Site. The unimproved road noted on aerial photographs between 1975 and 1993 follows the alignment of an existing PG&E right-of-way easement noted on the San Joaquin County Assessor's parcel map (see Appendix C).

5.3 CITY DIRECTORIES

City directories provide information regarding property occupants by address. EDR provided a city directory image report (EDR, 2018e), included in Appendix D, which included a search of city directories for the period between 1959 and 2014. West Schulte Road was listed in city directories between 1975 and 2014; however, the Site address was not listed in city directories reviewed. Adjoining properties along West Schulte Road were also not listed in city directories reviewed.

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5.4 HISTORICAL TOPOGRAPHIC MAP REVIEW

Kleinfelder obtained information regarding historical topographic maps of the Site vicinity from EDR (2018f). The topographic maps reviewed for this assessment are listed in Table 5-3 and copies of the maps are included in Appendix D.

TABLE 5-3

Historical Topographic Maps Reviewed

YEAR	SCALE	SUMMARY
1907	1:62,500	**Site:** The Site was depicted undeveloped. **Surrounding Area:** A road was apparent adjoining to the north of the Site. Adjoining properties were shown as undeveloped land, except for a residential-type structure located on the property to the west.
1916	1:31,680	**Site:** The Site was the same as on the 1907 map. A natural drainage channel was shown entering the Site near the southwestern portion toward the central portion. **Surrounding Area:** The Site vicinity was shown generally the same as on the 1907 map.
1922		**Site:** The Site was not covered on the 1922 map. **Surrounding Area:** The adjoining properties were not covered on the 1922 map.
1942 1943	1:62,500	**Site:** The Site was the same as on the 1907 and 1916 maps, although the natural drainage that entered the Site as shown on the 1916 map was not shown on the 1942 and 1943 maps. **Surrounding Area:** The Site vicinity was shown generally the same as on the 1916 map. A natural drainage was shown near the northwestern corner of the Site.
1947		**Site:** The Site was not covered on the 1947 map. **Surrounding Area:** The adjoining properties were not covered on the 1947 map.

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TABLE 5-3 (Continued)

Historical Topographic Maps Reviewed

YEAR	SCALE	SUMMARY
1953 1968	1:24,000	**Site:** The natural drainage was again depicted on the 1953 map, passing generally southwest-northeast through the central portion of the Site. **Surrounding Area:** West Schulte Road was shown adjoining to the north of the Site. Adjoining properties to the north, east and south were undeveloped. The Delta Mendota Canal was shown adjoining the southwestern Site boundary. A canal flume was depicted adjoining to the Site, in the canal. Seven structures were shown on the property that adjoined to the west, just north of the canal.
1980	1:24,000	**Site:** The Site was depicted to be developed for agricultural use (orchards). The on-Site natural drainage was still shown. **Surrounding Area:** Changes to the Site vicinity included the presence of agricultural land on the properties that adjoined to the north, beyond West Schulte Road, and to the southwest, beyond the Delta Mendota Canal. Some structural changes were noted on the property that adjoined to the west, just north of the canal.
2012	1:24,000	**Site:** The 2012 topographic map depicted roads and other physical features, but did not depict structures in the area. The natural drainage feature on Site was shown. **Surrounding Area:** West Shulte Road, a natural drainage near the northwestern corner of the Site, and the Delta Mendota Canal were shown on the map. Structures and other features were not shown.

5.5 BUILDING DEPARTMENT

EDR provided an EDR Building Permit Report (EDR, 2018g) for the Site. Permits for the Site were not found in records reviewed by EDR.

5.6 PREVIOUS ASSESSMENTS

Previous environmental assessments were not available for the Site.

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6 SITE RECONNAISSANCE

Kleinfelder's Phase I ESA activities included a Site reconnaissance. This section summarizes the findings from the Site reconnaissance.

6.1 METHODOLOGY AND LIMITING CONDITIONS

Mr. Anthony Wohletz and Mr. Curtis Conti of Kleinfelder performed a Site reconnaissance on April 17, 2018. The Site reconnaissance included a visual inspection of the Site to assist in identifying the presence or likely presence of hazardous substances or petroleum hydrocarbons under conditions that indicate an existing release, a past release, or threat of release into structures, soil, groundwater, or surface water at the Site (i.e., RECs). Observations of readily-apparent environmental conditions are summarized in Table 6-1, and color photographs of the Site are presented on Figures 3 through 15. The approximate Site boundaries are shown on Figure 2. Mr. Wohletz and Mr. Conti were not accompanied during the Site reconnaissance.

6.2 GENERAL SITE SETTING

The Site is located at 16000 West Schulte Road, approximately 750 feet east of the intersection of West Schulte Road and South Hansen Road in the City of Tracy, California. At the time of the Site reconnaissance, surrounding properties appeared to be primarily developed for agricultural purposes. Commercial/light industrial properties are present farther west of the Site.

6.3 SITE OBSERVATIONS

Kleinfelder's Site observations are summarized in Table 6-1.

TABLE 6-1

Site Observations

GENERAL OBSERVATIONS	REMARKS	OBSERVED	NOT OBSERVED
Current use	Agricultural land.	X	
Current use likely to indicate RECs	Although not considered a REC pursuant to the Standard Practice, the potential exists for pesticides to be present in shallow soil beneath the Site.		X
Past use	The Site was historically used for agricultural purposes since at least 1937 through the present.		X

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TABLE 6-1 (Continued)

Site Observations

GENERAL OBSERVATIONS	REMARKS	OBSERVED	NOT OBSERVED
Past use likely to indicate RECs	Although not considered a REC pursuant to the Standard Practice, the potential exists for pesticides to be present in shallow soil beneath the Site.		X
Structures			X
Roads			X
Topography of Site and surrounding area	The Site is relatively flat.	X	
ASTs	Empty, discarded propane AST noted off Site along southwestern Site border.	X	
Asbestos and lead	Concrete stand pipe noted along southwestern border. Irrigation piping on agricultural properties were typically constructed of Transite pipe (asbestos).	X	
Below grade vaults			X
Burned or buried debris			X
Chemical storage			X
Chemical mixing areas			X
Discolored soil or water			X
Ditches, streams	Drainage ditch noted along northern Site border.	X	
Drains and piping	Irrigation valves noted near southeastern portion of Site. Corrugated metal pipe culverts noted along northern Site border.	X	
Drums			X
Electrical or hydraulic equipment (polychlorinated biphenyls [PCBs])			X
Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		**Observed**	**Not Observed**
Fill dirt from an unknown source			X
Fill dirt from a known source			X

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TABLE 6-1 (Continued)

Site Observations

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		Observed	Not Observed
Hazardous chemical and petroleum products in connection with known use			X
Hazardous chemical and petroleum products in connection with unknown use	Used oil and paint thinner containers noted in apparent flood-control box culvert off Site adjacent to southwestern Site border.	X	
Non-hazardous containers with contents			X
Hazardous waste storage			X
Heating and cooling system and fuel source			X
Industrial waste treatment equipment			X
Loading and unloading areas			X
Odors			X
Pits, ponds, or lagoons			X
Pools of liquid			X
Process waste water			X
Sanitary sewer system			X
Septic system (e.g. tank and leach fields)			X
Soil piles	Mounded soil near retention basin in northeastern Site corner. Appears to be spoils from the retention basin.	X	
Solid waste/evidence of unauthorized dumping	Debris and garbage noted along northern and southern Site borders. Mattresses and other garbage noted in southeastern Site corner.	X	
Stained pavement, soil or concrete			X

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TABLE 6-1 (Continued)

Site Observations

Interior and exterior observations or environmental conditions that may involve the use, storage, disposal or generation of hazardous substances or petroleum products.		Observed	Not Observed
Stains or corrosion (interior, non-water)			X
Storm drains/catch basins	Retention basin noted in northeastern Site corner. Corrugated metal pipe culvert noted at base of the detection basin.	X	
Stressed vegetation			X
Sumps and clarifiers			X
Surface water			X
UST(s) (including heating oil tanks)			X
Unidentified substance containers			X
Waste water discharge			X
Water supplies (potable and process)			X
Wells (irrigation, monitoring, or domestic)			X
Wells (dry)			X
Wells (oil and gas)			X

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6.4 RESULTS OF SITE RECONNAISSANCE

The Site consists of a 103-acre parcel of land that is currently unpaved, agricultural land that was covered at the time of the reconnaissance with grasses. The Site is relatively flat, with 0.5- to 1-foot-tall rows of soil about 1.5 to 2.5 feet wide, running north/south every approximately 25 feet. At the time of the reconnaissance, soil was generally moist and not loose.

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A retention basin is present in the northeastern Site corner. The basin is surrounded by mounds of dirt that appear to be retention basin excavation spoils. A corrugated metal pipe was noted in the deepest portion of the basin, and an approximately 4- to 5-foot wide and 1.5- to 2-foot deep ditch runs along the northern Site boundary and into the western end of the basin. It appears the basin is used for Site drainage.

Irrigation-related standpipes were noted in the southeastern Site corner. These stand pipes appear to be gate valves for Site irrigation. Scattered debris, including a discarded mattress, was also noted in the southeastern Site corner.

A communications station/facility was noted immediately west of the northwestern Site corner. A stained pole-mounted transformer was noted off Site, near the northwest facility corner, but did not impact the Site. Also, a potential backup generator was noted in the southwestern facility corner, about 120 feet west of the Site. No associated fuel AST was noted.

Agricultural, agricultural/industrial, and residential properties were noted immediately west of the Site. Apparent storage ponds were noted about 600 feet north of the canal. These apparent ponds were empty at the time of the Site reconnaissance. Multiple agricultural structures were noted immediately west of the Site, south of the ponds. These structures include likely garages/shops/barns, animal-related housing, and potential silos. Residential structures were also noted.

Various ASTs, agricultural equipment, and other agricultural supplies were noted in the agricultural/industrial properties just west of the southern half of the Site. Multiple ASTs appeared to be empty and not in use; however, at least four ASTs appeared to be in use, and one appeared to be used for propane. These ASTs, however, were only visible from a distance.

An apparent flood control structure was noted along the southwestern Site border. The structure spans across the top of the Delta Mendota Canal and includes an approximately 5-foot-wide concrete-box culvert. It appears the structure allows excess water to be drained from the canal to the Site. Discarded oil and paint thinner containers were noted in the concrete box culvert, and a discarded propane tank was noted east of the culvert. Irrigation-related pipes were also noted along the southwestern Site border.

Communication utility vaults were noted just east of the Site, along the eastern Site border, and petroleum utility signs were noted along the eastern Site border, about 450 feet south of the northeastern Site corner. Petroleum utility signs were also noted along the northern Site border,

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about 525 feet west of the northeastern Site corner. It appears petroleum utilities; therefore, pass across the northeastern Site corner.

Evidence of discolored water, stressed vegetation, USTs, ASTs, wells, pits, ponds (other than the retention basin), or lagoons was not observed on the Site during the reconnaissance.

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7 INTERVIEWS

Key Site Managers are contacted to obtain current and historical environmental information concerning the Site. The following sections highlight information revealed during the interviews.

7.1 INTERVIEW WITH CLIENT

Kleinfelder submitted a Phase I ESA User Questionnaire to the Client. Based on information provided in the questionnaire, Costco is not aware of environmental cleanup liens or AULs associated with the Site. Costco does not have specialized knowledge of the Site, but indicated previous use of the Site was agricultural.

7.2 INTERVIEW WITH OWNER/MANAGER

A questionnaire was provided to the Client to forward to the appropriate owner or manager associated with the Site. To date, a completed questionnaire has not been received.

7.3 INTERVIEWS WITH LOCAL GOVERNMENT OFFICIALS

Based on the information obtained as part of the Phase I ESA research, interviews with local government officials was not deemed necessary for this Phase I ESA.

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8 LIMITED PHASE II ESA

Based on the use of the Site for agricultural purposes, Kleinfelder collected shallow soil samples in a grid pattern from across the Site to assess the presence of pesticides and arsenic in shallow soil. Soil samples were collected pursuant to the DTSC Interim Guidance for Sampling Agricultural Properties (Third Revision), dated August 7, 2008, which recommends 60 shallow soil sample locations for the first 50 acres. As the Site is 103 acres in size, Kleinfelder collected an additional sample per acre (53), plus three additional samples based on a completed grid pattern for the Site, for a total of 116 discrete soil sample locations. The soil sampling methodology and analysis is described below. A table summarizing the soil sample analytical results, a figure showing the sample locations, and the soil sample laboratory report are included in Appendix E.

8.1 SOIL SAMPLING METHODOLOGY

Kleinfelder collected soil samples for environmental analysis from 116 locations at the Site. Soil samples were collected from approximately 0.5-foot bgs using a hand trowel. Soil intended for laboratory analysis was transferred into laboratory-provided wide-mouth glass jars with securely-fitting lids. The sample jars were labeled, promptly placed in a water ice-chilled cooler, and transported accompanied by chain-of-custody to a subcontracted, California-accredited analytical testing laboratory for analysis.

Sampling equipment was cleaned prior to collecting each sample by washing in a non-phosphate detergent (i.e., Liquinox™) and tap water wash, using a brush to dislodge soil, dirt, or other encrusted materials, and then double-rinsing in distilled or deionized water.

8.2 SOIL SAMPLE ANALYSIS

Soil samples were analyzed for organochlorine pesticides (OCPs) using US EPA Method 8081A and arsenic using US EPA Method 6010B.

8.3 SOIL SAMPLE RESULTS

Soil sample analytical results indicated that OCPs were not present above laboratory detection limits in shallow soils at the Site. Arsenic concentrations present in soil ranged from 2.3 milligrams per kilogram (mg/kg) to 4.3 mg/kg.

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8.4 EVALUATION

The soil analytical results were compared to the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) "Tier 1" Environmental Screening Level (ESL) for arsenic, last updated in February 2016. The SFBRWQCB's "Tier 1" ESLs, were designed to protect properties with unrestricted land and water use, addressing media including soil, groundwater, and soil vapor, along with a range of concerns including direct exposure human health risks, impact to drinking water, vapor intrusion, and impact to aquatic life. Use of the Tier 1 ESLs applies the most conservative ESL for the constituent of concern. The soil analytical results were also compared to human-health risk-based screening levels for residential and commercial/industrial soil presented in the California Environmental Protection Agency, DTSC, Office of Human and Ecological Risk (HERO) Human Health Risk Assessment (HHRA) Note Number (No.) 3, last updated in January 2018 (and corrected February 2018), for arsenic.

Also, in consideration of concentration thresholds for California and Federal hazardous waste, the detected concentrations of arsenic were compared to: 1) its California Code or Regulations (CCR) Title 22 Total Threshold Limit Concentration (TTLC); 2) 10 times the arsenic CCR Title 22 Soluble Threshold Limit Concentration (STLC); and 3) 20 times the arsenic Federal Toxicity Characteristic Leaching Procedure (TCLP) threshold.

Arsenic concentrations at the Site exceed the arsenic Tier 1 ESL value of 0.067 mg/kg and the DTSC HERO HHRA residential and commercial/industrial soil screening levels of 0.11 mg/kg and 0.4 mg/kg, respectively. However, it has been acknowledged by regulatory agencies, including the DTSC, that background concentrations of arsenic in soils in California commonly exceed established arsenic human-health risk-based screening levels. Reported concentrations are within generally-accepted southern California upper-bound background arsenic concentration of 12 milligrams per kilogram (mg/kg) (DTSC, 2008).

Arsenic concentrations did not exceed the arsenic TTLC of 500 mg/kg, 10 times the arsenic STLC value of 5 milligrams per liter (mg/L) (50 mg/kg), or 20 times the arsenic TCLP threshold of 5 mg/L (100 mg/kg). Therefore, arsenic concentrations at the Site do not exceed thresholds that would classify soils as Federal or California hazardous wastes.

Based on the soil analytical results, Kleinfelder does not recommend any further assessment.

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9 EVALUATION

Kleinfelder performed this Phase I ESA of the Site in conformance with the scope and limitations of the Standard Practice, the scope of services in our Proposal No. MPCOSTCO.001C/IRV18P76351, dated April 6, 2018, and in accordance with Costco Wholesale Development Requirements, Version 2014, Revised June 13, 2014. The following sections describe Kleinfelder's findings and provide general background information about the Site. Findings address RECs, HRECs, CRECs, and notation of *de minimis* quantities, as applicable to the Site. In summary, Kleinfelder's assessment revealed the following information concerning the Site:

9.1 BACKGROUND

- The Site comprises a 103-acre parcel of land identified by the San Joaquin County Assessor as APN 209-230-020-000. Currently, the Site is used for agricultural purposes.

- The Site was historically used for agricultural purposes (both agricultural fields and orchards) since at least 1937 through the present. Kleinfelder performed soil sampling throughout the Site to assess for the presence of pesticides and arsenic in shallow soil at the Site as a result of historical and current agricultural activities. Based on the analytical laboratory results, pesticides were not detected in shallow soil, and arsenic was detected at concentrations consistent with naturally-occurring background. Thus, the former agricultural use is not considered an environmental concern.

9.2 FINDINGS AND OPINIONS

The following is a summary of the findings and opinions of this Phase I ESA:

- A retention basin is located in the northeastern corner of the Site. A corrugated metal pipe culvert is present at the base of the retention basin. Irrigation-related standpipes were noted in the southeastern Site corner. These stand pipes appear to be gate valves for Site irrigation. Irrigation-related pipes were also noted along the southwestern Site border.

- Crimson Pipeline, L.P. operates a crude oil pipeline, and Pacific, Gas and Electric (PG&E) operates two natural gas pipelines, which run generally southeast-northwest across the northeastern portion of the Site (see Figure 2). No incidental/accidental releases were reported

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along the pipelines in the vicinity of the Site. However, the presence of the pipelines on Site, along with the potential for undocumented leaks which may have occurred, represent a REC.

- Discarded oil and paint thinner containers, and an empty discarded propane tank, were noted in a concrete box culvert near the southwestern border of the Site, near the Delta Mendota Canal. Debris and general household trash was noted along the northern and southern borders of the Site, and in the southeastern corner of the Site. No evidence of stained soil was noted in the vicinity of the discarded items or debris/trash.

- No off-Site facilities are considered likely to have affected soil, soil vapor or groundwater beneath the Site.

9.3 DEVIATIONS AND ADDITIONAL SERVICES

Kleinfelder's scope of services did not include Standard Practice non-scope evaluations of cultural, historic, and archaeological resources and environmental regulatory compliance that may be required for a Phase I ESA pursuant to Costco's Development Requirements publication (revised June 13, 2014). In addition, the Phase I ESA did not include an assessment for ACMs, radon, LBP, lead in drinking water, molds and mildews, indoor air quality, industrial hygiene, health and safety, and other Standard Practice non-scope considerations not described herein.

Kleinfelder's scope of services included evaluations of wetlands and threatened, endangered, and other protected species pursuant to Development Requirements, Version 2014, revised June 13, 2014. Kleinfelder contracted with Moore Biological Consultants to perform these evaluations. However, the completed report summarizing the results of these evaluations has not yet been received. Results will be presented under separate cover.

9.4 CONCLUSIONS

Kleinfelder has performed a Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-13 of the property located at 16000 West Schulte Road in Tracy, California. Any exceptions to, or deviations from, this practice are described in Section 8.3 of this report.

This assessment has revealed no evidence of CRECs associated with the Site. The following REC has been identified:

The presence of natural gas pipelines and the potential for undocumented leaks to have occurred from the crude oil pipeline, which runs through the northeastern portion of the Site represents a

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REC. However, should subsurface contamination be detected in the future as a result of leaks from this pipeline, Crimson Pipeline, L.P. (or current operator at that time) would be responsible for cleanup.

9.5 RECOMMENDATIONS

Based on the results of the Phase I ESA findings, Kleinfelder does not recommend further assessment at this time.

9.6 DATA GAPS

Consistent with ASTM Standard Practice E 1527-13, data gaps are to be identified, which may affect the identification of hazardous substances or petroleum products for the evaluation of RECs at the Site. Data gaps identified must be evaluated to determine if they constitute a data failure. The following data gap was identified for the Site.

- Questionnaire has not been received from the Site owner.

Based on other information gathered as part of this Phase I ESA, this data gap is not considered a data failure.

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10 REFERENCES

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_____, 2018f. EDR Historical Topo Map Report with QuadMatch™, 16000 West Schulte Road, Tracy, CA 95377, Inquiry Number: 5253641.4, April 10.

_____, 2018g. EDR Building Permit Report, 16000 West Schulte Road, Tracy, CA 95377, Inquiry Number: 5253641.8, April 10.

United States Geological Survey (USGS), 2012, 7.5-minute Topographic Map of the Midway, California Quadrangle, scale 1:24,000.

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FIGURES

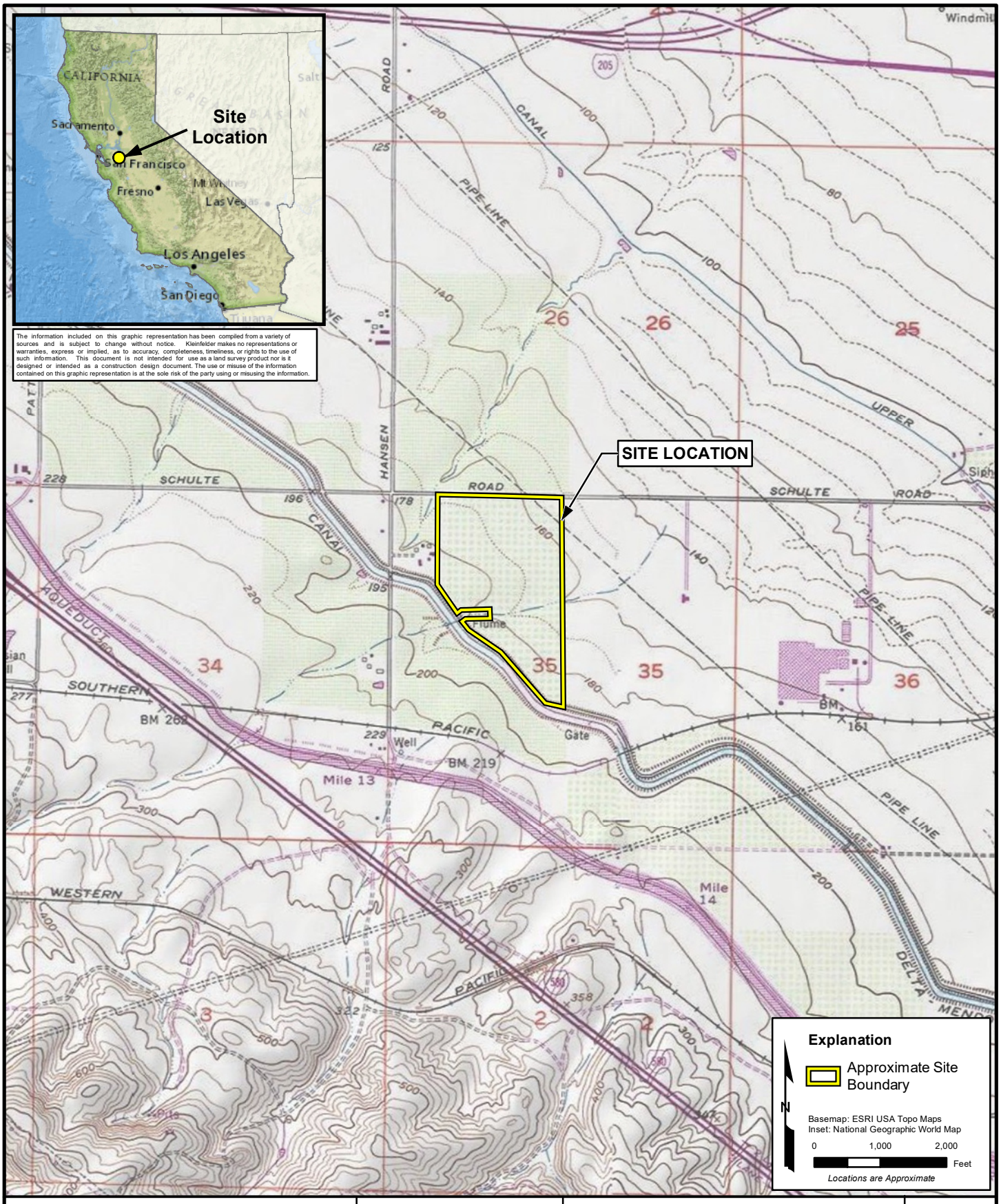
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IRVINE, CA



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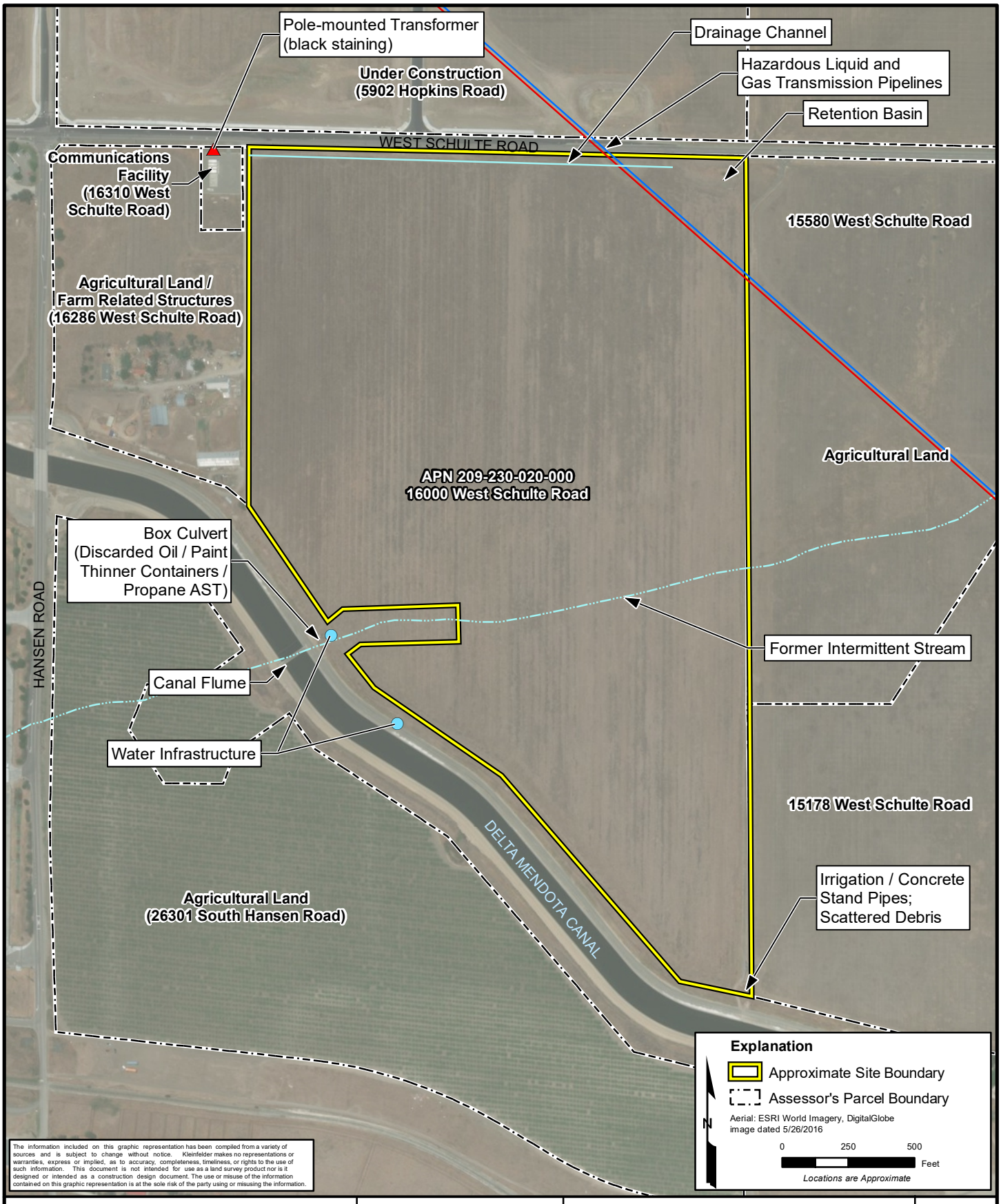
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DRAWN:	APR 2018
DRAWN BY:	K. HAGAN
CHECKED BY:	M. CARROLL
FILE NAME:	Figure1.mxd

SITE LOCATION MAP

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED COSTCO E-COMMERCE FACILITY
16000 WEST SCHULTE ROAD
TRACY, CALIFORNIA

FIGURE

1



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PROJECT:	20190071
DRAWN:	APR 2018
DRAWN BY:	K. HAGAN
CHECKED BY:	M. CARROLL
FILE NAME:	Figure2.mxd

SITE VICINITY MAP

PHASE I ENVIRONMENTAL SITE ASSESSMENT
PROPOSED COSTCO E-COMMERCE FACILITY
16000 WEST SCHULTE ROAD
TRACY, CALIFORNIA

FIGURE
2



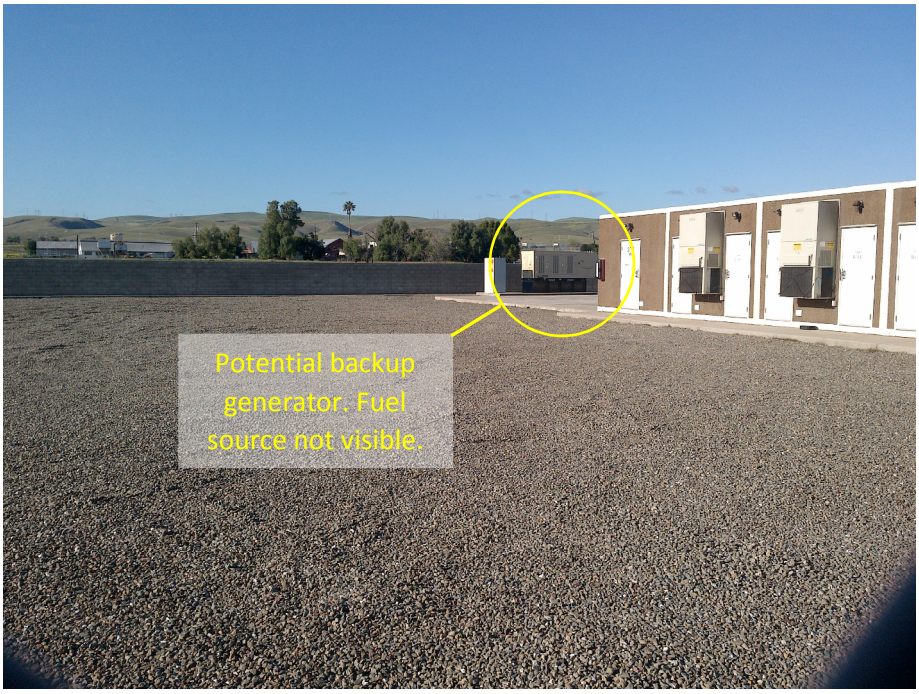


Photo 1: Looking southwest at adjoining Communications Facility.





Photo 2: Looking west at offsite pole-mounted transformer with dark staining.

KLEINFELDER Bright People. Right Solutions.	PROJECT NO. 20190071 DRAWN BY: AW CHECKED BY: MC DATE: 2018-04 REVISED:	SITE PHOTOGRAPHS PHASE I ENVIRONMENTAL SITE ASSESSMENT PROPOSED COSTCO E-COMMERCE FACILITY 16000 WEST SCHULTE ROAD TRACY, CALIFORNIA	FIGURE 3





Photo 3: Looking east along northern Site border.

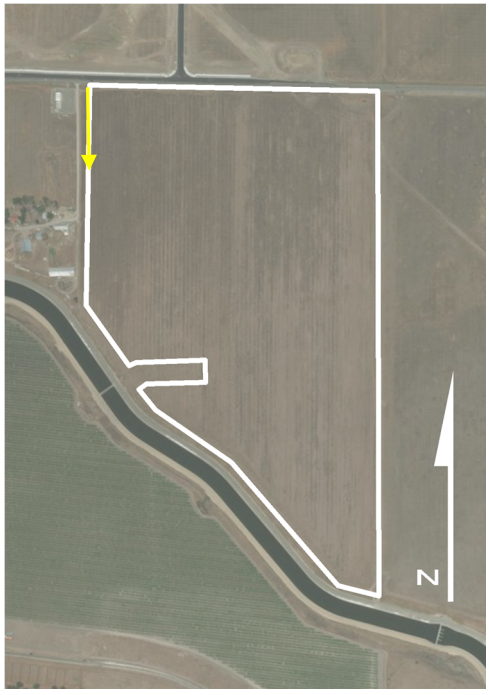




Photo 4: Looking south along western Site border.

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Photo 5: Looking southwest at ponds and embankments on adjoining western property.





Photo 6: Looking west at adjoining western property. Multiple ASTs visible.

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Photo 7: Looking west at adjoining western property and associated agricultural structures.





Photo 8: Looking southwest at ASTs and other items stored in southeastern portion of western adjoining property.

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Photo 9: Looking southwest across canal flume.





Photo 10: Looking southwest at concrete culvert associated with canal flume.

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Photo 11: Looking southeast at garbage at base of canal flume culvert (above). Garbage includes oil containers (Picture 12, below left) and paint thinner containers (Picture 13, below right).



Photo 12: Oil containers noted in garbage at base of canal flume culvert.



Photo 13: Paint thinner containers noted in garbage at base of canal flume culvert.

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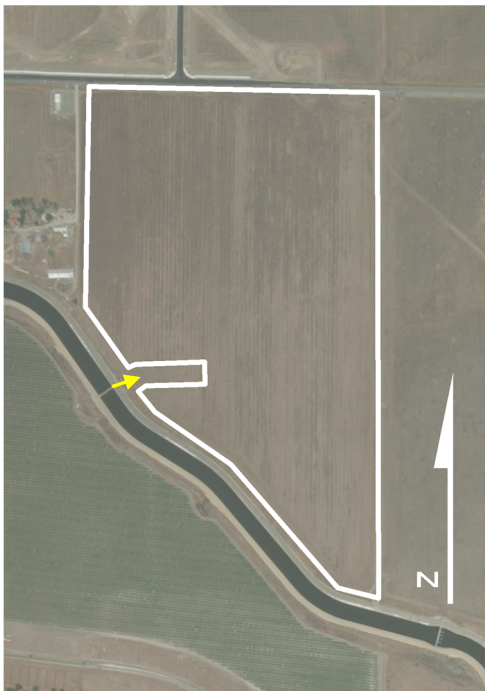




Photo 14: Looking northeast at typical irrigation valve located along southwestern Site border.

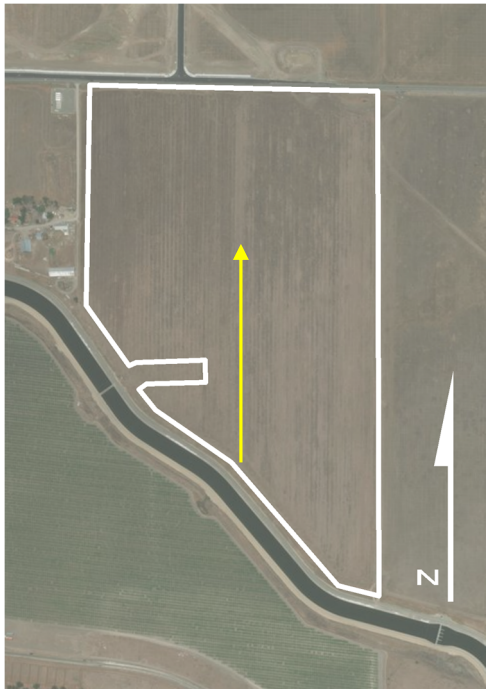




Photo 15: Looking north across Site from southwestern Site border.

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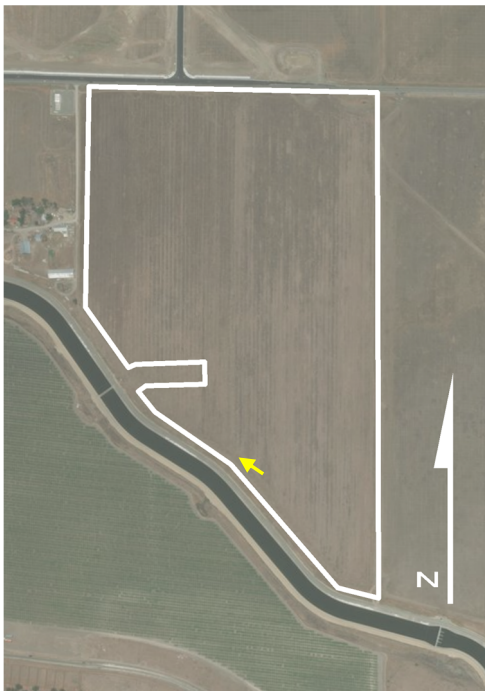




Photo 16: Discarded propane tank noted along southwestern Site border.

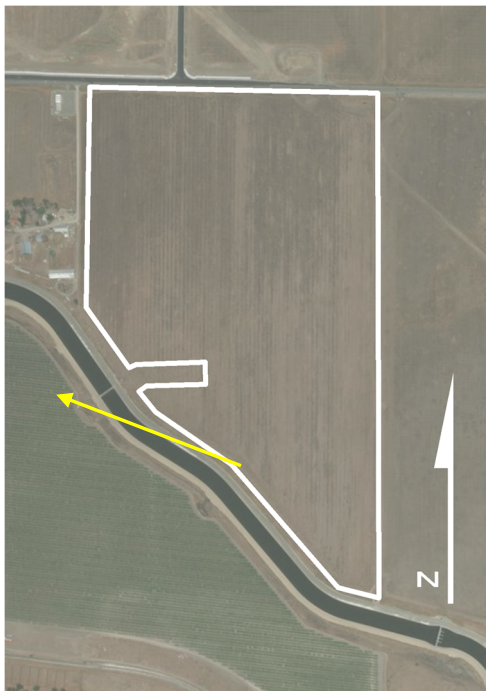




Photo 17: Looking west/northwest across canal.

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Photo 18: Garbage and debris noted in southeastern Site corner.





Photo 19: Looking east at garbage and irrigation-related concrete standpipes located in southeastern Site corner.

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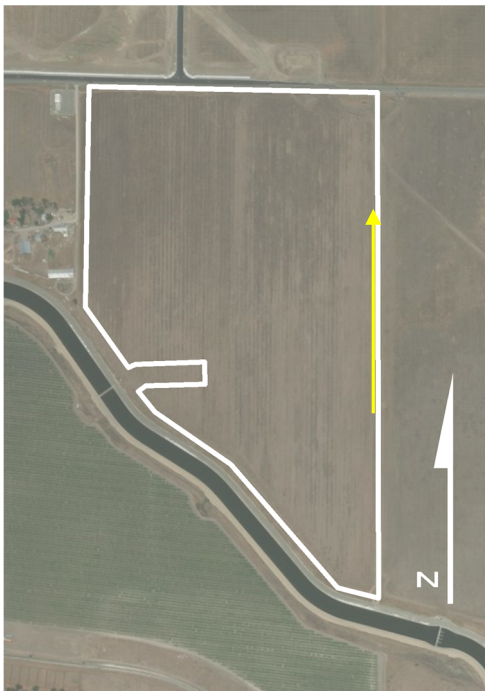




Photo 20: Looking north along eastern Site border.





Photo 21: Example of typical communication vault box noted along eastern Site border. Vaults are east of fence and therefore may be located on eastern adjoining property.

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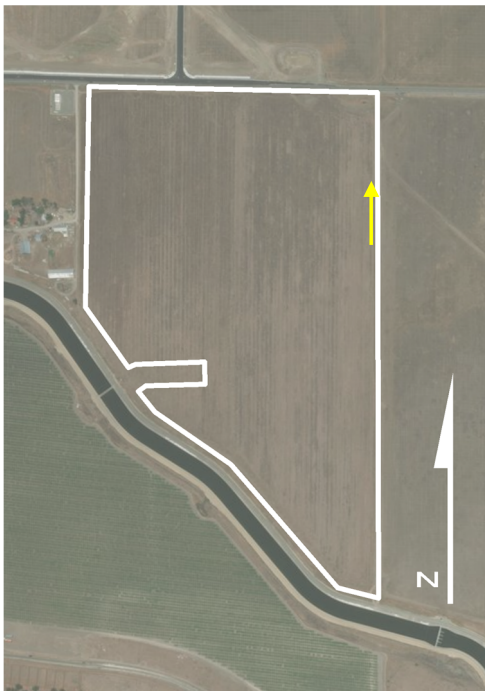




Photo 22: Looking north along eastern Site border at petroleum utility markers.





Photo 23: Looking west across basin located at northeastern Site corner.

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Photo 24: Looking southwest across northeastern Site basin and up surrounding embankment. Kleinfelder personnel provides scale.





Photo 25: Looking east at utility vaults and equipment located at northwest corner of eastern adjoining property.

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Photo 26: Looking west along northern Site border ditch. Garbage in ditch and petroleum utility markers immediately north of ditch visible.





Photo 27: Looking northwest at northern adjoining parcel along USA-marked petroleum alignment.

KLEINFELDER Bright People. Right Solutions.	PROJECT NO. 20190071 DRAWN BY: AW CHECKED BY: MC DATE: 2018-04 REVISED:	SITE PHOTOGRAPHS PHASE I ENVIRONMENTAL SITE ASSESSMENT PROPOSED COSTCO E-COMMERCE FACILITY 16000 WEST SCHULTE ROAD TRACY, CALIFORNIA	FIGURE 15

APPENDIX A
STATEMENT OF QUALIFICATIONS

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STATEMENT OF QUALIFICATIONS

We declare that to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR 312. 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 CFR Part 312.

Anthony Wohletz
Environmental Professional

Margaret R. Carroll
Environmental Professional

Lizanne Simmons, PG
Senior Principal Geologist

The resumes of above-listed environmental professionals performing this Phase I ESA are on file at the Kleinfelder office and are available upon request.

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APPENDIX B
REGULATORY AGENCY DATABASE REPORT

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16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

Inquiry Number: 5253641.2s
April 10, 2018

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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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

16000 WEST SCHULTE ROAD
TRACY, CA 95377

COORDINATES

Latitude (North):	37.7182350 - 37° 43' 5.64''
Longitude (West):	121.5066100 - 121° 30' 23.79''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	631622.8
UTM Y (Meters):	4175398.0
Elevation:	175 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	5640068 MIDWAY, CA
Version Date:	2012
Southeast Map:	5640426 TRACY, CA
Version Date:	2012

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140628
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
16000 WEST SCHULTE ROAD
TRACY, CA 95377

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
A1	SHELL OIL COMPANY -	HANSEN & SHULTE RD	SLIC	Higher	833, 0.158, NW
A2	SHELL PIPELINE CO LP	W SCHULTE AND HANSEN	RCRA-SQG	Higher	833, 0.158, NW
3	TRACY YOUTH SPORTS P	15178 SCHULTE ROAD	SLIC	Lower	2005, 0.380, ENE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

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
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-LQG ---------- RCRA - Large Quantity Generators
RCRA-CESQG ---------- RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System
US ENG CONTROLS ---------- Engineering Controls Sites List
US INST CONTROL ---------- Sites with Institutional Controls

EXECUTIVE SUMMARY

Federal ERNS list

ERNS ---------- Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE ---------- State Response Sites

State- and tribal - equivalent CERCLIS

ENVIROSTOR ---------- EnviroStor Database

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

State and tribal registered storage tank lists

FEMA UST ---------- Underground Storage Tank Listing
UST ---------- Active UST Facilities
AST ---------- Aboveground Petroleum Storage Tank Facilities
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
DEBRIS REGION 9 ---------- Torres Martinez Reservation Illegal Dump Site Locations
ODI ---------- Open Dump Inventory
IHS OPEN DUMPS ---------- Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ---------- Delisted National Clandestine Laboratory Register

HIST Cal-Sites ---- Historical Calsites Database
SCH ---- School Property Evaluation Program
CDL ---- Clandestine Drug Labs
Toxic Pits ---- Toxic Pits Cleanup Act Sites
US CDL ---- National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

SWEEPS UST ---- SWEEPS UST Listing
HIST UST ---- Hazardous Substance Storage Container Database
CA FID UST ---- Facility Inventory Database

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

RCRA NonGen / NLR ---- RCRA - Non Generators / No Longer Regulated
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
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
FINDS - Facility Index System/Facility Registry System
UXO - Unexploded Ordnance Sites
ECHO - Enforcement & Compliance History Information
DOCKET HWC - Hazardous Waste Compliance Docket Listing
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
NPDES - NPDES Permits Listing
PEST LIC - Pesticide Regulation Licenses Listing
PROC - Certified Processors Database
Notify 65 - Proposition 65 Records
UIC - UIC Listing
WASTEWATER PITS - Oil Wastewater Pits Listing
WDS - Waste Discharge System
WIP - Well Investigation Program Case List

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.

EXECUTIVE SUMMARY

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-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 12/11/2017 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELL PIPELINE CO LP	W SCHULTE AND HANSEN	NW 1/8 - 1/4 (0.158 mi.)	A2	8

State and tribal leaking storage tank lists

SLIC: 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.

A review of the SLIC list, as provided by EDR, has revealed that there are 2 SLIC sites within approximately 0.5 miles of the target property.

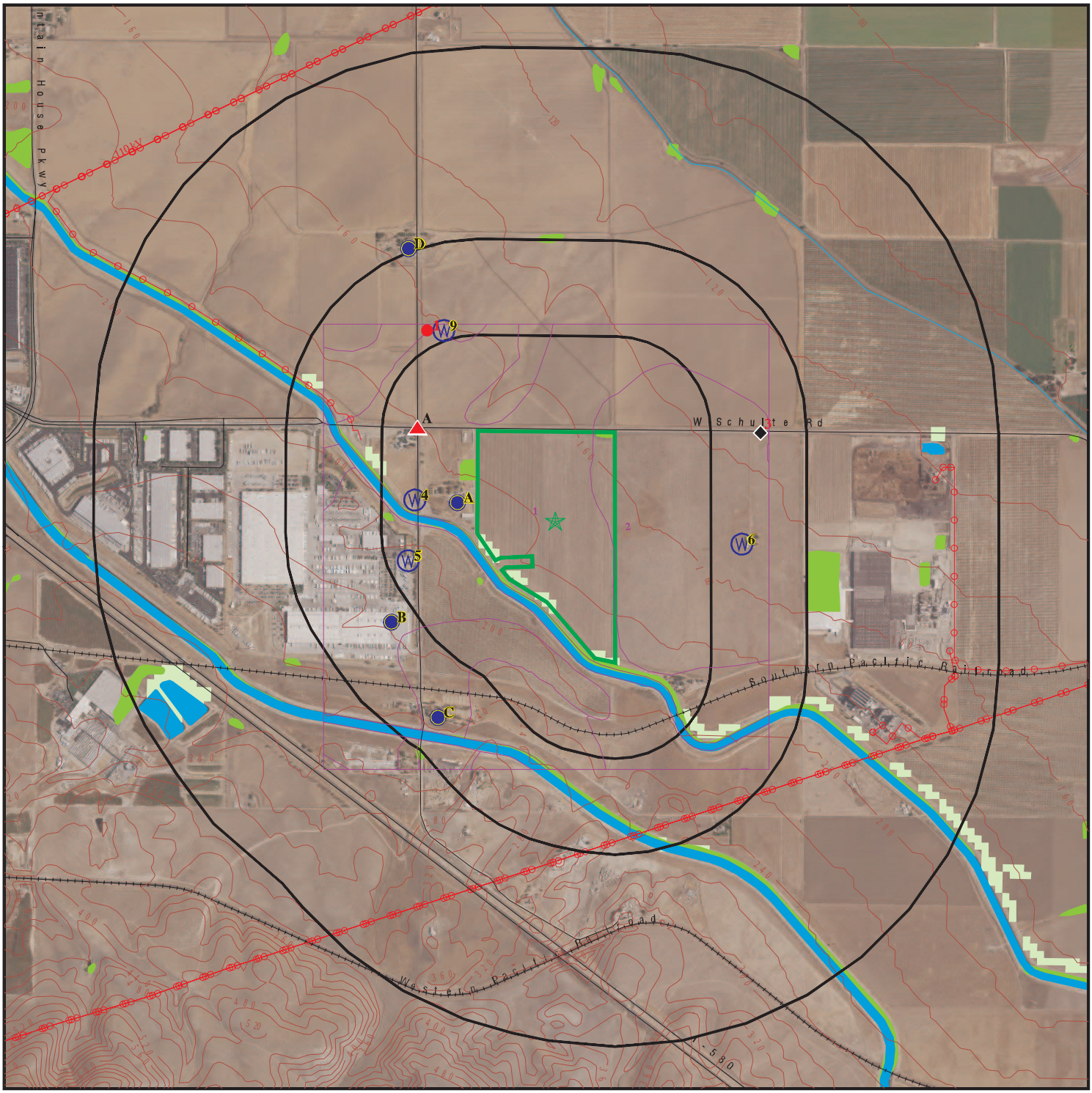
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SHELL OIL COMPANY -	HANSEN & SHULTE RD	NW 1/8 - 1/4 (0.158 mi.)	A1	8
Database: SLIC REG 5, Date of Government Version: 04/01/2005				

Lower Elevation	Address	Direction / Distance	Map ID	Page
TRACY YOUTH SPORTS P	15178 SCHULTE ROAD	ENE 1/4 - 1/2 (0.380 mi.)	3	9
Database: SLIC, Date of Government Version: 03/12/2018				
Facility Status: Completed - Case Closed				
Global Id: SL0607797298				

EXECUTIVE SUMMARY

There were no unmapped sites in this report.

OVERVIEW MAP - 5253641.2S



0 1/4 1/2 1 Miles

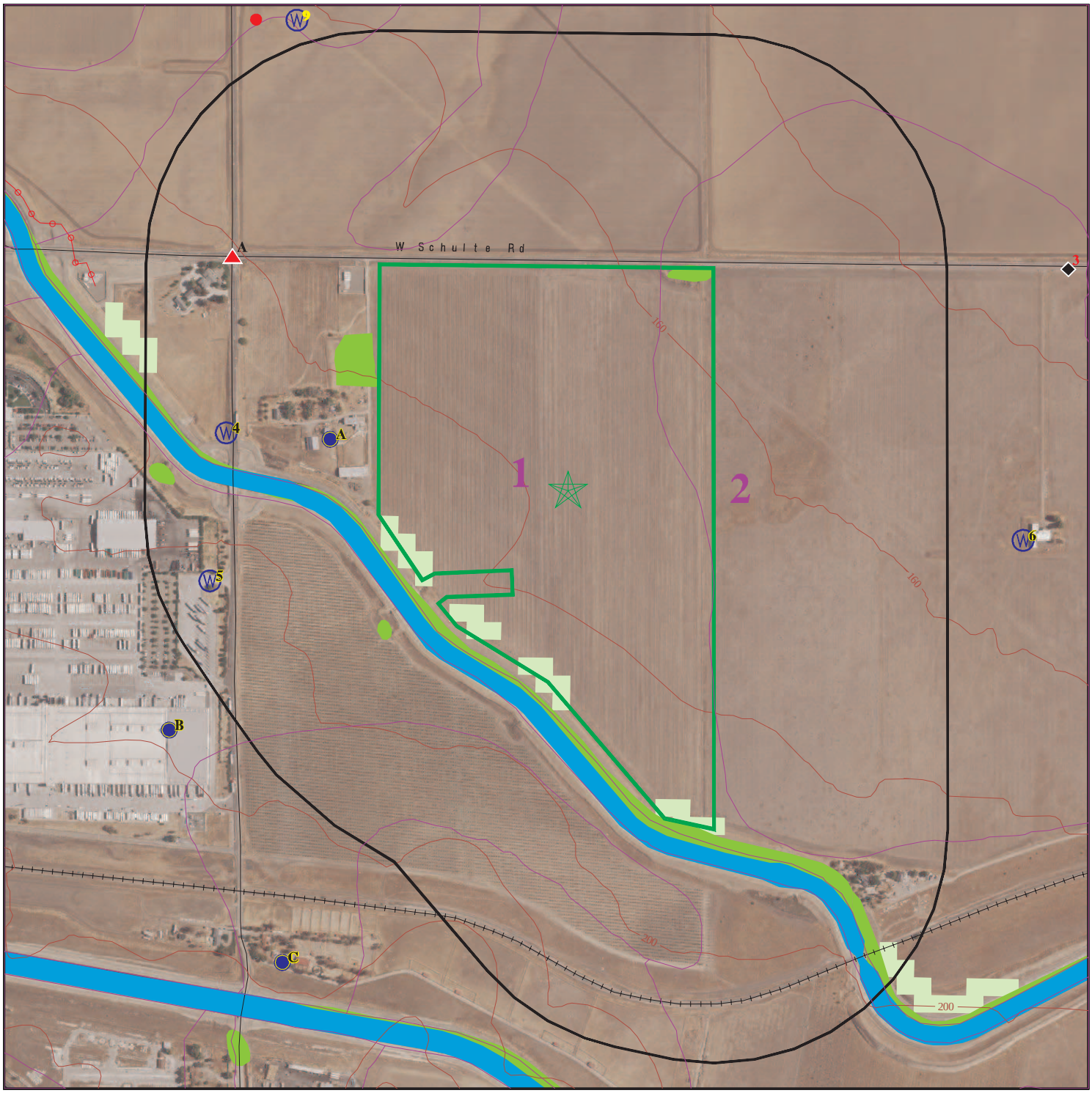
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- Upgradient Area
- 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: 16000 West Schulte Road ADDRESS: 16000 West Schulte Road Tracy CA 95377 LAT/LONG: 37.718235 / 121.50661	CLIENT: Kleinfelder, Inc. CONTACT: Paolo Dizon INQUIRY #: 5253641.2s DATE: April 10, 2018 6:11 pm

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DETAIL MAP - 5253641.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Power transmission lines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands
- 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: 16000 West Schulte Road ADDRESS: 16000 West Schulte Road Tracy CA 95377 LAT/LONG: 37.718235 / 121.50661	CLIENT: Kleinfelder, Inc. CONTACT: Paolo Dizon INQUIRY #: 5253641.2s DATE: April 10, 2018 6:13 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	TP		NR	NR	NR	NR	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		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	1	NR	NR	NR	1
RCRA-CESQG	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 CONTROL	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE	1.000		0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR	1.000		0	0	0	0	NR	0
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
SLIC	0.500		0	1	1	NR	NR	2
State and tribal registered storage tank lists								
FEMA UST	0.250		0	0	NR	NR	NR	0
UST	0.250		0	0	NR	NR	NR	0
AST	0.250		0	0	NR	NR	NR	0
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	TP		NR	NR	NR	NR	NR	0
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	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	TP		NR	NR	NR	NR	NR	0
HIST Cal-Sites	1.000		0	0	0	0	NR	0
SCH	0.250		0	0	NR	NR	NR	0
CDL	TP		NR	NR	NR	NR	NR	0
Toxic Pits	1.000		0	0	0	0	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
SWEEPS UST	0.250		0	0	NR	NR	NR	0
HIST UST	0.250		0	0	NR	NR	NR	0
CA FID UST	0.250		0	0	NR	NR	NR	0
Local Land Records								
LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
DEED	0.500		0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	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
CHMIRS	TP		NR	NR	NR	NR	NR	0
LDS	TP		NR	NR	NR	NR	NR	0
MCS	TP		NR	NR	NR	NR	NR	0
SPILLS 90	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
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	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	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	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	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
DRYCLEANERS	0.250		0	0	NR	NR	NR	0
EMI	TP		NR	NR	NR	NR	NR	0
ENF	TP		NR	NR	NR	NR	NR	0
Financial Assurance	TP		NR	NR	NR	NR	NR	0
HAZNET	TP		NR	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
ICE	TP		NR	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	TP		NR	NR	NR	NR	NR	0
PEST LIC	TP		NR	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	TP		NR	NR	NR	NR	NR	0
WASTEWATER PITS	0.500		0	0	0	NR	NR	0
WDS	TP		NR	NR	NR	NR	NR	0
WIP	0.250		0	0	NR	NR	NR	0
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	TP		NR	NR	NR	NR	NR	0
RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	2	1	0	0	3

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A1
NW
1/8-1/4
0.158 mi.
833 ft.

SHELL OIL COMPANY - HANSEN & SHULTE RD
HANSEN & SHULTE RD
TRACY, CA

Site 1 of 2 in cluster A

SLIC **S106230430**
N/A

Relative:
Higher

Actual:
181 ft.

SLIC REG 5:

Region:	5
Facility Status:	RI
Unit:	Facility is a Spill or site
Pollutant:	TPH
Lead Agency:	DLL
Date Filed:	/ /
Report Date:	/ /
Date Added:	Not reported
Date Closed:	Not reported

A2
NW
1/8-1/4
0.158 mi.
833 ft.

SHELL PIPELINE CO LP LOCATION NO 805248 DRUM LOCAT
W SCHULTE AND HANSEN
TRACY, CA 95377

Site 2 of 2 in cluster A

RCRA-SQG **1015740401**
CAR000231092

Relative:
Higher

Actual:
181 ft.

RCRA-SQG:

Date form received by agency:	10/25/2012
Facility name:	SHELL PIPELINE CO LP LOCATION NO 805248 DRUM LOCATION MW 5
Facility address:	W SCHULTE AND HANSEN ON HANSEN RD .5 MI N OF TRACY, CA 95377
EPA ID:	CAR000231092
Mailing address:	PO BOX 2648 HOUSTON, TX 77252-2648
Contact:	RAY E WALDING
Contact address:	PO BOX 2648 HOUSTON, TX 77252-2648
Contact country:	US
Contact telephone:	713-241-7008
Contact email:	RAY.WALDING@SHELL.COM
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	SHELL PIPELINE CO LP
Owner/operator address:	PO BOX 2648 HOUSTON, TX 77252
Owner/operator country:	US
Owner/operator telephone:	713-241-7008
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	05/01/2002
Owner/Op end date:	Not reported

SHELL PIPELINE CO LP LOCATION NO 805248 DRUM LOCATION MW 5 (Continued) **1015740401**

Owner/operator name:	SHELL PIPELINE CO LP
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	US
Owner/operator telephone:	Not reported
Owner/operator email:	Not reported
Owner/operator fax:	Not reported
Owner/operator extension:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	05/01/2002
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No

. Waste code:	D001
. Waste name:	IGNITABLE WASTE

. Waste code:	D018
. Waste name:	BENZENE

Violation Status: No violations found

---

3 **TRACY YOUTH SPORTS PARK** **SLIC** **S108937588**
ENE **15178 SCHULTE ROAD** **N/A**
1/4-1/2 **TRACY, CA**
0.380 mi.
2005 ft.

Relative:
Lower

Actual:
134 ft.

SLIC:

Region:	STATE
Facility Status:	**Completed - Case Closed**
Status Date:	05/21/2009
Global Id:	SL0607797298
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Lead Agency Case Number:	Not reported
Latitude:	37.721672
Longitude:	-121.495142
Case Type:	Cleanup Program Site
Case Worker:	ZZZ
Local Agency:	Not reported
RB Case Number:	Not reported
File Location:	Not reported

TRACY YOUTH SPORTS PARK (Continued) **S108937588**

Potential Media Affected: Soil
Potential Contaminants of Concern: Not reported
Site History: Not reported

Click here to access the California GeoTracker records for this facility:

Count: 0 records.

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
		NO SITES FOUND			

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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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: 11/07/2016
Date Data Arrived at EDR: 01/05/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 92

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 04/30/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - 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). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
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: 05/22/2017
Date Data Arrived at EDR: 06/13/2017
Date Made Active in Reports: 09/15/2017
Number of Days to Update: 94

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 05/28/2018
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: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

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: 11/13/2017
Date Data Arrived at EDR: 11/27/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 74

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 01/16/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
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: 02/12/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 48

Source: Department of Resources Recycling and Recovery
Telephone: 916-341-6320
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

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 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 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 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 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 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: Quarterly

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: 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: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

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: Varies

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 R10: Leaking Underground Storage Tanks on Indian Land

LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/25/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 31

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

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: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Semi-Annually

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: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

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: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7
Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
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: Quarterly

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: Semi-Annually

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: Varies

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: Semi-Annually

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: Semi-Annually

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: Semi-Annually

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: Annually

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: 05/15/2017
Date Data Arrived at EDR: 05/30/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 136
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 01/09/2018
Next Scheduled EDR Contact: 04/23/2018
Data Release Frequency: Varies

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 15
Source: SWRCB
Telephone: 916-341-5851
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
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: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 04/25/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/13/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78
Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 05/01/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 78
Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 05/02/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/24/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 134
Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/26/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 04/14/2017
Date Data Arrived at EDR: 07/27/2017
Date Made Active in Reports: 10/06/2017
Number of Days to Update: 71

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 01/23/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/14/2016
Date Data Arrived at EDR: 01/27/2017
Date Made Active in Reports: 05/05/2017
Number of Days to Update: 98

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Semi-Annually

State and tribal voluntary cleanup sites

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

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: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
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: 12/22/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 36
Source: State Water Resources Control Board
Telephone: 916-323-7905
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 21
Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 03/21/2018
Next Scheduled EDR Contact: 07/02/2018
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: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: No Update Planned

SWRCY: Recycler Database
A listing of recycling facilities in California.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 02/08/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 39

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 02/09/2018
Next Scheduled EDR Contact: 02/26/2018
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: 01/30/2018
Next Scheduled EDR Contact: 05/14/2018
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: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
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: 02/02/2018
Next Scheduled EDR Contact: 05/14/2018
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: 01/19/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
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: 01/30/2018
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 47

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
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: 06/30/2017
Date Data Arrived at EDR: 08/18/2017
Date Made Active in Reports: 09/21/2017
Number of Days to Update: 34

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
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

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: 01/09/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 16

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 02/27/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Quarterly

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: 02/28/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 27

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
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

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: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 41

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: DTSC and SWRCB
Telephone: 916-323-3400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
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: 01/19/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 63

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
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: 02/15/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 05/07/2018
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: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
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: 03/12/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 7

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 12/12/2018
Next Scheduled EDR Contact: 06/25/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/26/2017
Date Made Active in Reports: 02/09/2018
Number of Days to Update: 45

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/31/2015
Date Data Arrived at EDR: 07/08/2015
Date Made Active in Reports: 10/13/2015
Number of Days to Update: 97

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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: 10/13/2017
Next Scheduled EDR Contact: 01/22/2018
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: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/11/2017
Next Scheduled EDR Contact: 01/22/2018
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: 02/16/2018
Next Scheduled EDR Contact: 05/28/2018
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: 01/11/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42
Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
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: 01/31/2018
Next Scheduled EDR Contact: 05/21/2018
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: 04/22/2013
Date Data Arrived at EDR: 03/03/2015
Date Made Active in Reports: 03/09/2015
Number of Days to Update: 6
Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/21/2018
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: 06/21/2017
Date Made Active in Reports: 01/05/2018
Number of Days to Update: 198
Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
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: 12/31/2016
Date Data Arrived at EDR: 01/10/2018
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 2

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
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: 12/31/2009
Date Data Arrived at EDR: 12/10/2010
Date Made Active in Reports: 02/25/2011
Number of Days to Update: 77

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 04/09/2018
Next Scheduled EDR Contact: 05/07/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/22/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 21

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
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: 11/02/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/08/2017
Number of Days to Update: 21

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/25/2013
Date Data Arrived at EDR: 10/17/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 3
Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 02/06/2018
Next Scheduled EDR Contact: 05/21/2018
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: 06/01/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 126
Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 01/12/2018
Next Scheduled EDR Contact: 04/23/2018
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: 04/09/2018
Next Scheduled EDR Contact: 07/23/2018
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: Quarterly

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: Quarterly

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: 08/30/2016
Date Data Arrived at EDR: 09/08/2016
Date Made Active in Reports: 10/21/2016
Number of Days to Update: 43
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 08/07/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 76
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 03/09/2018
Next Scheduled EDR Contact: 06/18/2018
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: 07/01/2014
Date Data Arrived at EDR: 09/10/2014
Date Made Active in Reports: 10/20/2014
Number of Days to Update: 40
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
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: 05/24/2017
Date Data Arrived at EDR: 11/30/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 15
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 01/26/2018
Next Scheduled EDR Contact: 05/07/2018
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: 10/02/2017
Date Data Arrived at EDR: 10/05/2017
Date Made Active in Reports: 10/13/2017
Number of Days to Update: 8
Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/16/2018
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: 07/31/2012
Date Data Arrived at EDR: 08/07/2012
Date Made Active in Reports: 09/18/2012
Number of Days to Update: 42

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

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: 09/30/2017
Date Data Arrived at EDR: 11/10/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 63

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/02/2018
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: 12/31/2015
Date Data Arrived at EDR: 02/22/2017
Date Made Active in Reports: 09/28/2017
Number of Days to Update: 218

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
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: 01/09/2018
Next Scheduled EDR Contact: 04/23/2018
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: 12/23/2016
Date Data Arrived at EDR: 12/27/2016
Date Made Active in Reports: 02/17/2017
Number of Days to Update: 52

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 01/19/2018
Next Scheduled EDR Contact: 05/21/2018
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: 06/23/2017
Date Data Arrived at EDR: 10/11/2017
Date Made Active in Reports: 11/03/2017
Number of Days to Update: 23

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 24

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 07/16/2018
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: 10/29/2017
Date Data Arrived at EDR: 11/28/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 45

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Semi-Annually

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: 12/05/2005
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
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: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
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: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 92

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
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: 02/21/2018
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 28

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 02/23/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 09/30/2016
Date Data Arrived at EDR: 10/31/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 73

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 01/02/2018
Next Scheduled EDR Contact: 04/30/2018
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: 06/27/2017
Date Data Arrived at EDR: 11/21/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 03/02/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 01/13/2018
Date Data Arrived at EDR: 01/19/2018
Date Made Active in Reports: 03/02/2018
Number of Days to Update: 42

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

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: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 03/23/2018
Number of Days to Update: 30

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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: 02/08/2018
Date Data Arrived at EDR: 02/08/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 0

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 03/27/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

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: 12/01/2017
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 42

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2015
Date Data Arrived at EDR: 03/21/2017
Date Made Active in Reports: 08/15/2017
Number of Days to Update: 147

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 03/23/2018
Next Scheduled EDR Contact: 07/02/2018
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: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 54

Source: State Water Resoruces Control Board
Telephone: 916-445-9379
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

Financial Assurance 1: Financial Assurance Information Listing

Financial Assurance information

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 55

Source: Department of Toxic Substances Control
Telephone: 916-255-3628
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
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: 02/14/2018
Date Data Arrived at EDR: 02/16/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 46

Source: California Integrated Waste Management Board
Telephone: 916-341-6066
Last EDR Contact: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
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: 12/31/2016
Date Data Arrived at EDR: 07/12/2017
Date Made Active in Reports: 10/17/2017
Number of Days to Update: 97

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 01/08/2018
Next Scheduled EDR Contact: 04/23/2018
Data Release Frequency: Annually

ICE: ICE

Contains data pertaining to the Permitted Facilities with Inspections / Enforcements sites tracked in Envirostor.

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41

Source: Department of Toxic Subsances Control
Telephone: 877-786-9427
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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: 02/20/2018
Date Data Arrived at EDR: 02/21/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 41
Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
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: 01/08/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28
Source: Department of Toxic Substances Control
Telephone: 916-440-7145
Last EDR Contact: 01/09/2018
Next Scheduled EDR Contact: 04/23/2018
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: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 31
Source: Department of Conservation
Telephone: 916-322-1080
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
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: 11/29/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 916-558-1784
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

NPDES: NPDES Permits Listing
A listing of NPDES permits, including stormwater.

Date of Government Version: 02/14/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 29
Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 05/28/2018
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: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 42
Source: Department of Pesticide Regulation
Telephone: 916-445-4038
Last EDR Contact: 03/05/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

PROC: Certified Processors Database
A listing of certified processors.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 35
Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
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: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 32
Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

UIC: UIC Listing
A listing of wells identified as underground injection wells, in the California Oil and Gas Wells database.

Date of Government Version: 12/11/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 36
Source: Deaprtment of Conservation
Telephone: 916-445-2408
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
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 board?s review found that more than one-third of the region?s active disposal pits are operating without permission.

Date of Government Version: 04/15/2015
Date Data Arrived at EDR: 04/17/2015
Date Made Active in Reports: 06/23/2015
Number of Days to Update: 67
Source: RWQCB, Central Valley Region
Telephone: 559-445-5577
Last EDR Contact: 01/12/2018
Next Scheduled EDR Contact: 04/23/2018
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: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Quarterly

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: 03/21/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

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:

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: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 02/22/2018
Number of Days to Update: 42

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 63

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 04/24/2047
Data Release Frequency: Semi-Annually

AMADOR COUNTY:

CUPA Facility List

Cupa Facility List

Date of Government Version: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 10

Source: Amador County Environmental Health
Telephone: 209-223-6439
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Varies

BUTTE COUNTY:

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: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: No Update Planned

CALVERAS COUNTY:

CUPA Facility Listing
Cupa Facility Listing

Date of Government Version: 01/25/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: Calveras County Environmental Health
Telephone: 209-754-6399
Last EDR Contact: 03/26/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

COLUSA COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 02/26/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 14

Source: Health & Human Services
Telephone: 530-458-0396
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 11/20/2017
Date Data Arrived at EDR: 11/29/2017
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 51

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Semi-Annually

DEL NORTE COUNTY:

CUPA Facility List
Cupa Facility list

Date of Government Version: 01/05/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 40

Source: Del Norte County Environmental Health Division
Telephone: 707-465-0426
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

EL DORADO COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 12/04/2017
Date Data Arrived at EDR: 12/06/2017
Date Made Active in Reports: 12/27/2017
Number of Days to Update: 21

Source: El Dorado County Environmental Management Department
Telephone: 530-621-6623
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

FRESNO COUNTY:

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: 03/01/2018
Date Data Arrived at EDR: 03/05/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 9

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

GLENN COUNTY:

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: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

HUMBOLDT COUNTY:

CUPA Facility List

CUPA facility list.

Date of Government Version: 08/03/2017
Date Data Arrived at EDR: 08/08/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 69

Source: Humboldt County Environmental Health
Telephone: N/A
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Semi-Annually

IMPERIAL COUNTY:

CUPA Facility List

Cupa facility list.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/26/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 47

Source: San Diego Border Field Office
Telephone: 760-339-2777
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

INYO COUNTY:

CUPA Facility List
Cupa facility list.

Date of Government Version: 06/08/2017
Date Data Arrived at EDR: 06/09/2017
Date Made Active in Reports: 08/04/2017
Number of Days to Update: 56

Source: Inyo County Environmental Health Services
Telephone: 760-878-0238
Last EDR Contact: 03/28/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 02/02/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 54

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

KINGS COUNTY:

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: 11/14/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/15/2017
Number of Days to Update: 28

Source: Kings County Department of Public Health
Telephone: 559-584-1411
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

LAKE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/09/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 33

Source: Lake County Environmental Health
Telephone: 707-263-1164
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

LASSEN COUNTY:

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: Lassen County Environmental Health
Telephone: 530-251-8528
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

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: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56
Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 01/16/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 29
Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 04/21/2017
Date Made Active in Reports: 10/09/2017
Number of Days to Update: 171
Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 01/10/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 01/01/2018
Date Data Arrived at EDR: 01/17/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 28
Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 01/17/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Annually

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: 01/10/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/09/2017
Date Data Arrived at EDR: 03/10/2017
Date Made Active in Reports: 05/03/2017
Number of Days to Update: 54
Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/18/2018
Number of Days to Update: 13

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 04/05/2018
Next Scheduled EDR Contact: 07/23/2018
Data Release Frequency: Semi-Annually

MADERA COUNTY:

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: 02/21/2018
Date Data Arrived at EDR: 02/22/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 40

Source: Madera County Environmental Health
Telephone: 559-675-7823
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/05/2018
Date Made Active in Reports: 01/17/2018
Number of Days to Update: 12

Source: Public Works Department Waste Management
Telephone: 415-473-6647
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Semi-Annually

MERCED COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/11/2018
Date Data Arrived at EDR: 01/12/2018
Date Made Active in Reports: 02/08/2018
Number of Days to Update: 27

Source: Merced County Environmental Health
Telephone: 209-381-1094
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

MONO COUNTY:

CUPA Facility List
CUPA Facility List

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 15

Source: Mono County Health Department
Telephone: 760-932-5580
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Varies

MONTEREY COUNTY:

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

CUPA Facility Listing
CUPA Program listing from the Environmental Health Division.

Date of Government Version: 01/09/2018
Date Data Arrived at EDR: 01/11/2018
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 20

Source: Monterey County Health Department
Telephone: 831-796-1297
Last EDR Contact: 02/20/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

NAPA COUNTY:

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: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 02/22/2018
Date Data Arrived at EDR: 02/27/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 30

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: No Update Planned

NEVADA COUNTY:

CUPA Facility List
CUPA facility list.

Date of Government Version: 01/31/2018
Date Data Arrived at EDR: 02/01/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 41

Source: Community Development Agency
Telephone: 530-265-1467
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Varies

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 04/03/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 02/05/2018
Date Data Arrived at EDR: 02/13/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 35

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/05/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 49

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 02/07/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 12/08/2017
Date Data Arrived at EDR: 12/12/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 50

Source: Placer County Health and Human Services
Telephone: 530-745-2363
Last EDR Contact: 03/15/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

PLUMAS COUNTY:

CUPA Facility List
Plumas County CUPA Program facilities.

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/24/2018
Date Made Active in Reports: 03/15/2018
Number of Days to Update: 50

Source: Plumas County Environmental Health
Telephone: 530-283-6355
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 56

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 01/18/2018
Date Data Arrived at EDR: 01/23/2018
Date Made Active in Reports: 03/28/2018
Number of Days to Update: 64

Source: Department of Environmental Health
Telephone: 951-358-5055
Last EDR Contact: 03/19/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/05/2018
Number of Days to Update: 33

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

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: 11/02/2017
Date Data Arrived at EDR: 01/03/2018
Date Made Active in Reports: 02/14/2018
Number of Days to Update: 42

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 04/04/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Quarterly

SAN BENITO COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 11/01/2017
Date Data Arrived at EDR: 11/03/2017
Date Made Active in Reports: 11/17/2017
Number of Days to Update: 14

Source: San Benito County Environmental Health
Telephone: N/A
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

SAN BERNARDINO COUNTY:

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: 11/30/2017
Date Data Arrived at EDR: 12/01/2017
Date Made Active in Reports: 01/16/2018
Number of Days to Update: 46

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 04/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

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: 12/04/2017
Date Data Arrived at EDR: 12/05/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 37

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Solid Waste Facilities
San Diego County Solid Waste Facilities.

Date of Government Version: 10/31/2015
Date Data Arrived at EDR: 11/07/2015
Date Made Active in Reports: 01/04/2016
Number of Days to Update: 58
Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

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: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: No Update Planned

SAN FRANCISCO COUNTY:

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: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

Underground Storage Tank Information
Underground storage tank sites located in San Francisco county.

Date of Government Version: 11/02/2017
Date Data Arrived at EDR: 11/07/2017
Date Made Active in Reports: 12/19/2017
Number of Days to Update: 42
Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 04/02/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST
A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 02/01/2018
Number of Days to Update: 42
Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 07/02/2018
Data Release Frequency: Semi-Annually

SAN LUIS OBISPO COUNTY:

CUPA Facility List
Cupa Facility List.

Date of Government Version: 11/16/2017
Date Data Arrived at EDR: 11/17/2017
Date Made Active in Reports: 12/18/2017
Number of Days to Update: 31
Source: San Luis Obispo County Public Health Department
Telephone: 805-781-5596
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SAN MATEO COUNTY:

Business Inventory
List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 12/12/2017
Date Data Arrived at EDR: 12/14/2017
Date Made Active in Reports: 01/11/2018
Number of Days to Update: 28
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Fuel Leak List
A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 12/12/2017
Date Data Arrived at EDR: 12/14/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 29
Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 03/07/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Semi-Annually

SANTA BARBARA COUNTY:

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: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SANTA CLARA COUNTY:

Cupa Facility List
Cupa facility list

Date of Government Version: 02/20/2018
Date Data Arrived at EDR: 02/20/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 27
Source: Department of Environmental Health
Telephone: 408-918-1973
Last EDR Contact: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

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

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: 02/22/2018
Next Scheduled EDR Contact: 06/11/2018
Data Release Frequency: Annually

Hazardous Material Facilities
Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 02/04/2018
Date Data Arrived at EDR: 02/06/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 42

Source: City of San Jose Fire Department
Telephone: 408-535-7694
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Annually

SANTA CRUZ COUNTY:

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: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SHASTA COUNTY:

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: 02/15/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Varies

SOLANO COUNTY:

Leaking Underground Storage Tanks
A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 12/14/2017
Date Data Arrived at EDR: 12/15/2017
Date Made Active in Reports: 01/12/2018
Number of Days to Update: 28

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 03/08/2018
Date Data Arrived at EDR: 03/13/2018
Date Made Active in Reports: 03/29/2018
Number of Days to Update: 16

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Quarterly

SONOMA COUNTY:

Cupa Facility List
Cupa Facility list

Date of Government Version: 12/20/2017
Date Data Arrived at EDR: 12/21/2017
Date Made Active in Reports: 01/31/2018
Number of Days to Update: 41

Source: County of Sonoma Fire & Emergency Services Department
Telephone: 707-565-1174
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Varies

Leaking Underground Storage Tank Sites

A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 01/04/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 02/06/2018
Number of Days to Update: 28

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 03/22/2018
Next Scheduled EDR Contact: 07/09/2018
Data Release Frequency: Quarterly

STANISLAUS COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 02/06/2018
Date Data Arrived at EDR: 02/07/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 37

Source: Stanislaus County Department of Ennvironmental Protection
Telephone: 209-525-6751
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Varies

SUTTER COUNTY:

Underground Storage Tanks

Underground storage tank sites located in Sutter county.

Date of Government Version: 01/08/2018
Date Data Arrived at EDR: 03/01/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 29

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 02/28/2018
Next Scheduled EDR Contact: 06/18/2018
Data Release Frequency: Semi-Annually

TEHAMA COUNTY:

CUPA Facility List

Cupa facilities

Date of Government Version: 01/26/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47

Source: Tehama County Department of Environmental Health
Telephone: 530-527-8020
Last EDR Contact: 02/01/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TRINITY COUNTY:

CUPA Facility List

Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/19/2018
Number of Days to Update: 53

Source: Department of Toxic Substances Control
Telephone: 760-352-0381
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

TULARE COUNTY:

CUPA Facility List
Cupa program facilities

Date of Government Version: 09/27/2017
Date Data Arrived at EDR: 09/28/2017
Date Made Active in Reports: 10/16/2017
Number of Days to Update: 18

Source: Tulare County Environmental Health Services Division
Telephone: 559-624-7400
Last EDR Contact: 03/06/2018
Next Scheduled EDR Contact: 05/21/2018
Data Release Frequency: Varies

TUOLUMNE COUNTY:

CUPA Facility List
Cupa facility list

Date of Government Version: 01/22/2018
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/16/2018
Number of Days to Update: 50

Source: Divison of Environmental Health
Telephone: 209-533-5633
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Varies

VENTURA COUNTY:

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: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/14/2018
Number of Days to Update: 48

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Quarterly

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: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

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: 02/08/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: Quarterly

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: 12/26/2017
Date Data Arrived at EDR: 01/25/2018
Date Made Active in Reports: 03/20/2018
Number of Days to Update: 54

Source: Ventura County Resource Management Agency
Telephone: 805-654-2813
Last EDR Contact: 01/22/2018
Next Scheduled EDR Contact: 05/07/2018
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 02/28/2018
Date Data Arrived at EDR: 03/14/2018
Date Made Active in Reports: 03/30/2018
Number of Days to Update: 16
Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 03/14/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 01/02/2018
Date Data Arrived at EDR: 01/09/2018
Date Made Active in Reports: 01/19/2018
Number of Days to Update: 10
Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 03/29/2018
Next Scheduled EDR Contact: 07/16/2018
Data Release Frequency: Annually

YUBA COUNTY:

CUPA Facility List
CUPA facility listing for Yuba County.

Date of Government Version: 02/01/2018
Date Data Arrived at EDR: 02/02/2018
Date Made Active in Reports: 03/21/2018
Number of Days to Update: 47
Source: Yuba County Environmental Health Department
Telephone: 530-749-7523
Last EDR Contact: 01/29/2018
Next Scheduled EDR Contact: 05/14/2018
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: 01/03/2018
Date Data Arrived at EDR: 02/14/2018
Date Made Active in Reports: 03/22/2018
Number of Days to Update: 36
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 02/14/2018
Next Scheduled EDR Contact: 05/28/2018
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/11/2017
Date Made Active in Reports: 07/27/2017
Number of Days to Update: 107
Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 01/05/2018
Next Scheduled EDR Contact: 04/23/2018
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: 12/31/2017
Date Data Arrived at EDR: 01/31/2018
Date Made Active in Reports: 03/09/2018
Number of Days to Update: 37

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 01/31/2018
Next Scheduled EDR Contact: 05/14/2018
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 07/25/2017
Date Made Active in Reports: 09/25/2017
Number of Days to Update: 62

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 01/16/2018
Next Scheduled EDR Contact: 04/30/2018
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2017
Date Data Arrived at EDR: 02/23/2018
Date Made Active in Reports: 04/09/2018
Number of Days to Update: 45

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 02/21/2018
Next Scheduled EDR Contact: 06/04/2018
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 04/13/2017
Date Made Active in Reports: 07/14/2017
Number of Days to Update: 92

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 03/08/2018
Next Scheduled EDR Contact: 06/25/2018
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: PennWell Corporation
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 PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Electric Power Transmission Line Data
Source: PennWell Corporation
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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

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 & Game
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

16000 WEST SCHULTE ROAD
16000 WEST SCHULTE ROAD
TRACY, CA 95377

TARGET PROPERTY COORDINATES

Latitude (North):	37.718235 - 37° 43' 5.65''
Longitude (West):	121.50661 - 121° 30' 23.80''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	631622.8
UTM Y (Meters):	4175398.0
Elevation:	175 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	5640068 MIDWAY, CA
Version Date:	2012
Southeast Map:	5640426 TRACY, 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 principal 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).

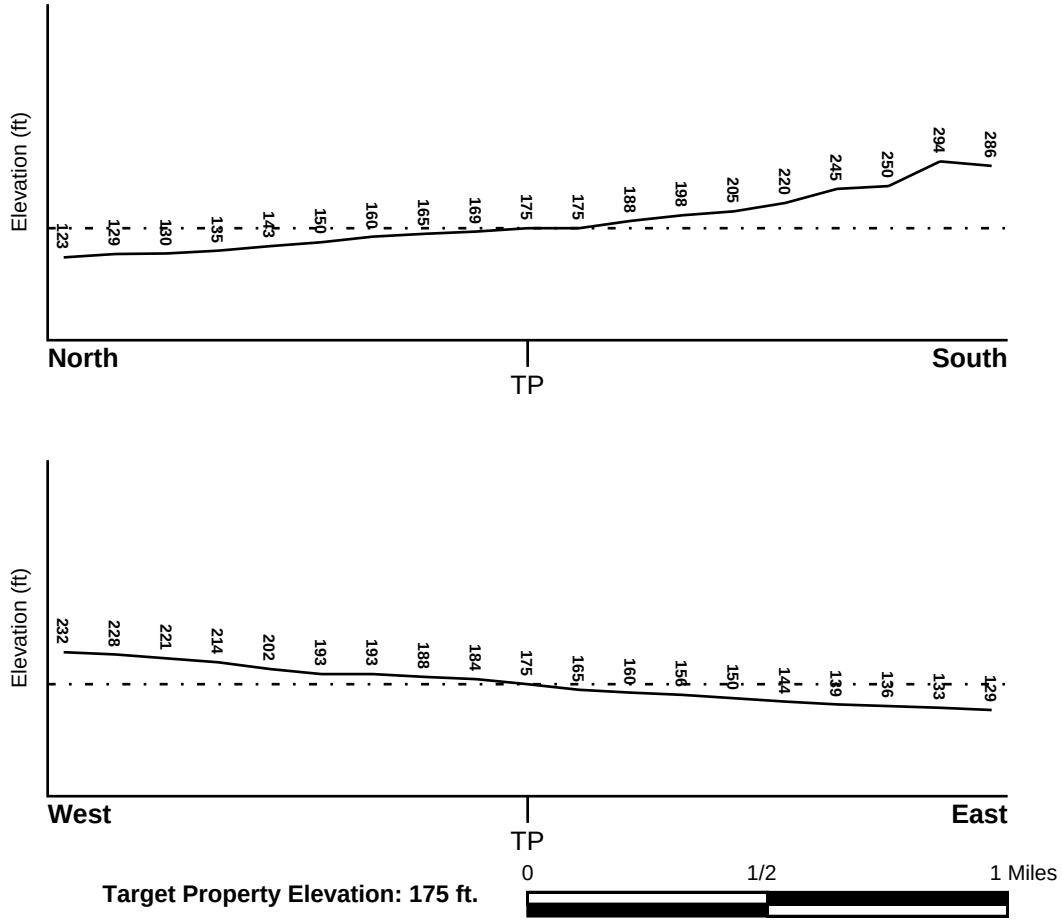
TOPOGRAPHIC INFORMATION

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 NE

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
06077C0725F	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
06001C0400G	FEMA FIRM Flood data
0602990705A	FEMA Q3 Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
MIDWAY	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
Status:	Not found

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

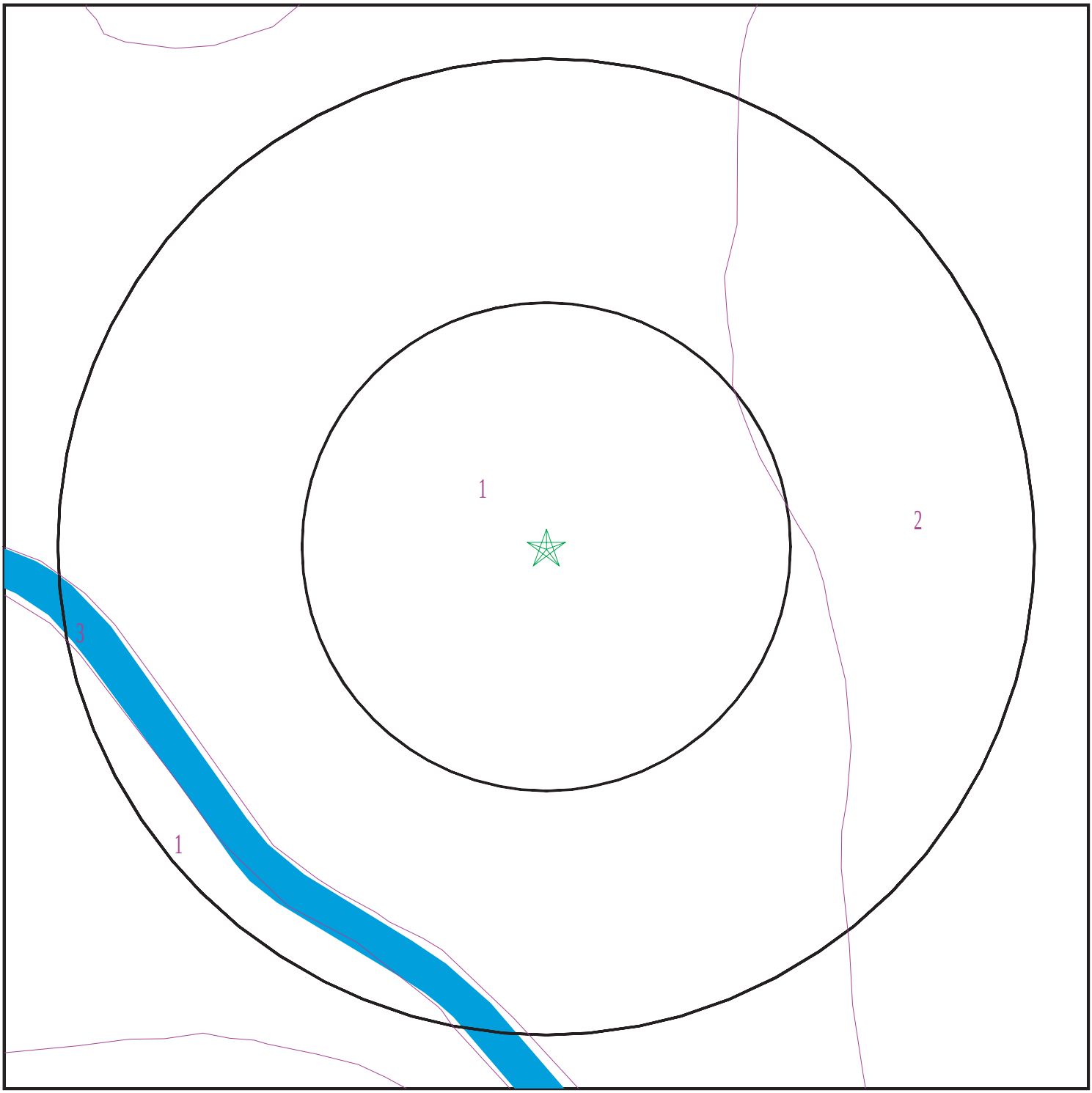
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q *(decoded above as Era, System & Series)*

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 - 5253641.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	16000 West Schulte Road	CLIENT:	Kleinfelder, Inc.
ADDRESS:	16000 West Schulte Road Tracy CA 95377	CONTACT:	Paolo Dizon
LAT/LONG:	37.718235 / 121.50661	INQUIRY #:	5253641.2s
		DATE:	April 10, 2018 6:13 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: Capay

Soil Surface Texture: clay

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Moderately well drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

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	20 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
2	20 inches	59 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6

Soil Map ID: 2

Soil Component Name: STOMAR

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

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	16 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 7.3 Min: 6.6
2	16 inches	46 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit 50% or more), Fat Clay.	Max: 1.4 Min: 0.42	Max: 8.4 Min: 6.6
3	46 inches	59 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4

Soil Map ID: 3

Soil Component Name: Water

Soil Surface Texture: clay loam

Hydrologic Group: Class C - Slow infiltration rates. Soils with layers impeding downward movement of water, or soils with moderately fine or fine textures.

Soil Drainage Class:
Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

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.

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
A2	USGS40000185144	1/4 - 1/2 Mile WNW
4	USGS40000185145	1/4 - 1/2 Mile West
6	USGS40000185132	1/4 - 1/2 Mile East
B8	USGS40000185120	1/2 - 1 Mile WSW
C11	USGS40000185094	1/2 - 1 Mile SSW
D12	USGS40000185191	1/2 - 1 Mile NNW
D13	USGS40000185192	1/2 - 1 Mile NNW

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

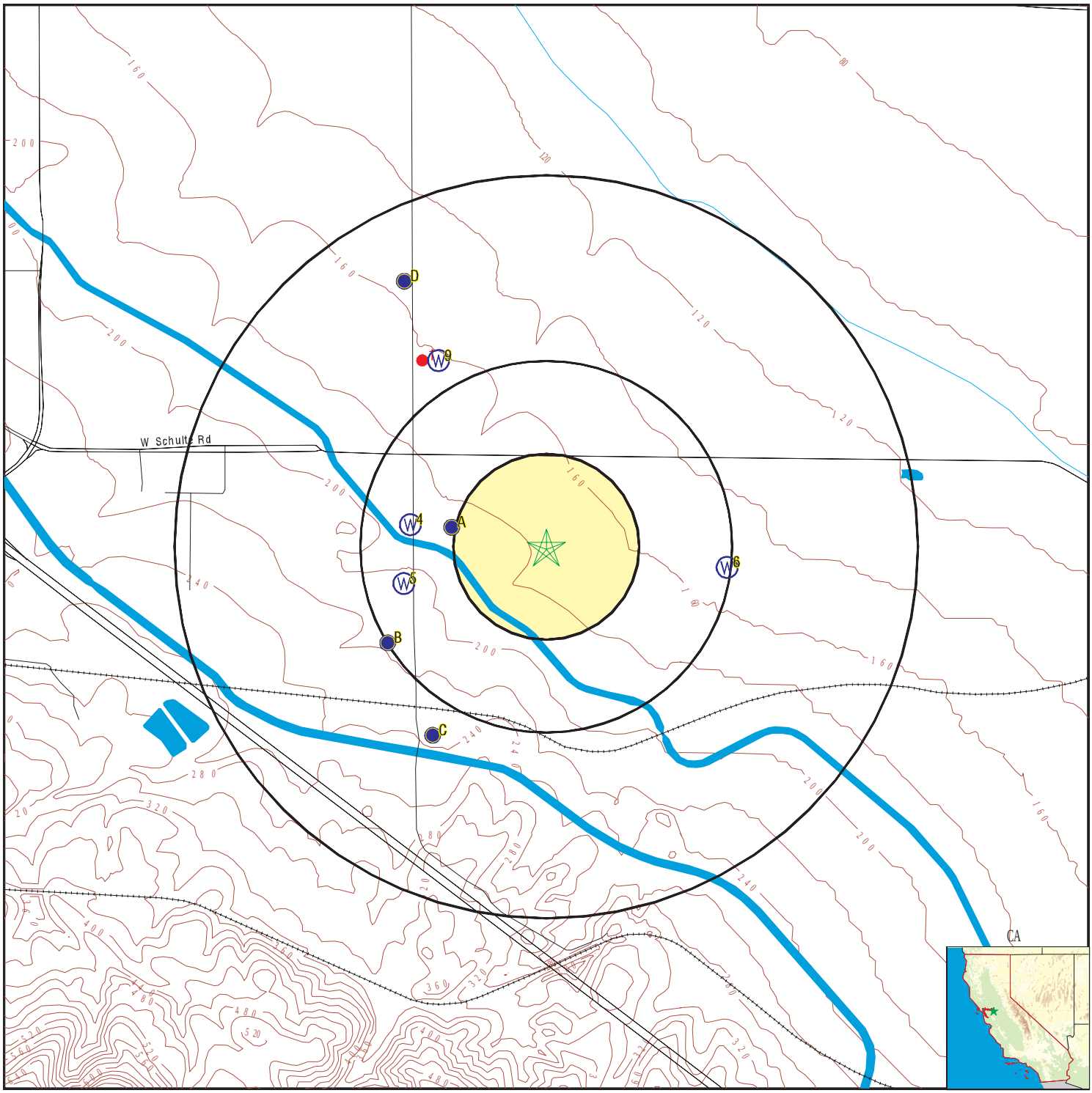
MAP ID	WELL ID	LOCATION FROM TP
A1	CADW60000017075	1/8 - 1/4 Mile West
A3	CADW60000031728	1/4 - 1/2 Mile WNW
5	CADW60000017073	1/4 - 1/2 Mile WSW
B7	CADW60000017074	1/4 - 1/2 Mile WSW
9	CADW60000031723	1/2 - 1 Mile NNW
C10	CADW60000031729	1/2 - 1 Mile SSW
D14	CADW60000017068	1/2 - 1 Mile NNW
D15	CADW60000017069	1/2 - 1 Mile NNW

OTHER STATE DATABASE INFORMATION

STATE OIL/GAS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	CAOG11000235800	1/2 - 1 Mile NNW

PHYSICAL SETTING SOURCE MAP - 5253641.2s



- 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:	16000 West Schulte Road	CLIENT:	Kleinfelder, Inc.
ADDRESS:	16000 West Schulte Road Tracy CA 95377	CONTACT:	Paolo Dizon
		INQUIRY #:	5253641.2s
LAT/LONG:	37.718235 / 121.50661	DATE:	April 10, 2018 6:13 pm

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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

A1
West
1/8 - 1/4 Mile
Higher

CA WELLS **CADW60000017075**

Objectid:	17075
Latitude:	37.7188
Longitude:	-121.5108
Site code:	377188N1215108W001
State well numbe:	02S04E35D002M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000017075

A2
WNW
1/4 - 1/2 Mile
Higher

FED USGS **USGS40000185144**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374309121303601		
Monloc name:	002S004E35D002M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7190963
Longitude:	-121.5110575	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	183.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19510101	Welldepth:	305
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

A3
WNW
1/4 - 1/2 Mile
Higher

CA WELLS **CADW60000031728**

Objectid:	31728
Latitude:	37.7191
Longitude:	-121.5119
Site code:	377191N1215119W001
State well numbe:	02S04E35D001M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000031728

4
West **FED USGS** **USGS40000185145**
1/4 - 1/2 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374309121304401		
Monloc name:	002S004E34A002M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7190963
Longitude:	-121.5132798	Sourcemap scale:	24000
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	190.00
Vert measure units:	feet	Vertacc measure val:	10
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	19760920	Welldepth:	217
Welldepth units:	ft	Wellholedepth:	265
Wellholedepth units:	ft		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1976-09-20	142.00	

5
WSW **CA WELLS** **CADW60000017073**
1/4 - 1/2 Mile
Higher

Objectid:	17073
Latitude:	37.7168
Longitude:	-121.5136
Site code:	377168N1215136W001
State well numbe:	02S04E34A001M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000017073

6
East **FED USGS** **USGS40000185132**
1/4 - 1/2 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374303121294801		
Monloc name:	002S004E35H001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7174297
Longitude:	-121.4977238	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	150.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Tulare Formation		
Aquifer type:	Not Reported		
Construction date:	19610101	Welldepth:	514
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-05-01	186.00	

B7
WSW **CA WELLS** **CADW60000017074**
1/4 - 1/2 Mile
Higher

Objectid:	17074
Latitude:	37.7146
Longitude:	-121.5144
Site code:	377146N1215144W001
State well numbe:	02S04E34H001M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000017074

B8
WSW **FED USGS** **USGS40000185120**
1/2 - 1 Mile
Higher

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374252121304801		
Monloc name:	002S004E34H001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7143742
Longitude:	-121.5143909	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	214.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Alluvium of the Coast Range, Younger (Pleistocene-Holocene)		
Aquifer type:	Not Reported		
Construction date:	19270101	Welldepth:	273
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 0

9
NNW **CA WELLS** **CADW60000031723**
1/2 - 1 Mile
Lower

Objectid:	31723
Latitude:	37.7255
Longitude:	-121.5119
Site code:	377255N1215119W001
State well numbe:	02S04E26M001M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin

Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000031723

C10
SSW
1/2 - 1 Mile
Higher

CA WELLS **CADW60000031729**

Objectid:	31729
Latitude:	37.711
Longitude:	-121.5122
Site code:	377110N1215122W001
State well numbe:	02S04E35M001M
Local well name:	''
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000031729

C11
SSW
1/2 - 1 Mile
Higher

FED USGS **USGS40000185094**

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374239121304001		
Monloc name:	002S004E35M001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7107631
Longitude:	-121.5121685	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	230.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Alluvium of the Coast Range, Younger (Pleistocene-Holocene)		
Aquifer type:	Not Reported		
Construction date:	19490101	Welldepth:	304
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-05-01	234.00	

D12
NNW **FED USGS** **USGS40000185191**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374342121304401		
Monloc name:	002S004E27J002M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7282628
Longitude:	-121.51328	Sourcemap scale:	Not Reported
Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	154.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Alluvium of the Coast Range, Younger (Pleistocene-Holocene)		
Aquifer type:	Not Reported		
Construction date:	19590101	Welldepth:	289
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-04-01	172.00	

D13
NNW **FED USGS** **USGS40000185192**
1/2 - 1 Mile
Lower

Org. Identifier:	USGS-CA		
Formal name:	USGS California Water Science Center		
Monloc Identifier:	USGS-374343121304601		
Monloc name:	002S004E27J001M		
Monloc type:	Well		
Monloc desc:	Not Reported		
Huc code:	18040003	Drainagearea value:	Not Reported
Drainagearea Units:	Not Reported	Contrib drainagearea:	Not Reported
Contrib drainagearea units:	Not Reported	Latitude:	37.7285406
Longitude:	-121.5138356	Sourcemap scale:	Not Reported

Horiz Acc measure:	1	Horiz Acc measure units:	seconds
Horiz Collection method:	Interpolated from map		
Horiz coord refsys:	NAD83	Vert measure val:	154.00
Vert measure units:	feet	Vertacc measure val:	5.
Vert accmeasure units:	feet		
Vertcollection method:	Interpolated from topographic map		
Vert coord refsys:	NGVD29	Countrycode:	US
Aquifername:	Central Valley aquifer system		
Formation type:	Not Reported		
Aquifer type:	Not Reported		
Construction date:	Not Reported	Welldepth:	315
Welldepth units:	ft	Wellholedepth:	Not Reported
Wellholedepth units:	Not Reported		

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
1967-04-01	180.00	

D14
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADW60000017068**

Objectid:	17068
Latitude:	37.7288
Longitude:	-121.5136
Site code:	377288N1215136W001
State well numbe:	02S04E27J001M
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin
Basin code:	'5-22.15’
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000017068

D15
NNW
1/2 - 1 Mile
Lower

CA WELLS **CADW60000017069**

Objectid:	17069
Latitude:	37.7288
Longitude:	-121.5136
Site code:	377288N1215136W002
State well numbe:	02S04E27J002M
Local well name:	’’
Well use id:	6
Well use descrip:	Unknown
County id:	39
County name:	San Joaquin

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Basin code:	'5-22.15'
Basin desc:	Tracy
Dwr region id:	80236
Dwr region:	North Central Region Office
Site id:	CADW60000017069

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance

Database EDR ID Number

1
NNW
1/2 - 1 Mile

OIL_GAS **CAOG11000235800**

District nun:	6	Api number:	07700337
Blm well:	N	Redrill can:	Not Reported
Dryhole:	Y	Well status:	P
Operator name:	Richard S. Rheem, Operator		
County name:	San Joaquin	Fieldname:	Any Field
Area name:	Any Area	Section:	26
Township:	02S	Range:	04E
Base meridian:	MD	Elevation:	Not Reported
Gissourcec:	hud		
Comments:	Status Code 006		
Leasename:	Weaver-Cordes	Wellnumber:	1
Epawell:	N	Hydraulica:	N
Confidenti:	N	Spuddate:	05-AUG-59
Welldeptha:	8222		
Redrillfoo:	0		
Abandonedd:	21-SEP-59	Completion:	Not Reported
Directiona:	Unknown	Gissymbol:	PDH
Site id:	CAOG11000235800		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: CA Radon

Radon Test Results

Zipcode	Num Tests	> 4 pCi/L
95377	4	0

Federal EPA Radon Zone for SAN JOAQUIN County: 3

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 JOAQUIN COUNTY, CA

Number of sites tested: 20

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	2.530 pCi/L	90%	10%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	2.050 pCi/L	100%	0%	0%

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 & Game
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.

STATE RECORDS

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.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations
Source: Department of Conservation
Telephone: 916-323-1779
Oil and Gas well locations in the state.

RADON

State Database: CA Radon
Source: Department of Health Services
Telephone: 916-324-2208
Radon Database for California

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.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

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 C
USER PROVIDED AND REGULATORY AGENCY DOCUMENTATION

DRAFT

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ASSESSOR’S PARCEL MAP

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

Inquiry Number: 5253641.6
April 10, 2018

The EDR Property Tax Map Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

EDR Property Tax Map Report

Environmental Data Resources, Inc.'s EDR Property Tax Map Report is designed to assist environmental professionals in evaluating potential environmental conditions on a target property by understanding property boundaries and other characteristics. The report includes a search of available property tax maps, which include information on boundaries for the target property and neighboring properties, addresses, parcel identification numbers, as well as other data typically used in property location and identification.

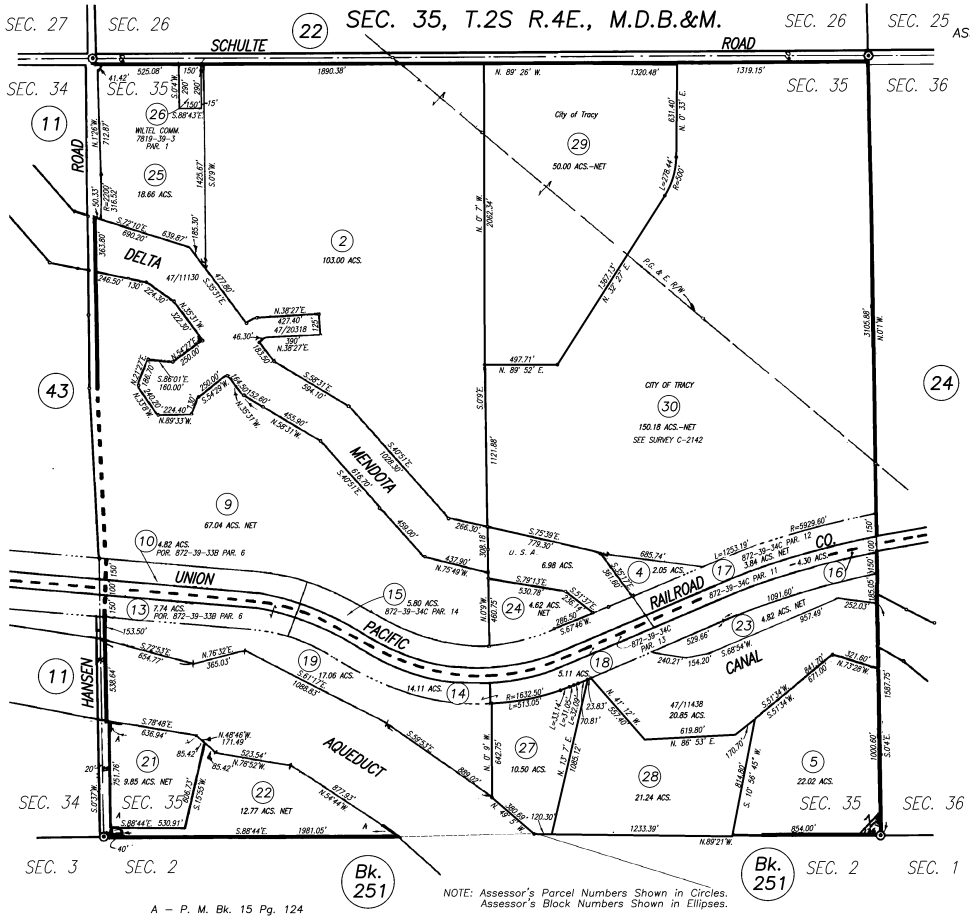
Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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THIS MAP IS FOR ASSESSMENT USE ONLY

209–23

1" = 600'

HIGHEST A.P.N. USED			
YEAR	PAR. #	PAR. #	PAR. #
87-88	20		
88-89	22		
90-91	24		
01-02	26		
05-06	28		
08-09	30		

Assessor's Map Bk.209 Pg.23
County of San Joaquin, Calif.

A – P. M. Bk. 15 Pg. 124

NOTE: Assessor's Parcel Numbers Shown in Circles.
Assessor's Block Numbers Shown in Ellipses.

INTERVIEW QUESTIONNAIRES

KLEINFELDER
Bright People. Right Solutions.

USER QUESTIONNAIRE

TRACY Herm PROPERTY 4/11/18

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KLEINFELDER
Bright People. Right Solutions.

ASTM E1527-13
Phase I Environmental Site Assessment
User Questionnaire

TRACY - [illegible] PROPERTY PMK 4/11/18

INTRODUCTION

In order to qualify for one of the *Landowner Liability Protections (LLPs)*[1] offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "*Brownfields Amendments*"),[2] the *user* must conduct the following inquiries required by 40 CFR 312.25, 312.28, 312.29, 312.30, and 312.31. These inquiries must also be conducted by EPA Brownfield Assessment and Characterization grantees. The *user* should provide the following information to the *environmental professional*. Failure to conduct these inquiries could result in a determination that "*all appropriate inquiries*" is not complete.

(1.) Environmental liens that are filed or recorded against the *property* (40 CFR 312.25).

Did a search of *recorded land title records* (or judicial records where appropriate, see *Note 1* below) identify any environmental liens filed or recorded against the *property* under federal, tribal, state or local law? YES

Note 1—In certain jurisdictions, federal, tribal, state, or local statutes, or regulations specify that environmental liens and AULs be filed in judicial records rather than in land title records. In such cases judicial records must be searched for environmental liens and AULs.

(2.) Activity and use limitations that are in place on the *property* or that have been filed or recorded against the *property* (40 CFR 312.26(a)(1)(v) and vi)).

Did a search of *recorded land title records* (or judicial records where appropriate, see *Note 1* above) identify any AULs, such as *engineering controls*, land use restrictions or *institutional controls* that are in place at the *property* and/or have been filed or recorded against the *property* under federal, tribal, state or local law? NO

(3.) Specialized knowledge or experience of the person seeking to qualify for the LLP (40 CFR 312.28).

Do you have any specialized knowledge or experience related to the *property* or nearby properties? For example, are you involved in the same line of business as the current or former *occupants* of the *property* or an *adjoining property* so that you would have specialized knowledge of the chemicals and processes used by this type of business?

NO

[1] *Landowner Liability Protections*, or *LLPs*, is the term used to describe the three types of potential defenses to Superfund liability in EPA's *Interim Guidance Regarding Criteria Landowners Must Meet in Order to Qualify for Bona Fide Prospective Purchaser, Contiguous Property Owner, or Innocent Landowner Limitations on CERCLA Liability* ("*Common Elements*" Guide) issued on March 6, 2003.
[2] P.L. 107-118.

(4.) Relationship of the purchase price to the fair market value of the *property* if it were not contaminated (40 CFR 312.29).

Does the purchase price being paid for this *property* reasonably reflect the fair market value of the *property*? If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present at the *property*?

YES, YES

(5.) Commonly known or *reasonably ascertainable* information about the *property* (40 CFR 312.30).

Are you aware of commonly known or *reasonably ascertainable* information about the *property* that would help the *environmental professional* to identify conditions indicative of releases or threatened releases? NO

For example,

(a.) Do you know the past uses of the *property*? Agricultural ?

(b.) Do you know of specific chemicals that are present or once were present at the *property*? NO

(c.) Do you know of spills or other chemical releases that have taken place at the *property*? NO

(d.) Do you know of any environmental cleanups that have taken place at the *property*? NO

(6.) The degree of obviousness of the presence or likely presence of contamination at the *property*, and the ability to detect the contamination by appropriate investigation (40 CFR 312.31).

Based on your knowledge and experience related to the *property* are there any *obvious* indicators that point to the presence or likely presence of releases at the *property*? NO

In addition, certain information should be collected, if available, and provided to the *environmental professional* conducting the *Phase I Environmental Site Assessment.* This information is intended to assist the *environmental professional*, but is not necessarily required to qualify for one of the *LLPs*. The information includes:

(a) the reason why the Phase I is being performed,

(b) the type of *property* and type of *property* transaction, for example, sale, purchase, exchange, etc.,

(c) the complete and correct address for the *property* (a map or other documentation showing *property* location and boundaries is helpful),

(d) the scope of services desired for the Phase I ESA (including whether any parties to the *property* transaction may have a required standard scope of services or whether any considerations beyond the requirements of Practice E1527 are to be considered),

(e) identification of all parties who will rely on the Phase I *report* ,

(f) identification of the site contact and how the contact can be reached,

(g) any special terms and conditions which must be agreed upon by the *environmental professional*, and

(h) any other knowledge or experience with the *property* that may be pertinent to the *environmental professional* (for example, copies of any available prior *environmental site assessment reports*, documents, correspondence, etc., concerning the *property* and its environmental condition).

The *USER* QUESTIONNAIRE was completed by:

Name PETER KAHN

Title AVP REAL ESTATE

Firm COSTCO WHOLESALE CORPORATION

Address 999 LAKE DRIVE
ISSAQUAH, WA 98027

Phone Number (office) (425) 313-6052
(cell) (206) 465-1732

User represents that to the best of the *user's* knowledge the above statements and facts are true and correct, and, to the best of the *user's* knowledge, no material facts have been suppressed or misstated.

User's Signature

4/11/18
Date

EDR ENVIRONMENTAL LIEN AND AUL SEARCH REPORT

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

Inquiry Number: 5253641.7
April 11, 2018

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

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

RESEARCH SOURCE

Source 1:

San JOquin Recorder
San Joaquin, CA

PROPERTY INFORMATION

Deed 1:

Type of Deed:	deed
Title is vested in:	Allen E Hom Trustee
Title received from:	Allen E Hom
Deed Dated	8/19/1992
Deed Recorded:	9/22/1992
Book:	NA
Page:	na
Volume:	na
Instrument:	na
Docket:	NA
Land Record Comments:	
Miscellaneous Comments:	
Legal Description:	See Exhibit
Legal Current Owner:	Allen E Hom Trustee
Parcel # / Property Identifier:	209-230-02
Comments:	See Exhibit

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

AULs: Found ☐ Not Found ☒

Deed Exhibit 1

RECORDING REQUESTED BY AND WHEN RECORDED RETURN TO

ALLEN ERNEST HOM
17221 LIDO LANE
HUNTINGTON BEACH, CA 92647

92110918

SAN JOAQUIN COUNTY
RECORDER'S OFFICE
JAMES M. JOHNSTONE

92 SEP 22 AM 10: 11

RECORDED AT REQUEST OF
Allen Hom
FEE 4-

MAIL TAX STATEMENT TO ABOVE — SPACE ABOVE FOR RECORDER'S USE ONLY

GRANT DEED

APN: 209-230-02-11
AKA: 16000 WEST SHULTE ROAD
TRACY, CA

THE UNDERSIGNED GRANTOR(S) AFFIRM(S) THAT THERE IS NO TRANSFER TAX BASED ON THE FULL VALUE OF THE PROPERTY BECAUSE THERE IS NO ($0) CONSIDERATION.

FOR VALUABLE CONSIDERATION, RECEIPT OF WHICH IS ACKNOWLEDGED, I (WE),

ALLEN E. HOM

HEREBY QUITCLAIMS ALL RIGHT, TITLE AND INTEREST TO: ALLEN ERNEST HOM, AS TRUSTEE, AND THE SUBSEQUENT TRUSTEE, OF THE ALLEN ERNEST HOM TRUST DATED AUGUST 19, 1992,

THAT REAL PROPERTY SITUATED IN THE CITY OF TRACY
COUNTY OF SAN JOAQUIN, STATE OF CALIFORNIA, DESCRIBED AS:

BEGINNING AT A POINT ON THE NORTH LINE OF SECTION 35, TOWNSHIP 2 SOUTH, RANGE 4 EAST, MOUNT DIABLO BASE AND MERIDIAN AND THE CENTER LINE OF SCHULTE ROAD, SAID POINT BEARS SOUTH 88° 36' 08" EAST A DISTANCE OF 752.61 FEET FROM THE NORTHWEST CORNER OF SAID SECTION 35;

THENCE DESCRIBING THE TRACT FROM SAID POINT OF BEGINNING SOUTH 0 09' 50" WEST A DISTANCE OF 1425.67 FEET TO A POINT ON THE NORTHEASTERLY LINE OF THE DELTA MENDOTA CANAL;

THENCE ALONG THE NORTHEASTERLY LINE OF SAID DELTA MENDOTA CANAL THE FOLLOWING TEN (10) COURSES;

1) SOUTH 34 52' 38" EAST A DISTANCE OF 477.80 FEET;
2) NORTH 55 07' 22" EAST A DISTANCE OF 83.70 FEET;
3) NORTH 88 27' 22" EAST A DISTANCE OF 427.40 FEET;
4) SOUTH 1 32' 38" EAST A DISTANCE OF 125.00 FEET;
5) SOUTH 88 27' 22" WEST A DISTANCE OF 390.00 FEET;
6) SOUTH 55 07' 22" WEST A DISTANCE OF 46.30 FEET;
7) SOUTH 34 52' 38" EAST A DISTANCE OF 171.00 FEET;
8) SOUTH 57 52' 38" EAST A DISTANCE OF 594.10 FEET;
9) SOUTH 40 12' 38" EAST A DISTANCE OF 1028.30 FEET;
10) SOUTH 75 00' 38" EAST A DISTANCE OF 266.30 FEET TO A POINT OF THE NORTH AND SOUTH MID-SECTION LINE OF SAID SECTION 35;

THENCE NORTH 0 29' 22" EAST ALONG SAID MID-SECTION LINE A DISTANCE OF 3184.56 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 35 AND THE CENTER LINE OF SAID SCHULTE ROAD;

THENCE NORTH 88 36' 08" WEST ALONG THE NORTH LINE OF SAID SECTION 35 AND THE CENTER LINE OF SAID SCHULTE ROAD A DISTANCE OF 1890.38 FEET TO THE POINT OF BEGINNING.

THIS IS A TRANSFER TO A REVOCABLE TRUST FOR THE BENEFIT OF THE GRANTOR(S)

EXECUTED ON 19th DAY OF August, 1992, AT ORANGE, CALIFORNIA.

STATE OF CALIFORNIA
COUNTY OF ORANGE)ss

On August 19, 1992 before me personally appeared ALLEN E. HOM

AND

personally known to me (or 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.

WITNESS MY HAND AND OFFICIAL SEAL:

Daniel C. Hales
Notary's Signature

Allen E. Hom
ALLEN E. HOM

OFFICIAL SEAL
Daniel Clark Hales
NOTARY PUBLIC-CALIFORNIA
ORANGE COUNTY
My Comm. Exp. NOV. 19, 1993

SAN JOAQUIN COUNTY ENVIRONMENTAL HEALTH DEPARTMENT

Margaret Carroll

From: Domenique Martorella [EH] <dmartorella@sjcehd.com>
Sent: Tuesday, April 17, 2018 9:14 AM
To: Margaret Carroll
Subject: RE: Data from San Joaquin County EHD Request Form.pdf

External Email.

_____

We have received your application. A search of our database shows no records on file for the requested address. We do not have records for you to review.

Thank you,
Dom Martorella, Office Assistant Specialist San Joaquin County Environmental Health Department
1868 East Hazelton Avenue, Stockton, CA 95205
Ph#: (209) 468-3450 Fax: (209) 464-0138

-----Original Message-----
From: Margaret Carroll [mailto:MCarroll@kleinfelder.com]
Sent: Monday, April 16, 2018 5:19 PM
To: EH-Directors <EH-Directors@sjcehd.com>
Subject: Data from San Joaquin County EHD Request Form.pdf

Good afternoon,

See attached for a records review request for the property located at:

16000 West Schulte Road
Tracy, California
(APN: 209-230-020-000)

Please contact me at the earliest available time if records exist. If possible, I would like to pay for records and have them emailed? Let me know if this can be arranged.

Thank you.

Sincerely,

Margaret R. Carroll
Senior Professional
707 Wilshire Boulevard, Suite 1450
Los Angeles, CA 90017
o| 213.622.3706
d| 213.596.6178
c| 562.458.0531

The attached file contains data that was entered into a form.

The recipient of this data file should save it locally with a unique name. Bluebeam Revu x64 can process this data by importing it back into the blank form.

SAN JOAQUIN COUNTY
Greatness grows here.

Environmental Health Department

PUBLIC RECORDS RELEASE APPLICATION

SUBMIT BY EMAIL

EHD LOG NUMBER:

APPLICANT: Margaret Carroll **BUSINESS/AGENCY:** Kleinfelder

ADDRESS: 707 Wilshire Boulevard, Suite 1450 **CITY/STATE/ZIP:** Los Angeles, CA 90017

PHONE (1): 213-598-6178 **PHONE (2):** _____ **FAX OR E-MAIL:** mcarroll@kleinfelder.com

Please allow 10 business days from date of application submittal for the records to be available.
Staff will contact you to arrange an appointment date and time to review the requested records.

SIGNATURE OF APPLICANT _____ **DATE** April 16, 2018

1. **List up to ten addresses in the space below. Address ranges WILL NOT be accepted. Select the type(s) of files from the list below by checking the appropriate box(es). At least one file type MUST be selected. Fax to (209) 464-0138, mail to the address indicated below, or email to info@sjcehd.com. Applications received after 3:00 pm will be processed the next business day.**
2. **For assistance in identifying the nature and content of EHD records, please contact EHD at the number noted below.**
3. **The EHD will notify the applicant if any EHD files exist. An appointment for review will be confirmed approximately ten (10) days after receipt of application. The files will be held for a maximum of five business days for review. Appointments should be scheduled accordingly.**
4. **Any file not returned in the same condition as released will be reorganized by EHD staff at the expense of the applicant. Future file reviews by the same applicant may require a $152 deposit prior to review.**

WELL AND SEPTIC PERMIT RECORDS ARE AVAILABLE FOR REVIEW: MONDAY-FRIDAY 8:00 AM-5:00PM (EXCLUDING HOLIDAYS)

Electronic Information: ☐ **List** ☐ **Map – Description:** _____

Specific Date Range of Information Requested: From _____ to _____

ENVIRONMENTAL HEALTH DEPARTMENT FILES		FILE ADDRESS (Specific addresses only, address ranges **will not** be accepted)			EHD USE ONLY
		Street #	Street Name	City	
☒ Underground Tank (UST) Cleanup Site (LOP)	1	16000	West Schulte Road	Tracy	☐ CONSUMER
☒ Other Cleanup Site (Non-LOP) ☒ Hazardous Waste ☒ Tiered Permitted Facility	2				☐ DAIRY
☒ Aboveground Tank ☒ UST (Monitoring / Removal) ☒ Hazardous Materials	3				☐ PWS
☒ Spill / Release Response ☐ Solid Waste Facility / Vehicle ☐ Food Facility	4				☐ WATER QUALITY
☐ Pool / Spa ☒ Dairy ☒ Land Use Application Sites	5				☐ SITE MITIGATION
☐ Septic Pumper Truck / Yard / Chemical Toilets	6				☐ HOUSING
☐ Wastewater Treatment Plant ☐ Housing Abatement ☐ Motel/Hotel	7				☐ CUPA AST / HM / HW
☐ Chicken Ranch / Dog Kennel ☐ Medical Waste Facility ☐ Tattoo/Body Piercing	8				☐ CUPA UST
☐ Waste Tire ☐ Complaint	9				☐ SOLID WASTE
☐ Other (Please Specify):	10				☐ ACCOUNTING

*****BOXED AREA - EHD USE ONLY*****

☐ **Records provided by Staff-PPR Complete.** **Staff Name:**

EHD 48-06

EDR BUILDING PERMIT REPORT

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

Inquiry Number: 5253641.8
April 10, 2018

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 Kleinfelder, Inc. on Apr 10, 2018.

TARGET PROPERTY

16000 West Schulte Road
Tracy, CA 95377

SEARCH METHODS

EDR searches available lists for both the Target Property and Surrounding Properties.

RESEARCH SUMMARY

Building permits identified: **NO PERMITS IDENTIFIED**

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.

BUILDING DEPARTMENT RECORDS SEARCHED

Name: Livermore
Years: 2011-2018
Source: City of Livermore, Community Devlopment, Building Department, LIVERMORE, CA
Phone: (925) 960-4410

Name: Redding
Years: 1987-2018
Source: City of Redding, Development Services, Building Division, REDDING, CA
Phone: 530-225-4014

Name: San Joaquin County
Years: 1991-2018
Source: San Joaquin County, Permits and Licenses, STOCKTON, CA
Phone: (209) 468-3124

Name: Tracy
Years: 1990-2018
Source: City of Tracy, Building Division, TRACY, CA
Phone: (209) 831-6400

TARGET PROPERTY FINDINGS

TARGET PROPERTY DETAIL

16000 West Schulte Road
Tracy, CA 95377

No Permits Found

ADJOINING PROPERTY FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

No Permits Found

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

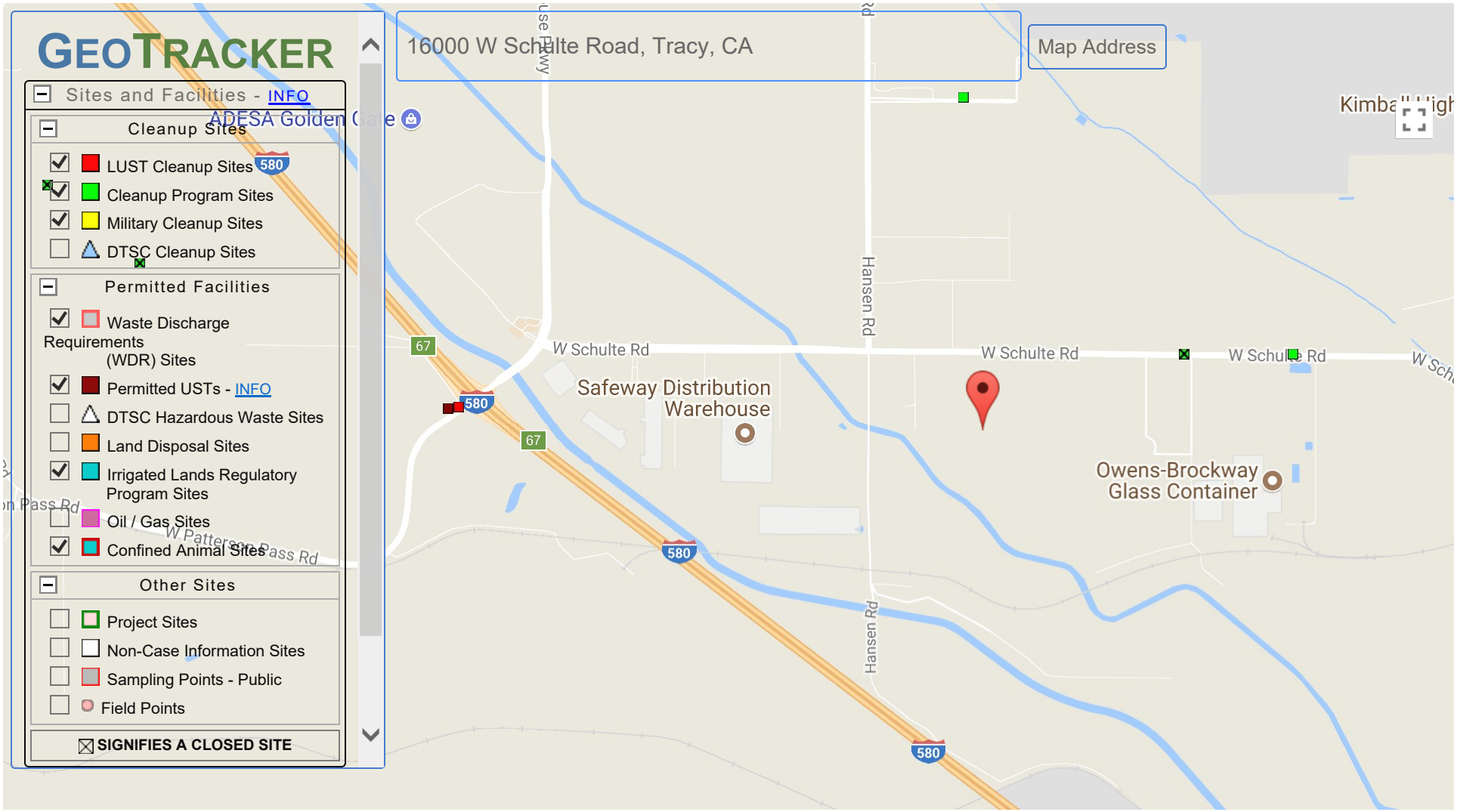
- Permit Number: The alphanumerical designation assigned to a permit for tracking within the building department system. Sometimes the permit number gives clues to its role, e.g. a "PL" prefix may designate a plumbing permit.
- Description: A field on the permit form that allows the building department 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.

STATE WATER RESOURCES CONTROL BOARD / GEOTRACKER™ DATABASE



SITES CURRENTLY VISIBLE ON MAP

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER

CASE SUMMARY

REPORT DATE
9/1/2007

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -
UNKNOWN

CREATED BY
UNKNOWN

III. SITE LOCATION

FACILITY NAME
TRACY YOUTH SPORTS PARK

FACILITY ID

FACILITY ADDRESS
15178 SCHULTE ROAD
TRACY, CA
SAN JOAQUIN COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

,

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED
9/1/2006

HOW DISCOVERED

DESCRIPTION

DATE STOPPED

STOP METHOD

DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE
Soil

IX. REMEDIAL ACTION

NO REMEDIAL ACTIONS ENTERED

X. GENERAL COMMENTS

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER	REGIONAL BOARD CASE NUMBER

LOCAL AGENCY

UNKNOWN

REGIONAL BOARD

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
zzz	ZZZ	CENTRAL VALLEY RWQCB (REGION 5S)	info5@waterboards.ca.gov

ADDRESS

11020 SUN CENTER DRIVE #200
RANCHO CORDOVA, CA 95670-6114

CONTACT DESCRIPTION

PHONE TYPE	PHONE NUMBER	EXTENSION
Front Office	(916)-464-3291	

Back to Top

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Central Valley Regional Water Quality Control Board

TO: Case File
Joseph Mello, CHG 545

FROM: Kristi Shelton, P.E.
Water Resources Control Engineer
SITE CLEANUP SECTION

DATE: 24 July 2013

SUBJECT: ***NO FURTHER ACTION REQUIRED, TRACY YOUTH SPORTS PARK, 15178 SCHULTE ROAD, TRACY, SAN JOAQUIN COUNTY***

Central Valley Water Board staff reviewed the case file for the Tracy Youth Sports Park facility at 15178 Schulte Road in Tracy (Site). The Site is listed in GeoTracker as Global ID SL0607797298. There are no files at the Central Valley Water Board associated with this case. In addition, the San Joaquin County Environmental Health Department does not have any information on the Site. The information on the Site was obtained during an internet search of the address.

In June 2006, the City of Tracy (City) conducted an Environmental Impact Report (EIR) to evaluate the potential environmental impacts from the development of a youth sports park at the Site. The City proposed constructing four football fields, 23 baseball/softball fields, 15 soccer fields, a sports/football stadium, and a recreation area at the 200 acre Site. The EIR identified environmental impacts associated with increased traffic and regional air quality impacts from the construction of the project. In addition, the EIR noted there are two Pacific Gas & Electric (PG&E) transmission pipelines and one Chevron crude oil pipeline beneath the Site. There is no record of any soil and/or groundwater data collected during the assessment.

In December 2007, the City voted to reject all construction bids on the proposed project and decided not to pursue construction of a sports park at the Site. City Council members cited the concern over safety of placing the youth sports park above existing pipelines as the reason to cancel the project. The council went on to say that the industrial nature of the area and the potential for industrial accidents made the Site a poor choice for youth sports.

The Site was opened in GeoTracker on 1 September 2007 presumably following receipt of the EIR. Board staff will not be activating the case and consider it closed.

STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

CASE SUMMARY

REPORT DATE
1/2/1965

HAZARDOUS MATERIAL INCIDENT REPORT FILED WITH OES?

I. REPORTED BY -
UNKNOWN

CREATED BY
UNKNOWN

III. SITE LOCATION

FACILITY NAME
SHELL OIL COMPANY- HANSEN RD (Cordes Ranch)

FACILITY ID

FACILITY ADDRESS
HANSEN ROAD
TRACY, CA
SAN JOAQUIN COUNTY

ORIENTATION OF SITE TO STREET

CROSS STREET
SCHULTE ROAD

V. SUBSTANCES RELEASED / CONTAMINANT(S) OF CONCERN

* PETROLEUM - OTHER

VI. DISCOVERY/ABATEMENT

DATE DISCHARGE BEGAN

DATE DISCOVERED | HOW DISCOVERED | DESCRIPTION

DATE STOPPED | STOP METHOD | DESCRIPTION

VII. SOURCE/CAUSE

SOURCE OF DISCHARGE

CAUSE OF DISCHARGE

DISCHARGE DESCRIPTION

VIII. CASE TYPE

CASE TYPE
Aquifer used for drinking water supply
Other Groundwater (uses other than drinking water)

IX. REMEDIAL ACTION

REMEDIAL ACTION	BEGIN DATE	END DATE	DESCRIPTION
Excavation	5/24/2001	8/1/2001	In 2001, Shell removed a 3,000-foot section of 8-inch crude oil pipeline from 4 feet bgs, from the Cordes Ranch property in anticipation of development. During the removal, six areas referred to as Trenches 1 through 6 were observed to be impacted by petroleum hydrocarbons. Shell over excavated two trenches to depths ranging from 6 to 20 feet bgs and excavated to 4 feet at 4 additional trenches. Groundwater is 30 to 35 feet bgs. Subsequent investigations established the presence of residual hydrocarbons in soil and in deep groundwater. Our 5 November 2009 letter concurred with Shell's 15 October 2009 Monitoring Well Installation Work Plan (Work Plan) to install nine monitoring wells in the vicinity of Trench 2, Trench 3, and boring B-69. The RA Work

Plan proposes to collect soil and groundwater data from the borings for the proposed wells. The proposed wells include two deep wells which are identified as a sentinel well about 500 feet northwest of Trench 1 and the Trench 3 well located about 20 feet southwest of Trench 3. However, Shell is claiming that TPHc observed below 171 feet bgs is naturally occurring.

X. GENERAL COMMENTS

In 2001, Shell removed a 3,000-foot section of 8-inch crude oil pipeline from 4 feet bgs, from the Cordes Ranch property in anticipation of development. During the removal, six areas referred to as Trenches 1 through 6 were observed to be impacted by petroleum hydrocarbons. Our 5 November 2009 letter concurred with Shell's 15 October 2009 Monitoring Well Installation Work Plan to install nine monitoring wells in the vicinity of Trench 2, Trench 3, and boring B-69. The RA Work Plan proposes to collect soil and groundwater data from the borings for the proposed wells. The proposed wells include two deep wells which are identified as a sentinel well about 500 feet northwest of Trench 1 and the Trench 3 well located about 20 feet southwest of Trench 3. However, Shell is claiming that TPHc observed below 171 feet bgs is naturally occurring.

XI. CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION REPORTED HEREIN IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE.

XII. REGULATORY USE ONLY

LOCAL AGENCY CASE NUMBER

REGIONAL BOARD CASE NUMBER

LOCAL AGENCY

UNKNOWN

REGIONAL BOARD

CONTACT NAME	INITIALS	ORGANIZATION NAME	EMAIL ADDRESS
KRISTIN SHELTON	KAS	CENTRAL VALLEY RWQCB (REGION 5S)	kshelton@waterboards.ca.gov

ADDRESS

11020 SUN CENTER DRIVE #200
RANCHO CORDOVA, CA 95670-6114

CONTACT DESCRIPTION

PHONE TYPE	PHONE NUMBER	EXTENSION
Direct	(916)-464-4819	

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7 December 2017

Andrea Wing
Shell Oil Products US
20945 South Wilmington Avenue
Carson, CA 90810

GROUNDWATER MONITORING REPORT THIRD QUARTER 2017, FORMER SHELL OIL PIPELINES, CORDES RANCH, HANSEN ROAD, SAN JOAQUIN COUNTY

Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff reviewed the 6 October 2017 *Groundwater Monitoring Report Third Quarter 2017* (QMR) submitted by GHD Services, Inc. on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) for the Former Shell Central Valley Crude Oil Pipelines on Hansen Road in the Cordes Ranch pipeline area (Site). Shell operated two crude oil pipelines at the Site until they removed the pipelines in the 1960s. One section of pipeline remains under Hansen Road. FedEx Tracy Hub and Medline warehouse facilities now occupy the Site. Central Valley Water Board staff previously approved an *Amended Soil Management and Excavation Work Plan (Work Plan)* dated 11 September 2014, which describes procedures for managing soil impacted with total petroleum hydrocarbons as crude (TPHc) from former pipelines during the redevelopment project at Cordes Ranch in Tracy.

The QMR summarizes the July/August groundwater monitoring and sampling event. Depth to water ranged from about 35 feet below ground surface (bgs) to about 52 feet bgs. Total petroleum hydrocarbons as crude oil (TPHc) was detected in one monitoring well (MW-16) at a concentration of 400 micrograms per liter (µg/L). Other petroleum hydrocarbons were not detected above laboratory detection limits in any other monitoring wells.

Our comments are:

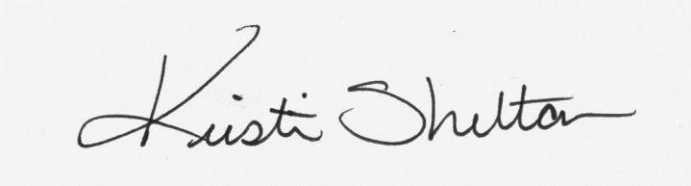
1. Central Valley Water Board staff concurs with the request to discontinue sampling of Site monitoring wells. Shell sampled monitoring wells MW-17 and MW-24 for one hydrologic cycle; these wells have contained sporadic detections of TPHc (maximum of 830 µg/L). MW-16 has contained a maximum concentration of 400 µg/L. Shell may stop monitoring Site groundwater wells.

2. Shell needs to continue to monitor and collect water samples annually from the nearby domestic wells.

3. Central Valley Water Board staff concurs the Site may be eligible for closure. Shell should prepare a closure report that includes a summary of the Site history, remaining mass of contamination, mass removed, remaining risks to human health and the environment, and an evaluation with respect to the California State Water Resources Control Board's Low Threat Closure Policy (LTCP). The closure request needs to be signed and stamped by a

registered professional and should include the LTCP checklist. If Shell identifies any data gaps during the closure evaluation, you should include a work plan that proposes methods to close the data gaps with the closure request.

In summary, Shell may discontinue sampling Site groundwater monitoring wells and prepare a closure request. Shell should continue to collect samples annually from nearby residential domestic wells. If you have questions please contact me by phone at (916) 464-4819 or by email at kristin.shelton@waterboards.ca.gov.



KRISTI SHELTON, P.E.
Water Resources Control Engineer

cc: Ms. Adrienne Ellsaesser, San Joaquin County Environmental Health Department, Stockton
Mr. Jeff Gaarder, GHD, 2300 Clayton Road, Suite 920, Concord, CA 94520
Ms. Gaylyn Frosini, FedEx Ground, 1000 FedEx Drive, Moon Township, PA 15108



Subsurface Investigation and Third and Fourth Quarter 2016 Groundwater Monitoring Report

Former Shell Central Valley Crude Oil Pipelines
Cordes Ranch
Tracy California
Planet Site ID USF06329
Planet Project ID 25753

GHD | 2300 Clayton Road, Suite 920 Concord California 94520

060223 16.04 | Report No 49 | December 13 2016

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Appendix F	Disposal Manifests
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Appendix H	Data Validation

1. Introduction

GHD Services Inc (GHD; formerly Conestoga-Rovers & Associates [CRA]) is submitting this *Site Investigation and Third and Fourth Quarter 2016 Groundwater Monitoring Report* on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell) to document the recent assessment conducted on the Former Shell Central Valley Crude Oil Pipelines located at Cordes Ranch in Tracy, California (Figure 1). GHD followed the scope of work presented in our August 31, 2016 *Site Investigation Work Plan*, which was conditionally approved in Central Valley – Regional Water Quality Control Board's (CV-RWQCB's) September 8, 2016 letter. The CV-RWQCB work plan approval letter is provided as Appendix A. The investigation consisted of installing groundwater monitoring wells on and around the new FedEx and Medline warehouses to replace wells which were destroyed prior to redevelopment.

1.1. Site Background

The site is located near the eastern slope of the Altamont Pass in the City of Tracy, California. The Former Shell Central Valley Crude Oil Pipelines carried crude oil from the Central Valley to the Bay Area. Shell operated two pipelines (8-inch and 10-inch diameter) that traverse the site, oriented in a northwest-to-southeast direction through agricultural land. The pipelines were reportedly removed from operation in the late 1960's. The current site boundaries encompass approximately 2 miles of former crude oil pipeline right-of-way located south of Highway 205 northwest of Hansen Road and north of Schulte Road (Figure 1). Based on available information, the pipelines were removed within the site boundaries except for a section that remains under Hansen Road. The former pipeline locations are shown on Figure 2. Based on historical records, these pipelines carried crude oil from the Central Valley to the Bay Area; they did not carry refined product. The pipelines were idled in the late 1960s and early 1970s and, along the length of the pipeline, certain portions were reportedly removed while others were abandoned in place. An existing Chevron-Texaco pipeline is located west of the investigation area.

The project area is now occupied by new FedEx Ground Tracy Hub and Medline warehouse facilities. There is an approved development plan and agreement between the property owner and the City of Tracy for development of the remainder of the Cordes Ranch property.

1.2. Previous Work Activities

2001 Pipeline Removal: In 2001, Shell removed the pipelines in the Cordes Rach area, with the exception of a short section under Hansen Road and on the residential property at 24322 Hansen Road. During the removal, impacted soils were observed in six areas along the pipeline. Two of the areas were over-excavate to between 15 and 20 feet below grade (fbg) and the other four areas were over-excavated to 4 fbg, corresponding with the approximate depth of the former pipelines.

2002 Subsurface Investigations: In January and February 2002, Clayton Group Services (Clayton) drilled 41 soil borings (B-1 through B-40 and B-42) along the pipeline alignment to generally define the extent of hydrocarbons in soil and groundwater. Soil samples collected from the borings contained up to 31,780 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as

crude oil (TPHc) and 3.7 mg/kg benzene. Grab groundwater samples collected from the borings contained up 523,100 micrograms per liter (µg/L) TPHc and 670 µg/L benzene. Clayton's June 26, 2002 *Investigation Report* details this investigation.

In October 2002, Clayton drilled 14 additional soil borings (B-43 through B-56) to further delineate lateral extent of hydrocarbons in soil and groundwater. Soil samples collected from the borings contained up to 22 mg/kg TPHc. No benzene was detected in the soil samples. No TPHc or benzene was detected in grab groundwater samples collected from the borings. Clayton's December 26, 2002 *Investigation Report* presents investigation details.

2003 Subsurface Investigations: In March 2003, Clayton drilled four soil borings (B-57 through B-60) to further define the vertical extent of soil and groundwater impacts. Soil samples collected from the borings contained up to 16,000 mg/kg TPHc and 150 mg/kg benzene. Grab groundwater samples collected from the borings contained up 16,000 µg/L TPHc and 150 µg/L benzene. Clayton's May 5, 2003 *Investigation Report* provides investigation results.

In June 2003, Clayton drilled three soil borings (B-61 through B-63) to further define the vertical extent of groundwater impacts. Grab groundwater samples collected from the borings contained up 2,400 µg/L TPHc and 15 µg/L benzene. Clayton's July 22, 2003 *Additional Delineation Report* details investigation results.

In September 2003, Clayton drilled two additional soil borings (B-64 and B-65) to further define the vertical extent of groundwater impacts. Grab groundwater samples collected from the borings contained up 2,600 µg/L TPHc and 1.2 µg/L benzene. Clayton's December 2, 2003 *Additional Groundwater Delineation Report* provides investigation details.

2004 Subsurface Investigation: In February and March 2004, Clayton drilled of 2 additional soil borings (B-66 and B-67) to further define the vertical extent of groundwater impacts. No TPHc or benzene was detected in the soil sample collected from 237.5 fbg in boring B-67. Grab groundwater samples collected from the borings contained up 74,000 µg/L TPHc. No benzene was detected in the grab groundwater samples. Clayton's April 26, 2004 *Additional Groundwater Delineation Report* presents investigation results.

2005 Forensic Analysis: Clayton's April 22, 2005 *Status Report* documents a forensic hydrocarbon analysis performed by Shell. Shell concluded that TPHc detected in the grab groundwater sample from boring B-66 at 171.5 feet is most likely the result of a naturally occurring erosional deposit or an oil seep not related to the pipeline.

Clayton's September 28, 2005 *Status Report* provides additional discussion on Shell's forensic analysis and concludes the hydrocarbons detected at 171.5 feet are not related to the pipeline and appear to be naturally occurring. Shell's analysis further suggests that that shallow hydrocarbons attenuate at depths of approximately 40 feet and that the hydrocarbons detected below approximately 50 feet are different in nature than the shallower hydrocarbons.

2005 Subsurface Investigation: In June 2005, Clayton drilled two soil borings (B-68 and B-69) to further assess the extent of soil and groundwater impacts. Soil samples collected from the borings contained up to 11,000 mg/kg TPHc and 0.87 mg/kg benzene. Grab groundwater samples

contained up to 730,000 μg/L TPHc and 180 μg/L benzene. Clayton's September 28, 2005 *Status Report* presents investigation details.

2007 Subsurface Investigation: In April 2007, Science Applications Incorporated (SAIC) drilled four borings (B-70, B-71, B-72 and B-74) to assess soil vapor conditions and two borings (B-75 and B-76) to further evaluate the lateral extent of hydrocarbon groundwater impacts in the interval between 40 and 150 fbg. Soil vapor samples collected from the borings contained up to 390,000 micrograms per cubic meter ($\mu g/m^3$) benzene. Grab groundwater samples contained up to 14,000 μg/L TPHc. No benzene was detected in the grab groundwater samples. SAIC's August 6, 2007 *Site Investigation Report* details this investigation.

2009 Subsurface Investigation: In October 2008, Conestoga-Rovers & Associates (CRA) drilled two borings (B-77 and B-78) to further define the horizontal extent of groundwater impacts northeast of B-75. Grab groundwater samples contained up to 2,500 mg/kg TPHc. No benzene was detected in the grab groundwater samples. CRA's January 8, 2009 *Site Investigation Report* presents investigation and survey findings.

2009 Site Conceptual Model (SCM): CRA's September 1, 2009 SCM describes the relationship between the source area, transport pathways, and potential receptors. CRA developed the SCM based on review of available geological and analytical data.

2010 to 2016 Residential Well Monitoring: In June 2010, CRA sampled five domestic water wells located northwest of the site to determine if petroleum hydrocarbons are present in the wells. No petroleum hydrocarbons were detected in the samples collected from the domestic water wells. The two wells closest to the former pipelines have been sampled annually since the initial event. No petroleum hydrocarbons were detected in the wells CRA's annual **r**esidential well monitoring reports detail sampling results.

2010 Subsurface Investigation: From July to September 2010, CRA installed thirteen groundwater monitoring wells (MW-1 through MW-4, MW-5A, MW-5B, MW-5C, and MW-6 through MW-11) to assess groundwater quality, gradient, and flow direction in the vicinity of the former crude oil pipeline. The wells monitored three groundwater zones; 30 to 50 fbg (Zone A), 105 to 125 fbg (Zone B), and 160 to 177 fbg (Zone C). Soil samples collected from the well borings contained up to 79,000 mg/kg TPHc and 7.4 mg/kg benzene. CRA's October 15, 2010 *Site Investigation Report* presents well installation details.

2011 Subsurface Investigations: From May to July 2011, CRA drilled twenty soil borings (B-79, B-79A, B-80 through B-92, B-93, B-93A, B-93B, B-94, and B-95) to assess soil conditions beneath areas 7, 8, and 9; installed six groundwater monitoring wells (MW-12, MW-13B, MW-13C, MW-14B, MW-14C, and MW-15 were installed to assess groundwater quality, gradient, and flow direction; and installed three nested soil vapor wells (VW-1, VW-2, and VW-3) to assess soil vapor impacts. Soil samples collected from the soil and well borings contained up to 68,000 mg/kg TPHc and 5.3 mg/kg benzene. Soil vapor samples contained a limited number of volatile organic compounds and semivolatile organic compounds at varying concentrations. CRA's January 4, 2012 *Subsurface Investigation and Third Quarter 2011 Groundwater Monitoring Report* details the investigation.

In November 2011, CRA drilled 29 exploratory borings (B-96 through B-104, B-104A, B-104B, B-105 through B-109, B-109A, B-110 through B-113, B-113A, B-113B, B-114, B-115, B-115A,

B-115B, and B-116) along the pipeline alignment. Soil samples collected from the borings contained up to 57,000 mg/kg TPHc and 2.2 mg/kg benzene. CRA's May 13, 2013 *Subsurface Investigation Report and Updated Site Conceptual Model* provides investigation details. This report also presents a human health risk assessment (HHRA) and ecological risk assessment (ERA).

2014 Subsurface Investigations and Well Destructions: In May 2014, ENGEO, Inc. (ENGEO) drilled 48 soil borings for a geotechnical investigation prior to site redevelopment. CRA collected various soil samples from 14 borings (1-B05 through 1-B07, 1-B09, 1-B10, 1-B12, 1-B13, 1-B27 through 1-B29, and 1-B35 through 1-B38) located in the area of the former pipeline alignment at depths from 5 to 15 fbg. TPHc was detected in a single soil sample from boring 1-B07 at 15 fbg at a concentration of 28 mg/kg. Benzene was not detected in these soil samples.

In May and June 2014, CRA drilled three soil borings (B-117 through B-119) and installed one groundwater monitoring well (MW-16) to delineate soil and groundwater impacts in the area of well MW-15. Soil samples collected from the soil borings and well boring contained up to 42,000 mg/kg TPHc and 8.3 mg/kg benzene.

In July 2014, CRA properly destroyed all site wells and vapor probes, with the exception of well MW-16. CRA's September 30, 2014 *Subsurface Investigation and Well Destruction Report* presents details for both investigations and the well destructions.

2014 and 2015 Soil Management Plans and Reports:

- May 23, 2014: CRA, *Soil Management Plan and Excavation Work Plan*
- September 11, 2014: CRA, *Amended Soil Management Plan and Excavation Work Plan*
- December 5, 2014: CRA, *Amended Soil Management Plan*
- February 26, 2015: CRA, *Amended Soil Management Plan*
- October 19, 2015: GHD, *Soil Management Report FedEx Site*
- November 6, 2015: GHD, *Soil Management Report Medline Site*

2014 Excavation: In September and October 2014, CRA excavated the areas around boring locations B-9 and B-93 to 5 fbg, dug and two exploratory trenches between former well MW-15 and boring location B-80, and dug a trench along the removed pipeline. CRA collected 49 confirmation soil samples from the excavations that contained up to 47,000 mg/kg TPHc. Benzene was not detected in the soil samples. GHD's April 15, 2015 *Remedial Action Report* provides excavation details.

Groundwater Monitoring: 20 groundwater monitoring wells were installed and sampled periodically prior to site redevelopment. 19 of these wells were destroyed in 2014. Groundwater samples are analyzed for TPHc and benzene, toluene, ethylbenzene, and total xylenes (BTEX). The remaining well (MW-16) is currently sampled semiannually. The historical data indicate the following:

- Zone A – The average depth to groundwater was 34.5 fbg and the groundwater flow direction ranges from southwest to northeast at gradients ranging from 0.001 to 0.05. Dissolved phase

petroleum detections were limited well MW-2. Well MW-5A and well MW-15 contain minimal LNAPL. The remaining wells generally did not contain petroleum constituents.

- Zone B - The average depth to groundwater was 33.8 fbg and the groundwater flow direction is northwesterly at an approximately hydraulic gradient of 0.01.
- Zone C - The average depth to groundwater was 54.5 fbg and the groundwater flow direction is easterly at an approximately hydraulic gradient of 0.004. Dissolved phase petroleum detections were infrequent and no benzene was detected.
- TPHc detections in Zones B and C were infrequent and random, ranging from non-detect to 2,800 µg/L. Furthermore, the random detections of TPHc are relatively low concentration and are typically flagged by the laboratory as "hydrocarbon result partly due to individual peak(s) in quantitation range." Particularly random were the TPHc detections at well MW-14B, which was located over 320 feet laterally (northwest) from the pipeline, and cross-gradient to the groundwater flow direction. TPHc concentrations at this depth (125 fbg) and lateral distance (320 feet) from the pipeline is not consistent with the behavior of weathered crude oil particularly in the low permeability soils encountered at the Site.

2. Investigation Results

2.1. Permits

GHD obtained drilling permits for the wells from the San Joaquin County Environmental Health Department. Copies of the permits are presented in Appendix B.

2.2. Drilling Dates

October 10 through 14, 21 and 22, 2016.

2.3. Drilling Company

Cascade Drilling, L.P. of Sacramento, California

2.4. GHD Personnel

Geologist Jessica Hudnall directed the drilling activities under the supervision of California Professional Geologist Peter Schaefer.

2.5. Drilling Method

The soil borings were advanced using hollow stem augers.

2.6. Number of Borings

GHD drilled eight soil borings (MW-17 though MW-24), which were completed as groundwater monitoring wells. The well locations are shown on Figure 2 and 3. The borings and soil types encountered are described on the boring logs, presented in Appendix C.

2.7. Boring Depths

Soil borings were drilled to 45.5 to 65.5 fbg.

2.8. Soil Sampling

GHD collected soil samples at 5 foot intervals in the borings for soil description, screening in the field for organic vapors using a flame ionization detector (FID), and laboratory analyses. GHD shipped the soil samples to CalScience Environmental Laboratories, Inc. (CalScience) in Garden Grove, CA for analysis. The samples were analyzed for TPHc (C6–C44) with and without silica gel cleanup by EPA Method 8015B (M) and BTEX by EPA Method 8260B.

2.9. Soil Boring/Well Location Survey

Mid Coast Engineers (MCE) of Watsonville, California conducted a survey on October 31, 2016 to obtain latitude, longitude, and elevation data. MCE's survey report is included as Appendix D.

2.10. Monitoring Well Installation

Wells MW-17. MW-19 through MW-22 were completed to approximately 50 fbg and screened from 30 to 50 fbg. Well MW-18 was completed to approximately 45 fbg and screened from 25 to 45 fbg. Well MW-23 was completed to approximately 65 fbg and screened from 45 to 65 fbg. The wells were constructed using 2-inch-diameter Schedule 40 PVC casing. The filter pack was placed from the bottom of the well screen up to 2 ft above the top of the well screen, followed by a 2-foot-thick bentonite seal, and cement grout to grade. The wells are secured with a locking cap and a traffic-rated cristy box.

2.11. Well Development and Sampling

Blaine Tech Services, Inc. (Blaine) developed wells MW-17 through MW-24 on October 25 and 26, 2016 and collected initial groundwater samples from the wells on October 31, 2016. Blaine's field notes, presenting the well development and sampling data, are included in Appendix E.

2.12. Waste Disposal

Residual soil and equipment decontamination (decon) water from the well borings were stored on site in a 10-cubic-yard soil bin and 55-gallon drums. On October 14, 2016, the soil bin was transported by American Integrated Services, Inc. (AIS) of Wilmington, California to Keller Canyon Landfill in Pittsburg, California. On November 8, 2016, the soil drums were transported by AIS to Keller Canyon Landfill in Pittsburg, California and AIS transported the decon water drums to Crosby & Overton, Inc. in Long Beach, California for recycling. Appendix F presents the disposal manifests.

3. Findings

3.1. Soil

The soil chemical analytical data are summarized in Table 1. Figure 3 presents soil chemical concentration data for each soil boring. The laboratory analytical report is presented in Appendix G. GHD's independent data validation of the laboratory analytical results is provided as Appendix H.

BTEX was not detected in soil samples collected from the well borings. TPHc was not detected in the soil samples with the following exceptions:

- MW-18 at 5, 10, and 25 fbg contained 7,000, 600, and 45 mg/kg TPHc, respectively.
- MW-19 at 35 and 45 fbg contained 92, and 260 mg/kg TPHc, respectively.
- MW-21 at 15 fbg contained 58 mg/kg TPHc.

The chromatograms from the samples the detections in MW-18 and MW-21 did not match the chromatogram for the TPHc standard.

3.2. Groundwater

The groundwater data are presented in Table 2. The laboratory analytical report is presented in Appendix G. GHD's independent data validation of the laboratory analytical results is provided as Appendix H. A groundwater contour and chemical concentration map showing TPHc and benzene analytical results is presented on Figure 4. Note that groundwater analytical data for well MW-16 is from third quarter 2016 (July 29, 2016).

No TPHc or BTEX was detected in groundwater samples collected during the third and fourth quarter 2016 groundwater monitoring events.

The depth to groundwater ranged from 34.75 (MW-19) to 49.78 (MW-23) fbg. Groundwater elevation ranged from 81.82 (MW-20) to 82.56 (MW-23) feet above mean sea level.

4. Conclusions

Crude oil impacts to soil detected during this investigation are limited in extent. The highest concentrations (MW-18) are beneath the Medline parking lot and are below the on-site soil reuse concentrations approved by CV-RWQCB[1].

The groundwater analytical data demonstrate that the dissolved-phase TPHc in groundwater is now delineated down-gradient from the residual impacts along the pipeline alignment. Historically, BTEX in groundwater has not been detected or detected at low concentrations as a result of degradation over the years since the pipelines were taken out of service.

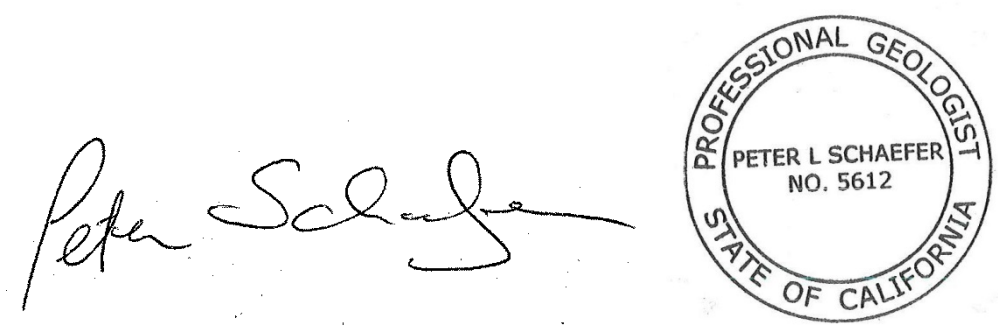
[1] CRA, *Amended Soil Management Plan*, December 5, 2014 approved in CV-RWQCB's January 6, 2015 letter.

5. Recommendations

GHD recommends monitoring groundwater in the new wells (MW-17 through MW-24) on a quarterly basis for one hydrologic cycle to confirm the TPHc plume extent and behavior, and determine the appropriate path forward.

GHD's *Groundwater Monitoring Report – First Quarter 2016* requested that the semi-annual monitoring of well MW-16 be discontinued. Petroleum hydrocarbons have not been detected in MW-16 during all six sampling events starting in June 2014. If approved by the CV-RWQCB, GHD will properly destroy MW-16 following the procedures detailed in our August 31, 2016 *Site Investigation Work Plan*. GHD will continue monitoring the residential wells on an annual basis.

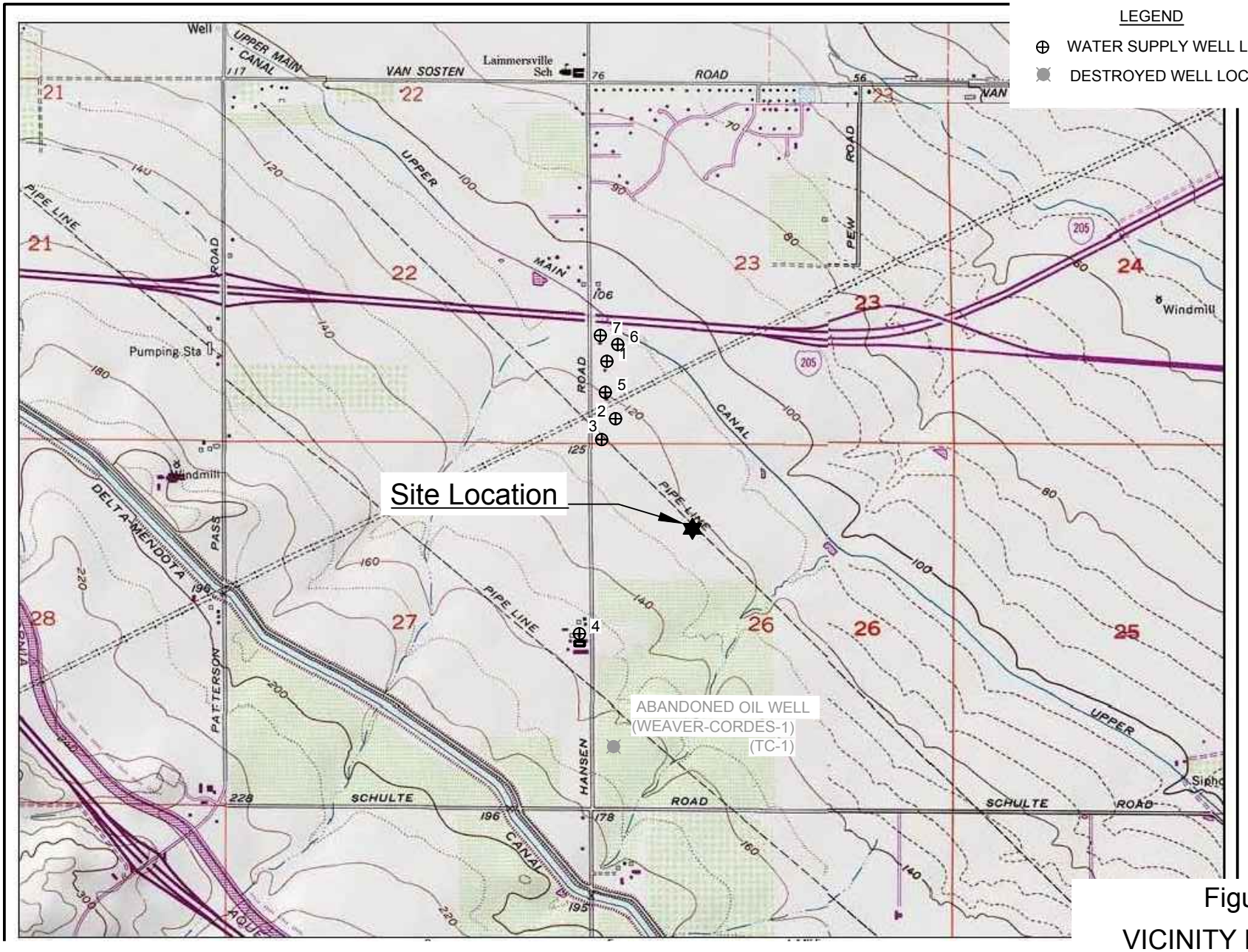
All of Which is Respectfully Submitted,
GHD



Peter Schaefer, CEG, CHG

Jeff Gaarder

Figures



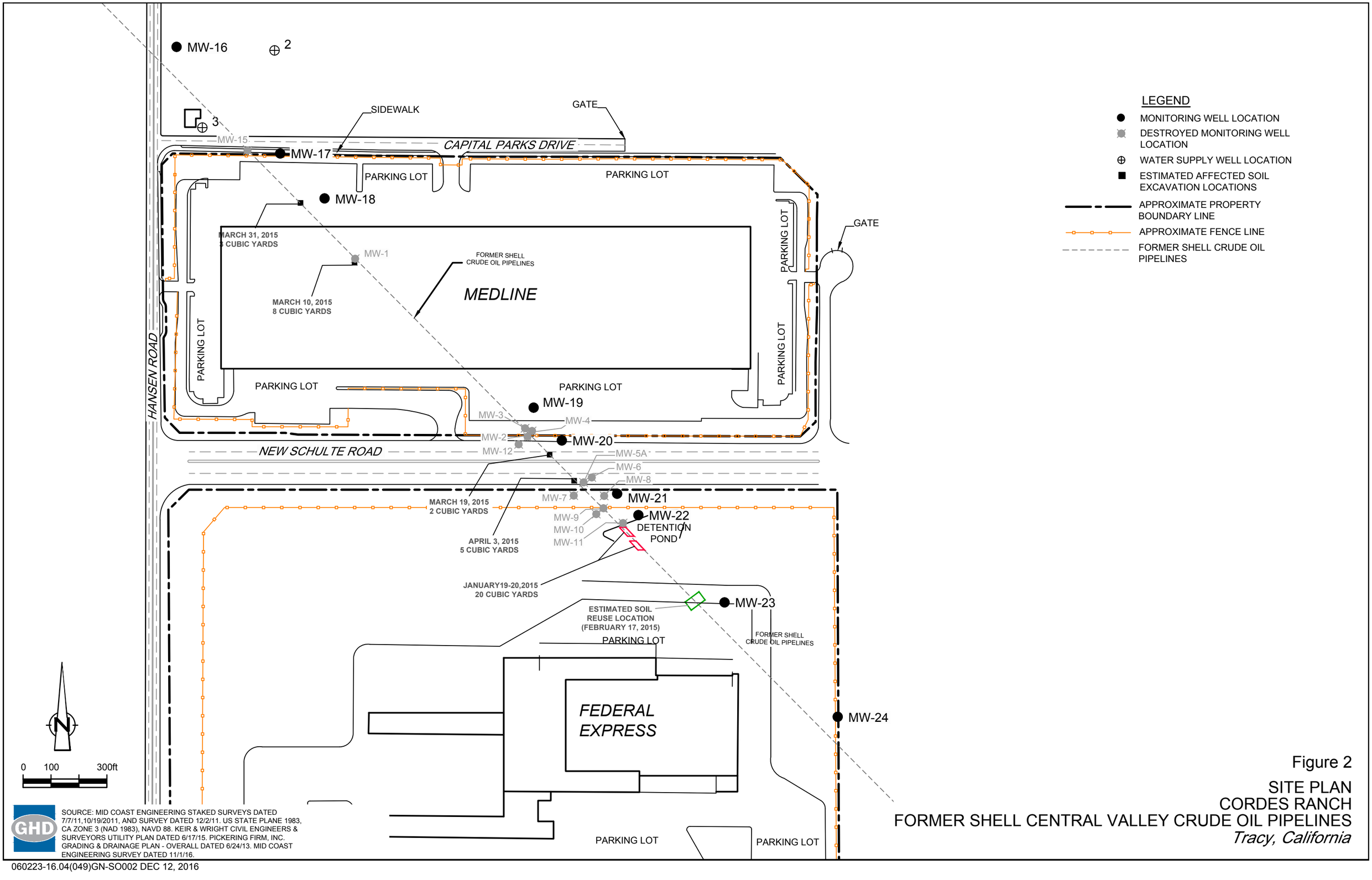
N

0 1000 2000ft

SOURCE: TOPOGRAPHICAL MAP FROM CA TOPO WILDFLOWER PRODUCTIONS copy right 2000 www.topo.com.

Figure 1

VICINITY MAP
CORDES RANCH
HANSEN ROAD NEAR SCHULTE ROAD
Tracy, California



SOURCE: MID COAST ENGINEERING STAKED SURVEYS DATED 7/7/11,10/19/2011, AND SURVEY DATED 12/2/11. US STATE PLANE 1983, CA ZONE 3 (NAD 1983), NAVD 88. KEIR & WRIGHT CIVIL ENGINEERS & SURVEYORS UTILITY PLAN DATED 6/17/15. PICKERING FIRM, INC. GRADING & DRAINAGE PLAN - OVERALL DATED 6/24/13. MID COAST ENGINEERING SURVEY DATED 11/1/16.

Figure 2

SITE PLAN
CORDES RANCH
FORMER SHELL CENTRAL VALLEY CRUDE OIL PIPELINES
Tracy, California

Sample Location - MW-17	
Depth	TPHc
5	<25/<25
15	<25/<25
20	<25/<25
25	<25/<25
30	<25/<25
35	<25/<25
40	<25/<25
45	<25/<25
50	<25/<25

Sample Location - MW-18	
Depth	TPHc
5	**7,300/7,000**
10	**650/600**
15	<25/<25
20	<25/<25
25	**47/45**
30	<25/<25
35	<25/<25
40	<25/<25
45	<25/<25

Sample Location - MW-19	
Depth	TPHc
5	<25/<25
10	<25/<25
15	<25/<25
20	<25/<25
25	<25/<25
30	<25/<25
35	**96/92**
40	<25/<25
45	**580/260**
50	<25/<25

Sample Location - MW-20	
Depth	TPHc
15.5	<25/<25
20.5	<25/<25
25.5	<25/<25
31	<25/<25
35.5	<25/<25
40.5	<25/<25
45	<25/<25
51	<25/<25

Sample Location - MW-21	
Depth	TPHc
5	<25/<25
10	<25/<25
15	**73/58**
20	<25/<25
25	<25/<25
30	<25/<25
35	<25/<25
40	<25/<25
45	<25/<25
50	<25/<25

Sample Location - MW-22	
Depth	TPHc
5.5	<25/<25
10.5	<25/<25
15.5	<25/<25
20.5	<25/<25
25.5	<25/<25
30.5	<25/<25
35.5	<25/<25
40.5	<25/<25
45.5	<25/<25
50.5	<25/<25

Sample Location - MW-23	
Depth	TPHc
5	<25/<25
10	<25/<25
15	<25/<25
20	<25/<25
25	<25/<25
30	<25/<25
35	<25/<25
40	<25/<25
45	<25/<25
50	<25/<25
55	<25/<25
60	<25/<25
65	<25/<25

Sample Location - MW-24	
Depth	TPHc
5	<25/<25
10	<25/<25
15	<25/<25
20	<25/<25
25	<25/<25
30	<25/<25
35	<25/<25
40	<25/<25
45	<25/<25
50	<25/<25

MW-16
2
3
MW-15
MW-17
MW-18
SIDE
DRIVE
PARKI
MARCH 31, 2015
3 CUBIC YARDS
MW-1
MARCH 10, 2015
8 CUBIC YARDS
FORMER SHELL
CRUDE OIL PIPELINES
MEDLINE
HANSEN ROAD
PARKING LOT
PARKING LOT
PARKING LOT
MW-19
MW-3
MW-4
MW-2
MW-20
NEW SCHULTE ROAD
MW-12
MW-5A
MW-6
MW-8
MW-7
MW-21
MW-9
MW-22
MW-10
DETENTION
POND
MW-11
MARCH 19, 2015
2 CUBIC YARDS
APRIL 3, 2015
5 CUBIC YARDS
JANUARY19-20,2015
20 CUBIC YARDS
ESTIMATED SOIL
REUSE LOCATION
MW-23
FORMER SHELL
CRUDE OIL PIPELINES
MW-24
PARKING LOT
PARKING LOT
GATE

N

0 100 300ft

LEGEND

- MONITORING WELL LOCATION
- DESTROYED MONITORING WELL LOCATION
- WATER SUPPLY WELL LOCATION
- ESTIMATED AFFECTED SOIL EXCAVATION LOCATIONS
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE FENCE LINE
- FORMER SHELL CRUDE OIL PIPELINES

TPHc TOTAL PETROLEUM HYDROCARBONS AS CRUDE OIL

<X NOT DETECTED AT REPORTING LIMIT X

7,300/7,000 TPHc/TPHc (WITH SILICA GEL CLEAN-UP) IN MILLGRAMS PER KILOGRAM (mg/kg)

SOIL SAMPLE DATES:

MW-17 SAMPLED ON OCTOBER 11, 2016.

MW-18 AND MW-19 SAMPLED ON OCTOBER 12, 2016.

MW-24 SAMPLED ON OCTOBER 13, 2016.

MW-23 SAMPLED ON OCTOBER 14, 2016.

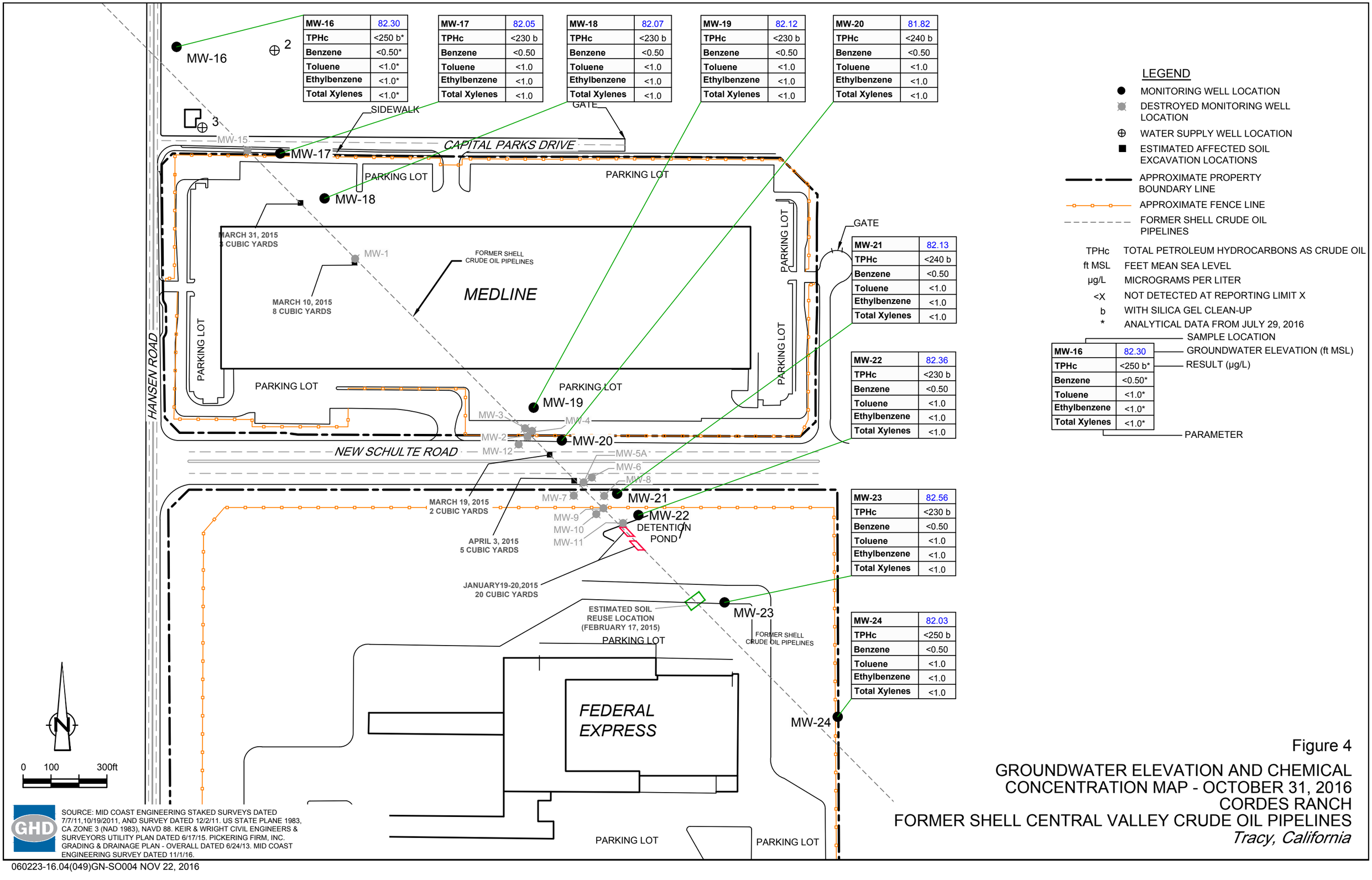
MW-20 SAMPLED ON OCTOBER 21, 2016.

MW-22 SAMPLED ON OCTOBER 22, 2016.

SOURCE: MID COAST ENGINEERING STAKED SURVEYS DATED 7/7/11,10/19/2011, AND SURVEY DATED 12/2/11. US STATE PLANE 1983, CA ZONE 3 (NAD 1983), NAVD 88. KEIR & WRIGHT CIVIL ENGINEERS & SURVEYORS UTILITY PLAN DATED 6/17/15. PICKERING FIRM, INC. GRADING & DRAINAGE PLAN - OVERALL DATED 6/24/13. MID COAST ENGINEERING SURVEY DATED 11/1/16.

Figure 3

SOIL CHEMICAL CONCENTRATION MAP
CORDES RANCH
FORMER SHELL CENTRAL VALLEY CRUDE OIL PIPELINES
Tracy, California



MW-16	82.30
TPHc	<250 b*
Benzene	<0.50*
Toluene	<1.0*
Ethylbenzene	<1.0*
Total Xylenes	<1.0*

MW-17	82.05
TPHc	<230 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-18	82.07
TPHc	<230 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-19	82.12
TPHc	<230 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-20	81.82
TPHc	<240 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-21	82.13
TPHc	<240 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-22	82.36
TPHc	<230 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-23	82.56
TPHc	<230 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

MW-24	82.03
TPHc	<250 b
Benzene	<0.50
Toluene	<1.0
Ethylbenzene	<1.0
Total Xylenes	<1.0

LEGEND

- MONITORING WELL LOCATION
- DESTROYED MONITORING WELL LOCATION
- WATER SUPPLY WELL LOCATION
- ESTIMATED AFFECTED SOIL EXCAVATION LOCATIONS
- APPROXIMATE PROPERTY BOUNDARY LINE
- APPROXIMATE FENCE LINE
- FORMER SHELL CRUDE OIL PIPELINES

TPHc	TOTAL PETROLEUM HYDROCARBONS AS CRUDE OIL
ft MSL	FEET MEAN SEA LEVEL
µg/L	MICROGRAMS PER LITER
<X	NOT DETECTED AT REPORTING LIMIT X
b	WITH SILICA GEL CLEAN-UP
*	ANALYTICAL DATA FROM JULY 29, 2016

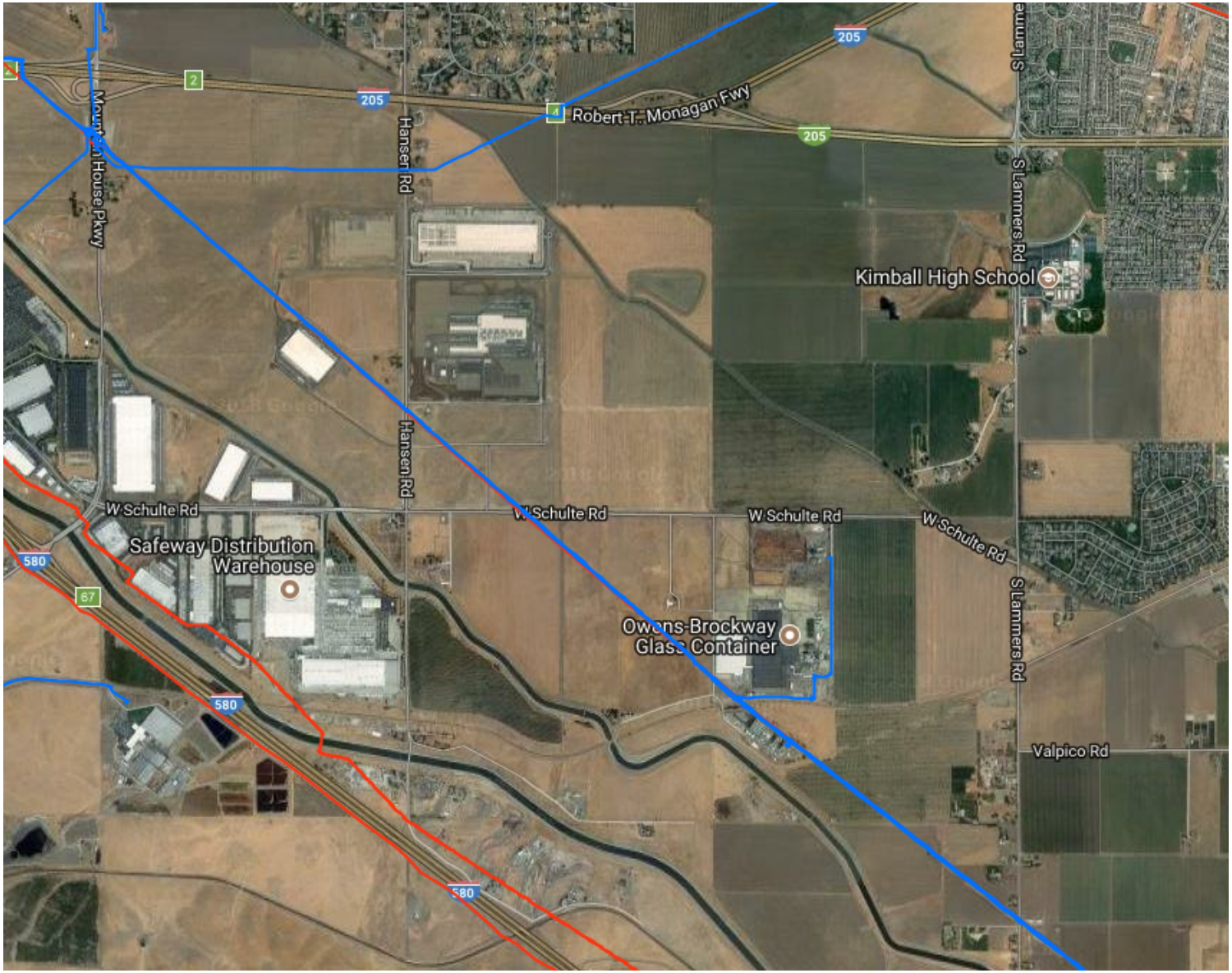
MW-16	82.30	← SAMPLE LOCATION; GROUNDWATER ELEVATION (ft MSL)
TPHc	<250 b*	← RESULT (µg/L)
Benzene	<0.50*	
Toluene	<1.0*	
Ethylbenzene	<1.0*	
Total Xylenes	<1.0*	← PARAMETER

SOURCE: MID COAST ENGINEERING STAKED SURVEYS DATED 7/7/11,10/19/2011, AND SURVEY DATED 12/2/11. US STATE PLANE 1983, CA ZONE 3 (NAD 1983), NAVD 88. KEIR & WRIGHT CIVIL ENGINEERS & SURVEYORS UTILITY PLAN DATED 6/17/15. PICKERING FIRM, INC. GRADING & DRAINAGE PLAN - OVERALL DATED 6/24/13. MID COAST ENGINEERING SURVEY DATED 11/1/16.

Figure 4

GROUNDWATER ELEVATION AND CHEMICAL CONCENTRATION MAP - OCTOBER 31, 2016
CORDES RANCH
FORMER SHELL CENTRAL VALLEY CRUDE OIL PIPELINES
Tracy, California

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION, NATIONAL PIPELINE MAPPING SYSTEM



Legend

- Accidents (Liquid)
- Incidents (Gas)
- Gas Transmission Pipelines
- Hazardous Liquid Pipelines

500 m
1000 ft

Pipelines depicted on this map represent gas transmission and hazardous liquid lines only. Gas gathering and gas distribution systems are not represented.

This map should never be used as a substitute for contacting a one-call center prior to excavation activities. Please call 811 before any digging occurs.

Questions regarding this map or its contents can be directed to npms@dot.gov.

Projection: Geographic

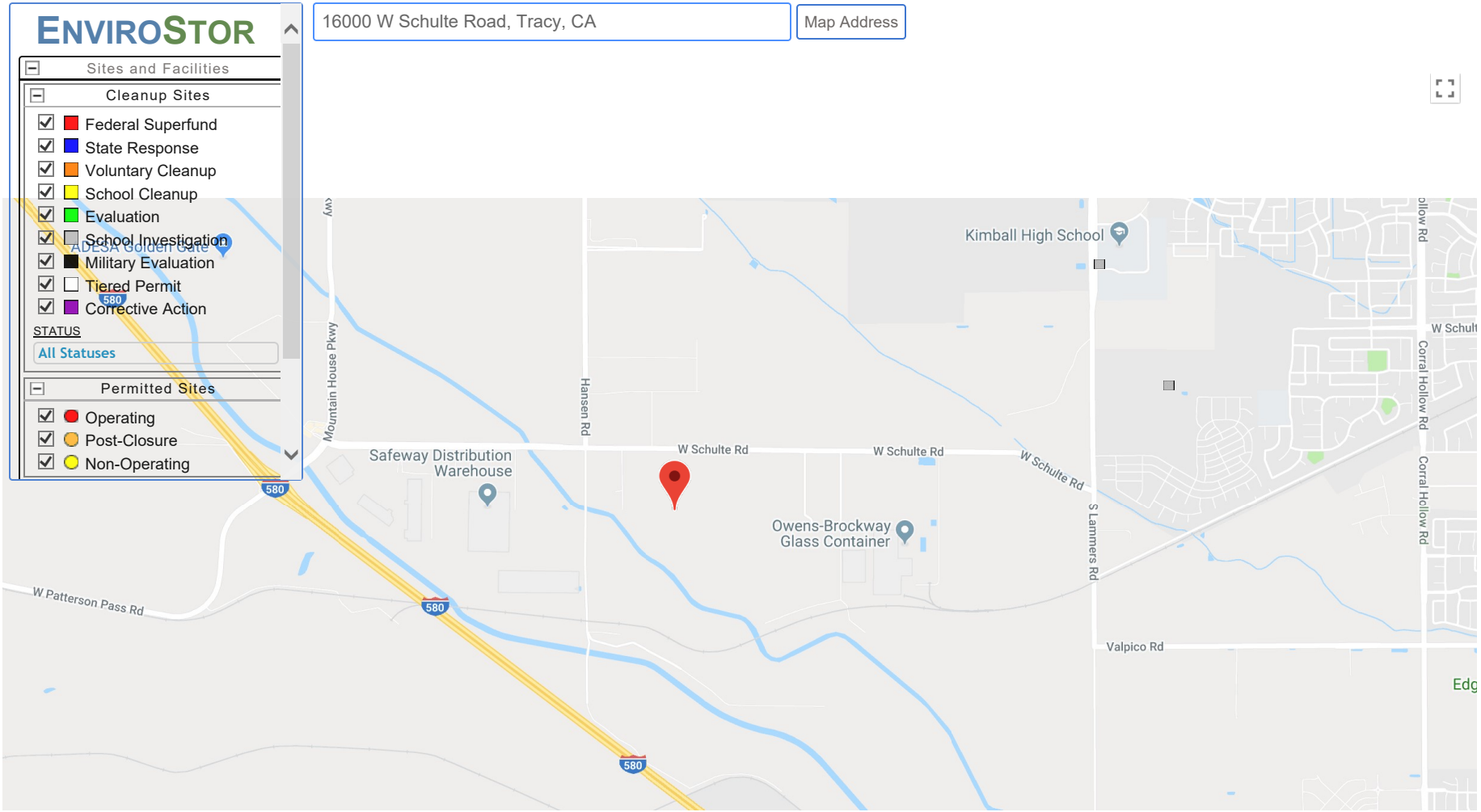
Datum: NAD83

Map produced by the Public Viewer application at www.npms.phmsa.dot.gov

Date Printed: Apr 16, 2018

811 Know what's below. Call before you dig.

STATE DEPARTMENT OF TOXIC SUBSTANCES CONTROL, ENVIROSTOR DATABASE



SITES CURRENTLY VISIBLE ON MAP — 3 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY
ADDITION TO KIMBALL HS (PARCEL 4)	NO ACTION REQUIRED	SCHOOL INVESTIGATION	24606 S. LAMMERS ROAD	TRACY
GEORGE KELLY SCHOOL	NO FURTHER ACTION	SCHOOL INVESTIGATION	VENETO DRIVE/MABEL JOSEPHINE DRIVE	TRACY
KIMBALL HIGH SCHOOL	NO FURTHER ACTION	SCHOOL INVESTIGATION	24606 SOUTH LAMMERS ROAD	TRACY

SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT

Margaret Carroll

From: Theresa Haywood <Theresa.Haywood@valleyair.org>
Sent: Tuesday, April 17, 2018 12:08 PM
To: Margaret Carroll
Subject: Public Records Request C-2018-4-74 @ 16000 W Schulte Rd, Tracy

External Email.

April 17, 2018

Margaret Carroll
Kleinfelder
620 W 16th Street #F
Long Beach, CA 90813

SUBJECT: Public Records Request
LOCATION: 16000 W Schulte Rd, Tracy

Dear Margaret Carroll:

The District has processed your request for information regarding the above mentioned site address/location. A search of the District's databases has returned no records on file for this location.

If you have any questions, or need additional information, please contact me at the number below.

Respectfully,

Theresa Haywood
Senior Office Assistant
San Joaquin Valley
Air Pollution Control District
4800 Enterprise Way
Modesto, CA 95356.8718
Phone: (209) 557.6406
Fax: (209) 557.6475
Theresa.Haywood@valleyair.org
Service * Teamwork * Attitude * Respect

Thank you for using our Online Public Records Request System. We will be working to process your request as quickly as possible.

The Control Number for this request is C-2018-4-74

Please use this number when referencing your request. You will also be receiving a comfirmation email with the Control Number included.

To contact the Air District, call a regional office in Fresno (559-230-6000), Modesto (209-557-6400) or Bakersfield (661-392-5500).

APPENDIX D
HISTORICAL RESEARCH DOCUMENTATION

DRAFT

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16000 West Schulte Road

16000 West Schulte Road

Tracy, CA 95377

Inquiry Number: 5253641.3

April 10, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

04/10/18

Site Name:

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377
EDR Inquiry # 5253641.3

Client Name:

Kleinfelder, Inc.
2 Ada, Suite 250
Irvine, CA 92618-0000
Contact: Paolo Dizon

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder, Inc. 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 # 196A-4F49-A00E

PO # NA

Project 20190071.001A

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 #: 196A-4F49-A00E

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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16000 West Schulte Road

16000 West Schulte Road

Tracy, CA 95377

Inquiry Number: 5253641.12

April 11, 2018

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

04/11/18

Site Name:

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377
EDR Inquiry # 5253641.12

Client Name:

Kleinfelder, Inc.
2 Ada, Suite 250
Irvine, CA 92618-0000
Contact: Paolo Dizon

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*
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1993	1"=500'	Acquisition Date: June 15, 1993	USGS/DOQQ
1982	1"=500'	Flight Date: July 10, 1982	USDA
1975	1"=500'	Flight Date: November 11, 1975	Cartwright
1968	1"=500'	Flight Date: May 02, 1968	USGS
1963	1"=500'	Flight Date: June 01, 1963	USDA
1957	1"=500'	Flight Date: July 15, 1957	USDA
1949	1"=500'	Flight Date: October 13, 1949	USGS
1940	1"=500'	Flight Date: June 03, 1940	USDA
1937	1"=500'	Flight Date: August 12, 1937	USDA

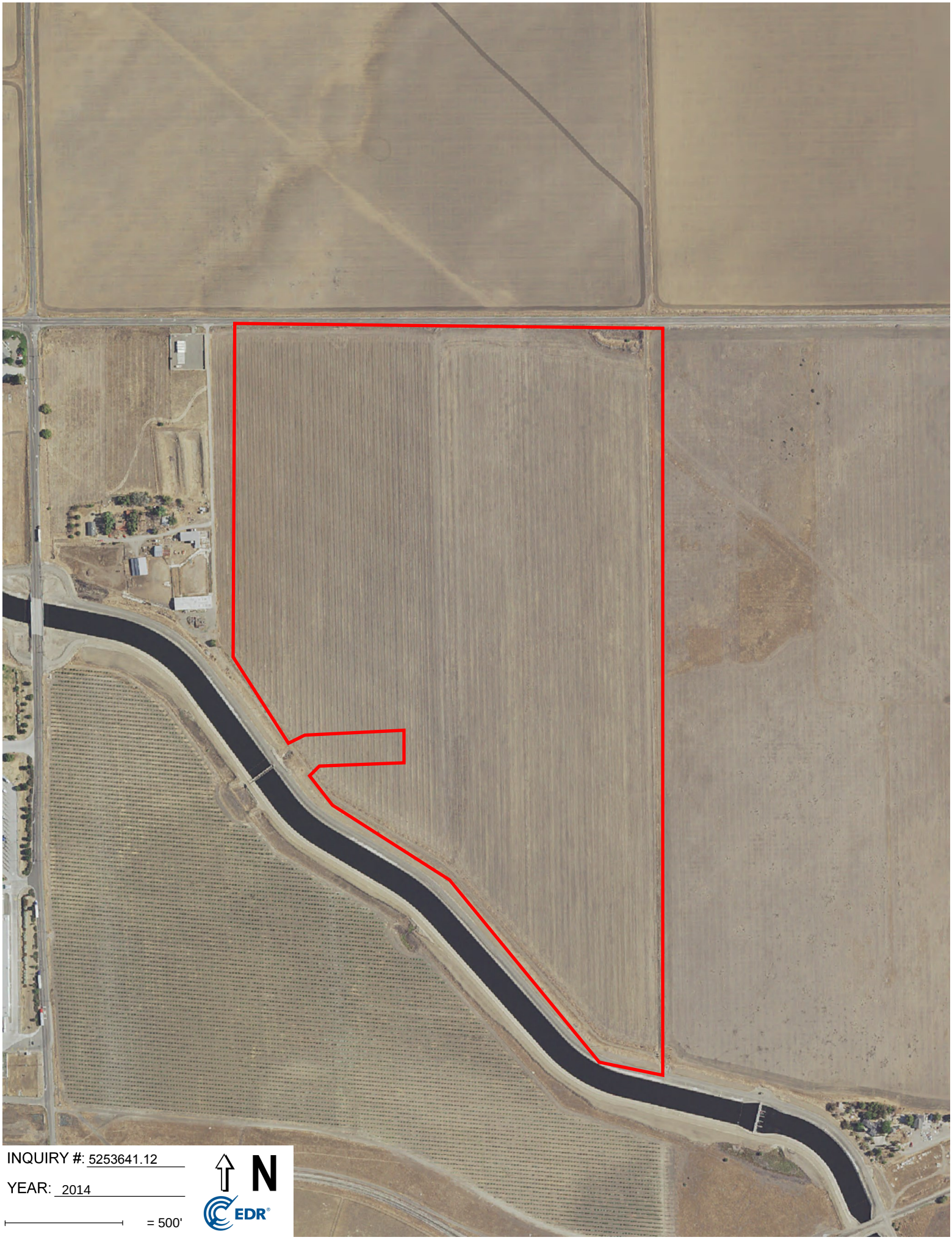
When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

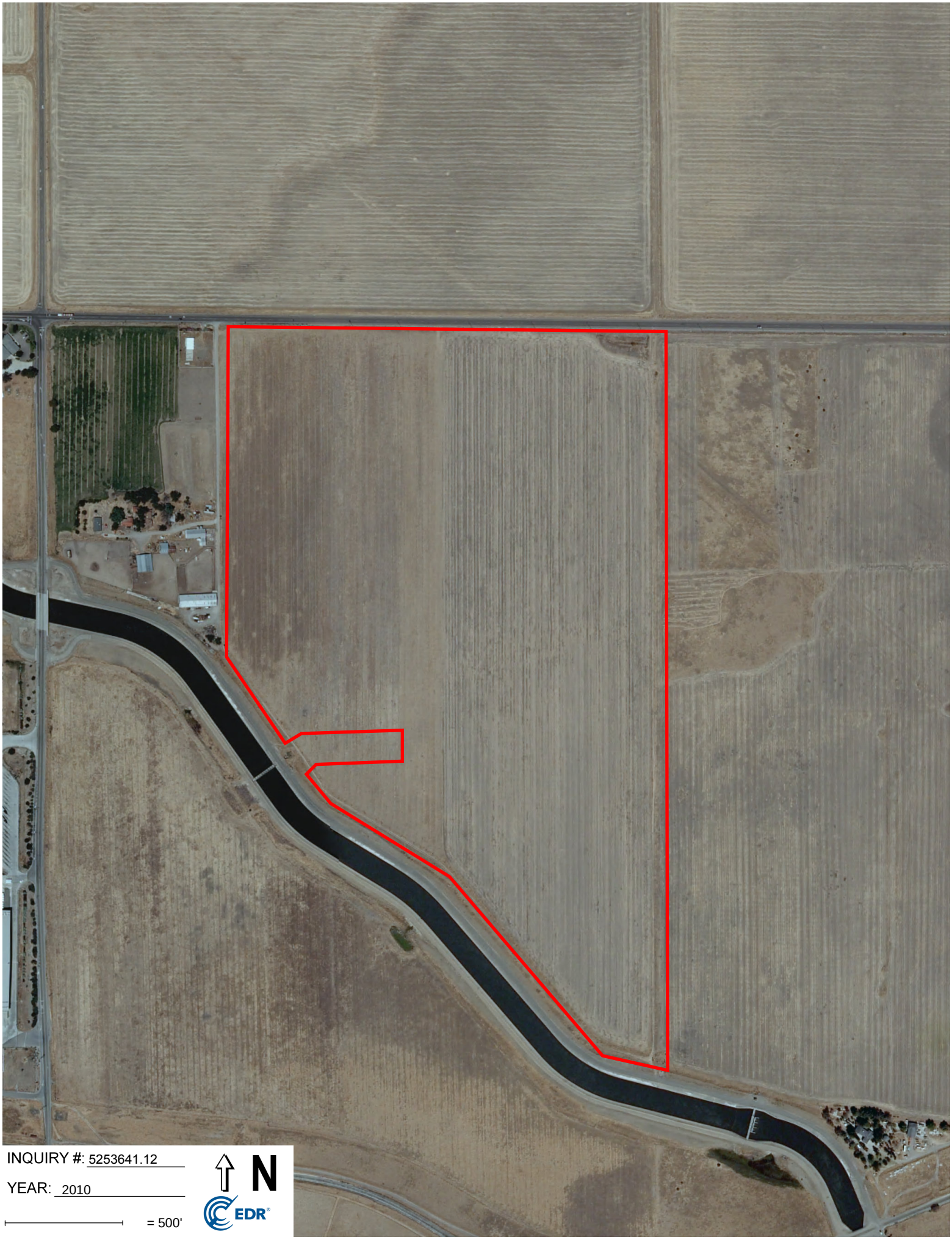
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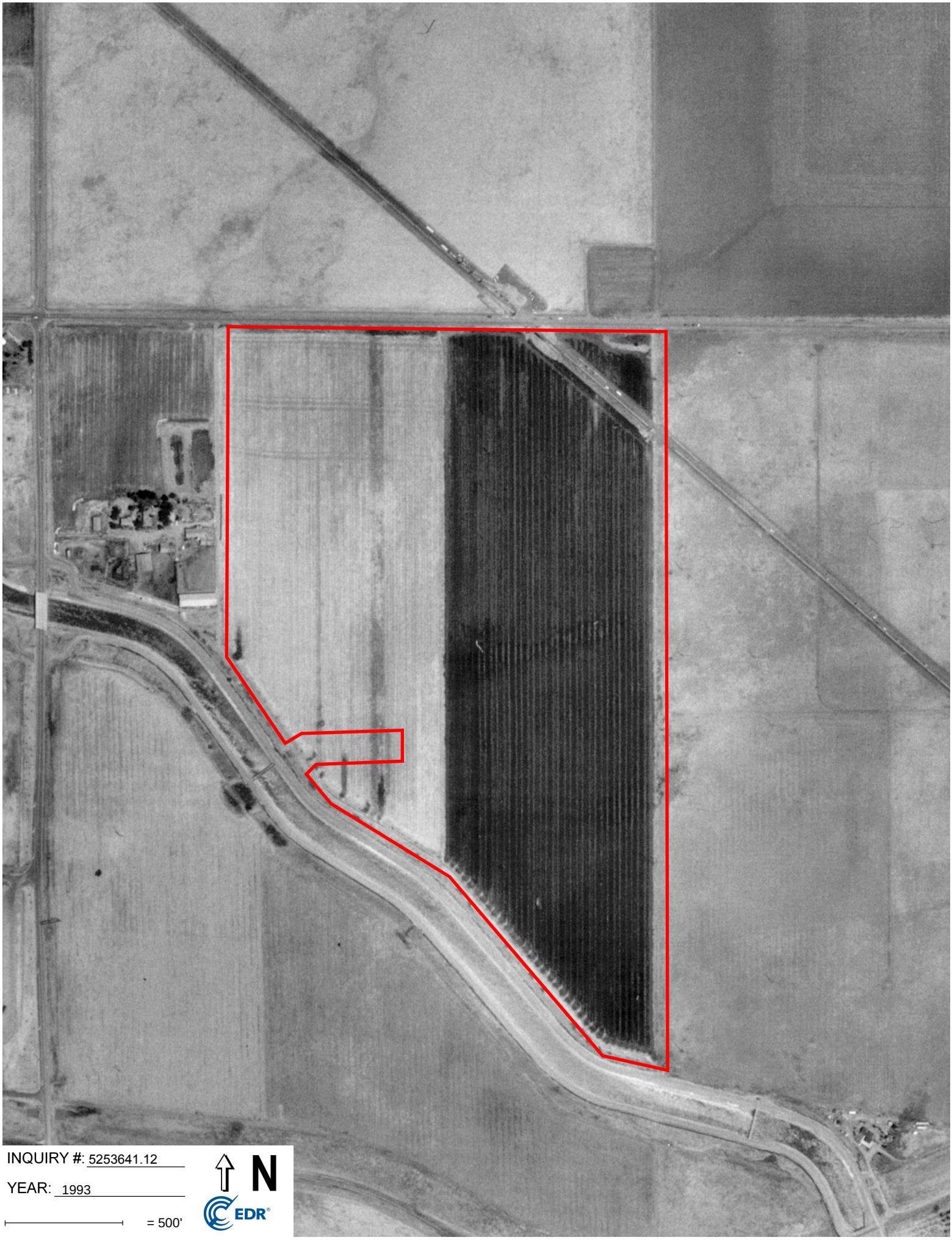
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INQUIRY #: 5253641.12
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 5253641.12
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 5253641.12
YEAR: 2006
= 500'
N
EDR



INQUIRY #: 5253641.12

YEAR: 1993

= 500'

N

EDR


INQUIRY #: 5253641.12
YEAR: 1982
= 500'
N
EDR



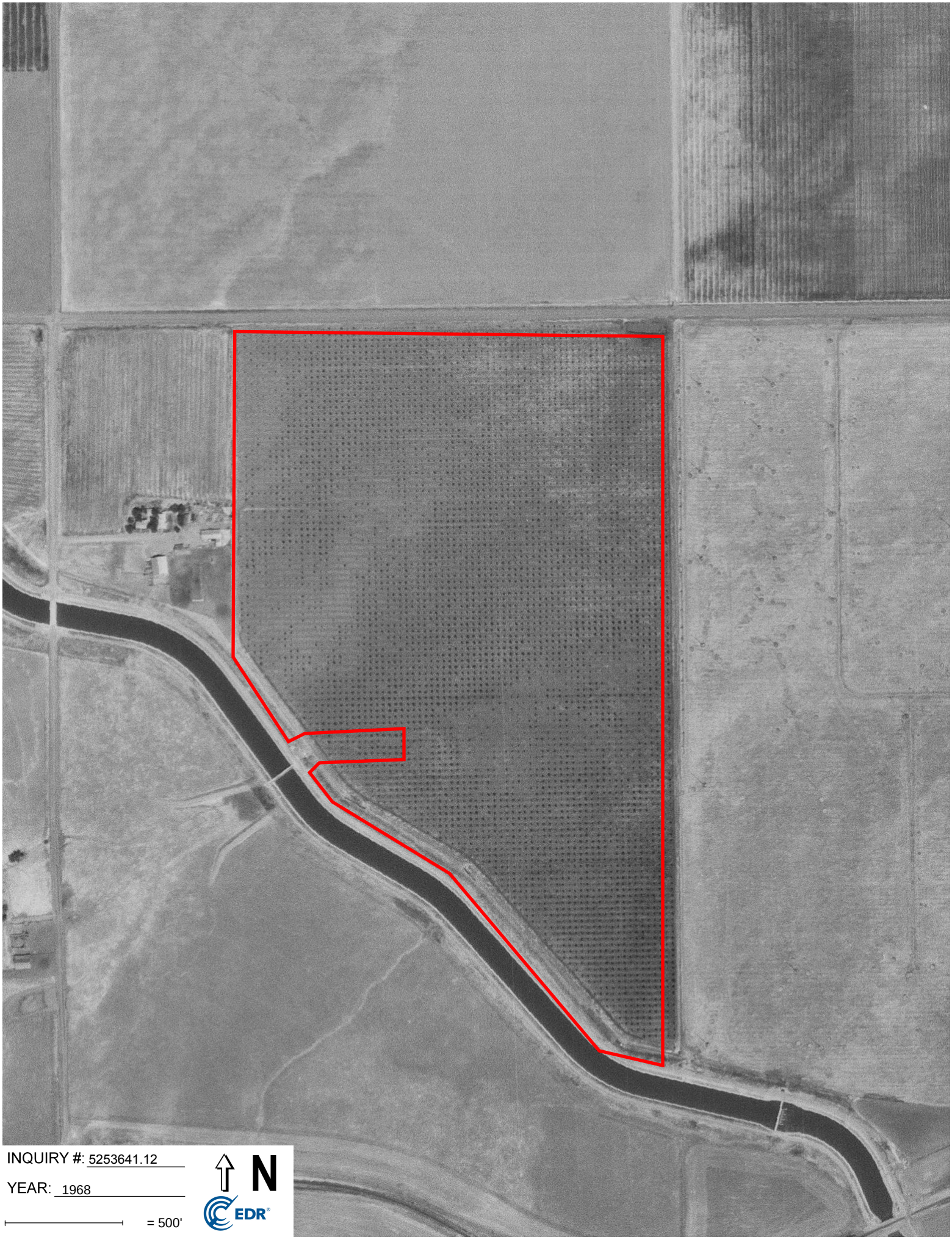
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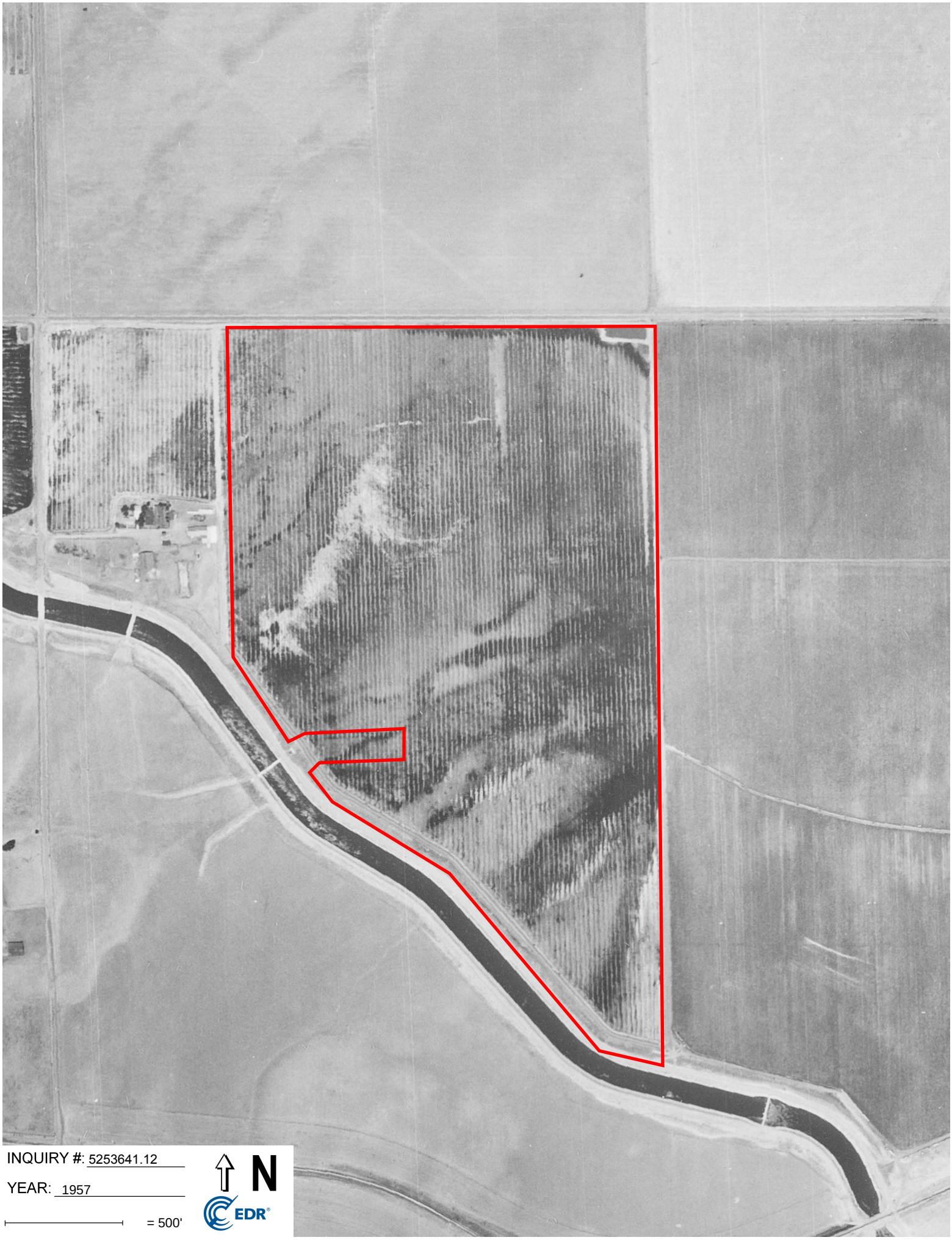
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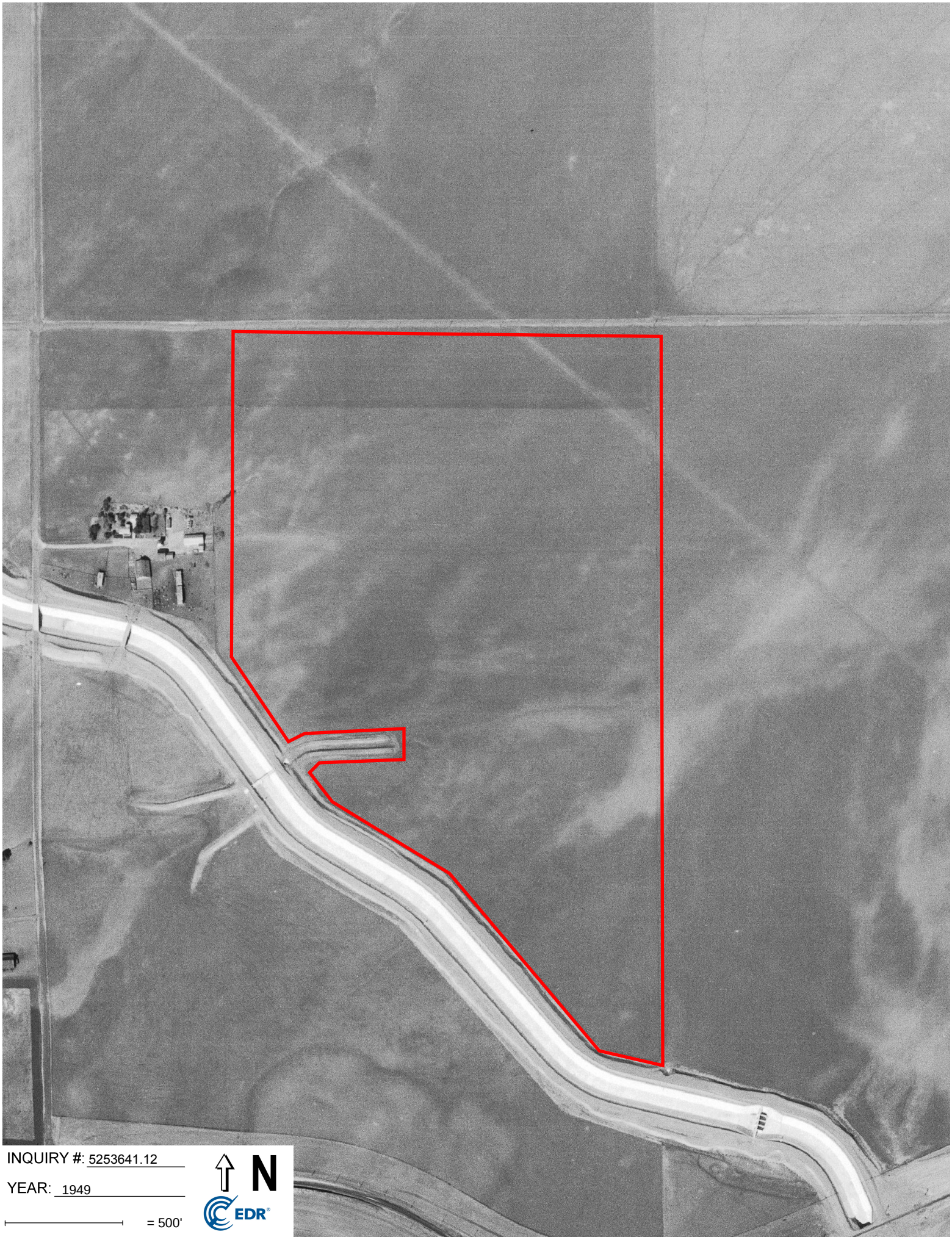
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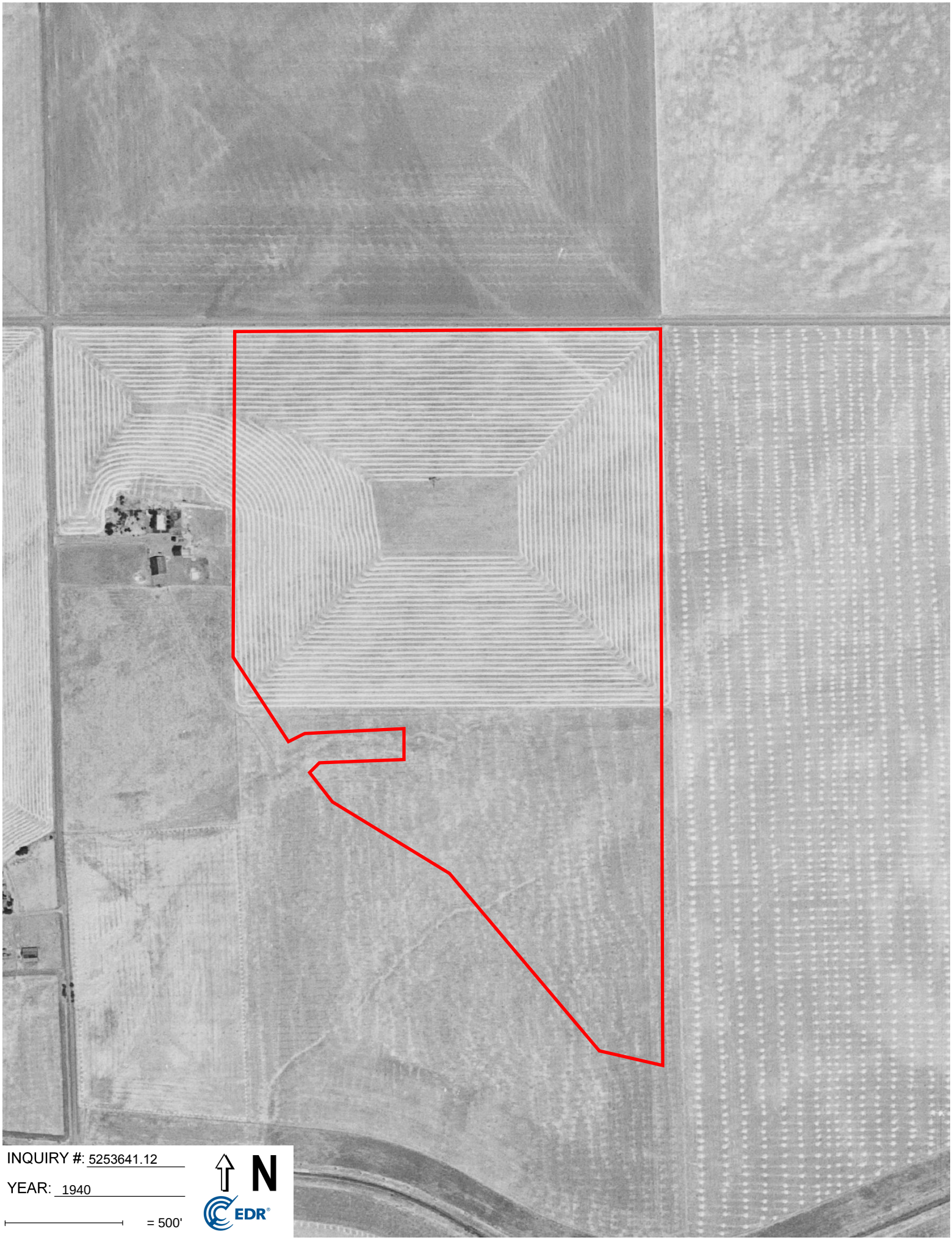
EDR


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YEAR: 1968
= 500'
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EDR


INQUIRY #: 5253641.12
YEAR: 1963
= 500'
N
EDR


INQUIRY #: 5253641.12
YEAR: 1957
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EDR


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YEAR: 1949
= 500'
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EDR



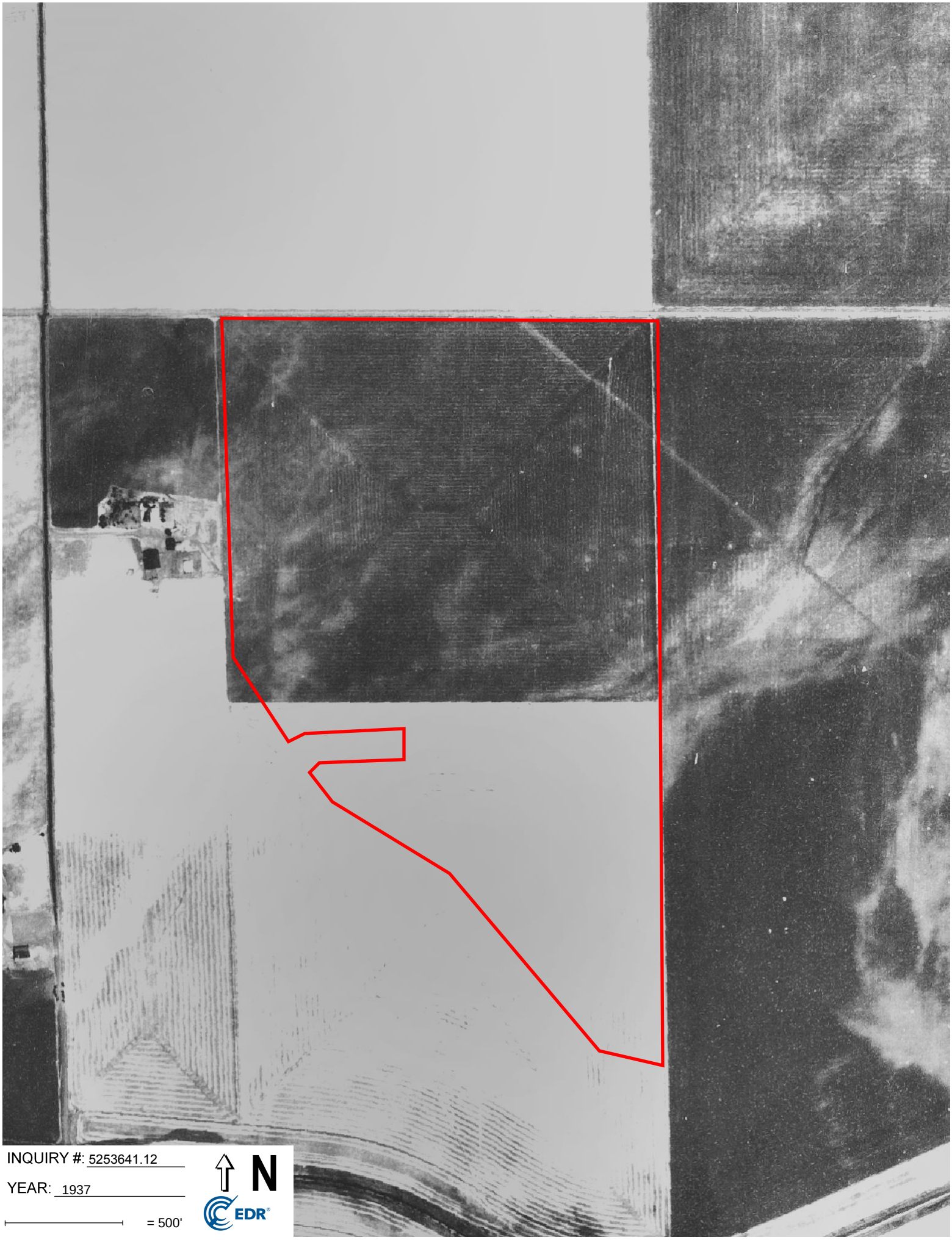
INQUIRY #: 5253641.12

YEAR: 1940

= 500'

N

EDR



INQUIRY #: 5253641.12

YEAR: 1937

= 500'

N

EDR

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377

Inquiry Number: 5253641.5
April 11, 2018

The EDR-City Directory Image Report

Environmental Data Resources Inc

6 Armstrong Road
Shelton, CT 06484
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

Executive Summary

Findings

City Directory Images

Thank you for your business.
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with any questions or comments.

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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
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
1975	☑	☐	Haines Criss-Cross Directory
1971	☐	☐	Polk's City Directory
1966	☐	☐	Polk's City Directory
1959	☐	☐	Polk's City Directory

FINDINGS

TARGET PROPERTY STREET

16000 West Schulte Road
Tracy, CA 95377

Year	*CD Image*	*Source*	
W SCHULTE RD			
2014	pg A1	EDR Digital Archive	
2010	pg A2	EDR Digital Archive	
2005	pg A3	EDR Digital Archive	
2000	pg A4	EDR Digital Archive	
1995	pg A5	EDR Digital Archive	
1992	pg A6	EDR Digital Archive	
1985	pg A7	Haines Criss-Cross Directory	
1980	pg A8	Haines Criss-Cross Directory	
1975	pg A9	Haines Criss-Cross Directory	
1971	-	Polk's City Directory	Street not listed in Source
1966	-	Polk's City Directory	Street not listed in Source
1959	-	Polk's City Directory	Street not listed in Source

FINDINGS

CROSS STREETS

No Cross Streets Identified

City Directory Images

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 2014

14590 GWF ENERGY LLC
14700 OWENS-BROCKWAY GLASS CONT INC
OWENS-ILLINOIS INC
14800 THERMAL ENERGY DEV PARTNR LP
14950 GWF POWER SYSTEMS
STAR WEST GENERATION LLC
15400 DEMOULIN, WILLIAM
16502 FORESTRY AND FIRE PROTECTION
16900 FEDEX SUPPLYCHAIN SYSTEMS INC
SAFE AMERICA CREDIT UNION
SAFEWAY INC
17880 COSTCO WHOLESALE CORPORATION
STAFFMARK

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 2010

14700	LILJA CORP
	OI CANADA
	OWENS-BROCKWAY GLASS CONT INC
	OWENS-ILLINOIS INC
	TRACEY GLASS PLANT
14800	THERMAL ENERGY DEV PARTNR LP
15400	LOPEZ, JOSE D
	STERLING AUTO BODY
16502	CALIFORNIA STATE OF
	FORESTRY AND FIRE PROTECTION
16900	SAFEAMERICA CREDIT UNION
	SAFEWAY INC
17880	COSTCO WHOLESALE CORPORATION
	STAFFMARK

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 2005

14700 OWENS-BROCKWAY GLASS CONTAINER
OWENS-ILLINOIS INC
TRACEY GLASS PLANT
14800 TRACY OPERATORS
15400 LOPEZ, JOSE D
16900 SAFEAMERICA CREDIT UNION
17880 COSTCO WHOLESALE DEPOT

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 2000

14700 OWENS-BROCKWAY GLASS CONTAINER
OWENS-ILLINOIS INC
14800 TRACY OPERATORS
16900 MONUMENT SECURITY INC
SAFEAMERICA FEDERAL CREDIT UN
SAFEWAY INC
SUMMIT LOGISTICS INC

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 1995

14700 OWENS-BROCKWAY GLASS CONTAINER
OWENS-ILLINOIS INC
14800 TRACY OPERATORS
16900 PHOENIX OPERATIONS INC
SAFEAMERICA FEDERAL CREDIT UN
SAFEWAY DISTRIBUTION
SPECIALIZED DISTRIBUTION MGT

Target Street	Cross Street	Source
✓	-	EDR Digital Archive

W SCHULTE RD 1992

14700 OWENS-ILLINOIS INC
14800 TRACY OPERATORS
16900 KALMAN FLOOR COMPANY INC
SPECIALIZED DISTRIBUTION MGT

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

W SCHULTE RD 1985

SCHULTE RD W 95376
TRACY

RURAL ROUTE 1

275	LATORRE BOB	836-5429	1
415B	MIDKIFF MIKE	836-5979	+5
500	SULLIVAN DEAN	836-4785	2
150	FILIPPINI C L	835-4043	2
7750	POTTER ERIC	835-5192	9
7818	ALVAREZ PETER	835-1411	
8235	CARDOZA LYNN	835-8677	9
8567	MATTOS B R	835-0306	3
	MATTOS EQUIP TRANS	835-6609	6
	MATTOS RICHARD N	835-0385	
8606	ALVAREZ JOE JR	835-3082	
8842	BARNARD GARDENS	835-7358	
	BERNARD GARDENS	835-7358	2
8898	XXXX	00	
8966	GRAHAM JAS	836-4289	2
10091	XXXX	00	
10151	XXXX	00	
10255	XXXX	00	
10268	XXXX	00	
12355	BEZIO RAYMOND	835-1937	0
	MOITOSO G P	835-0271	
12359	XXXX	00	
12763	SCOTT BYFORD	835-9348	8
12770	MONIZ R L	835-4761	
12775	XXXX	00	
12780	MONIZ MARK	835-5838	7
14700	OWENS IL GLSS CNTNR	835-5701	7
16502	INGHAM R JAMES	836-1028	9
NO #	US TRANSP FAA	835-4379	2

★ 5 BUS 24 RES 1 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

W SCHULTE RD 1980



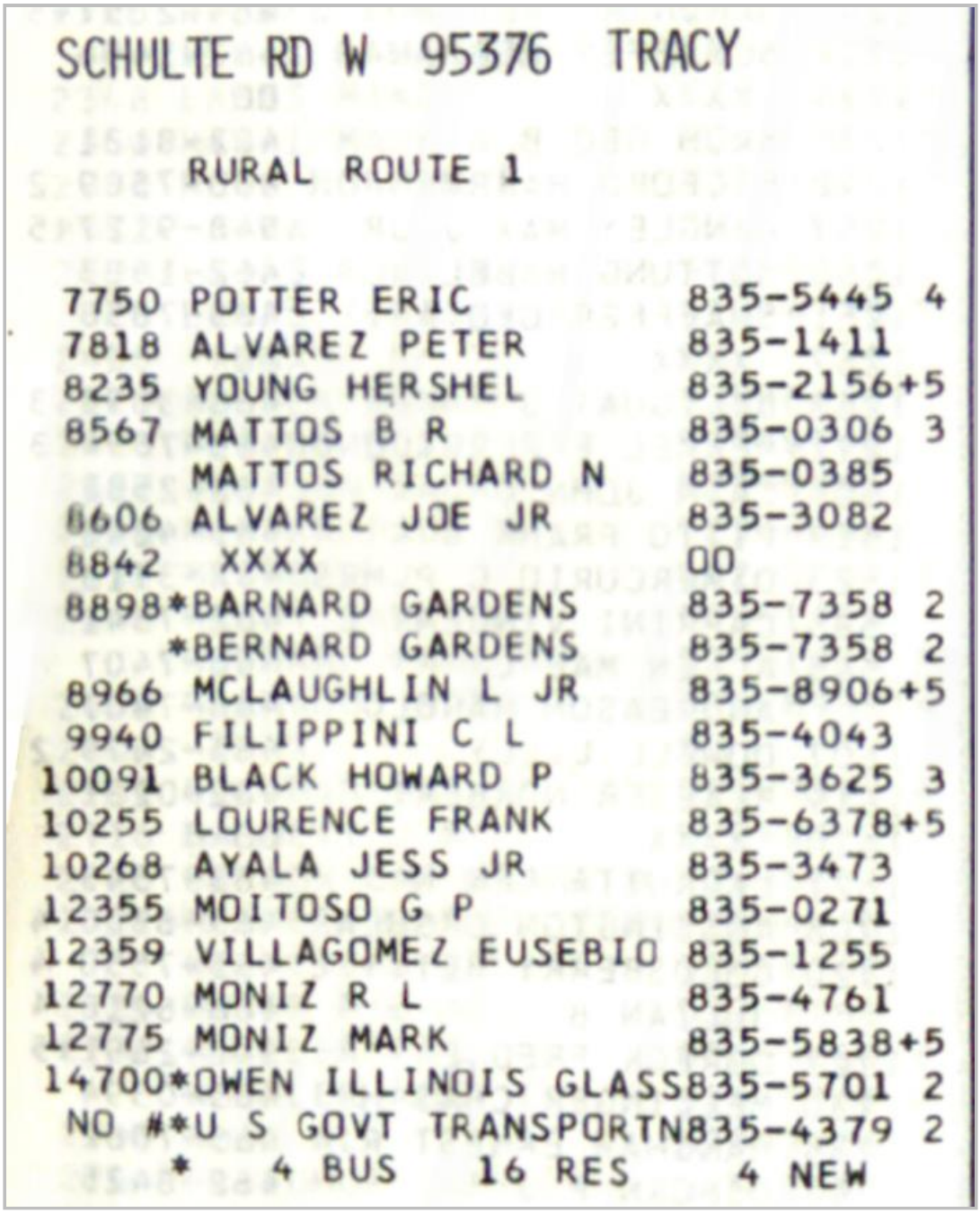
..SCHULTE RD W 95376 CONT..

10255	XXXX	00
10268	AYALA JESS JR	835-3473
12355	BEZIO RAYMOND	835-1937 +0
	MOITOSO G P	835-0271
12359	XXXX	00
12763	SCOTT BYFORD	835-9348 8
12770	MONIZ R L	835-4761
12775	XXXX	00
12780	MONIZ MARK	835-5838 7
14700	OWENS ILLINOIS GLSS	835-5701 7
16502	INGHAM R JAMES	836-1028 9
NO #	UNITED ST TRNSP FAA	835-4379 2

★ 5 BUS 21 RES 3 NEW

Target Street	Cross Street	Source
✓	-	Haines Criss-Cross Directory

W SCHULTE RD 1975



SCHULTE RD W 95376 TRACY

RURAL ROUTE 1

7750	POTTER ERIC	835-5445 4
7818	ALVAREZ PETER	835-1411
8235	YOUNG HERSHEL	835-2156+5
8567	MATTOS B R	835-0306 3
	MATTOS RICHARD N	835-0385
8606	ALVAREZ JOE JR	835-3082
8842	XXXX	OO
8898	*BARNARD GARDENS	835-7358 2
	*BERNARD GARDENS	835-7358 2
8966	MCLAUGHLIN L JR	835-8906+5
9940	FILIPPINI C L	835-4043
10091	BLACK HOWARD P	835-3625 3
10255	LOURENCE FRANK	835-6378+5
10268	AYALA JESS JR	835-3473
12355	MOITOSO G P	835-0271
12359	VILLAGOMEZ EUSEBIO	835-1255
12770	MONIZ R L	835-4761
12775	MONIZ MARK	835-5838+5
14700	*OWEN ILLINOIS GLASS	835-5701 2
NO #	*U S GOVT TRANSPORTN	835-4379 2

* 4 BUS 16 RES 4 NEW

16000 West Schulte Road

16000 West Schulte Road

Tracy, CA 95377

Inquiry Number: 5253641.4

April 10, 2018

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

04/10/18

Site Name:

16000 West Schulte Road
16000 West Schulte Road
Tracy, CA 95377
EDR Inquiry # 5253641.4

Client Name:

Kleinfelder, Inc.
2 Ada, Suite 250
Irvine, CA 92618-0000
Contact: Paolo Dizon

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder, Inc. 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.# NA
Project: 20190071.001A

Coordinates:

Latitude:	37.718235 37° 43' 6" North
Longitude:	-121.50661 -121° 30' 24" West
UTM Zone:	Zone 10 North
UTM X Meters:	631619.51
UTM Y Meters:	4175602.88
Elevation:	175.00' above sea level

Maps Provided:

2012	1916
1980, 1981	1907
1968	
1953, 1954	
1947	
1943	
1942	
1922	

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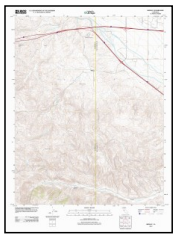
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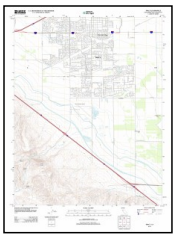
Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets



Midway
2012
7.5-minute, 24000



Tracy
2012
7.5-minute, 24000

1980, 1981 Source Sheets



Midway
1980
7.5-minute, 24000
Aerial Photo Revised 1978



Tracy
1981
7.5-minute, 24000
Aerial Photo Revised 1978

1968 Source Sheets



Midway
1968
7.5-minute, 24000
Aerial Photo Revised 1968



Tracy
1968
7.5-minute, 24000
Aerial Photo Revised 1968

1953, 1954 Source Sheets



Midway
1953
7.5-minute, 24000
Aerial Photo Revised 1950

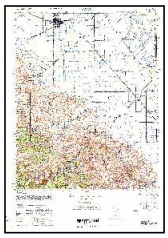


Tracy
1954
7.5-minute, 24000
Aerial Photo Revised 1949

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1947 Source Sheets



CARBONA
1947
15-minute, 50000

1943 Source Sheets



Tesla
1943
15-minute, 62500
Aerial Photo Revised 1937

1942 Source Sheets



Altamont
1942
15-minute, 62500
Aerial Photo Revised 1937



Carbona
1942
15-minute, 62500
Aerial Photo Revised 1937

1922 Source Sheets



Carbona
1922
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

1916 Source Sheets



Tracy
1916
7.5-minute, 31680



Midway
1916
7.5-minute, 31680

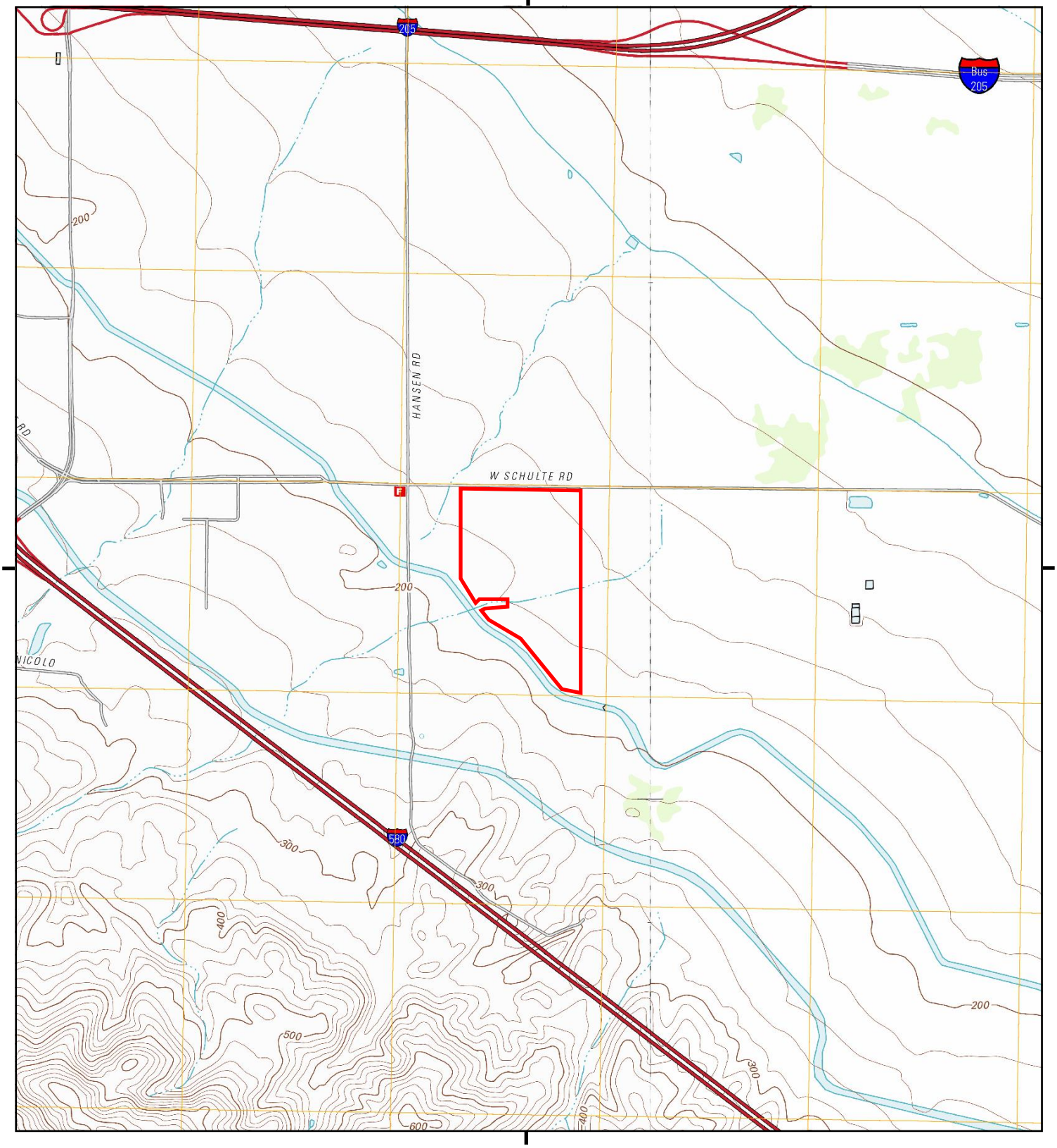
1907 Source Sheets



Tesla
1907
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

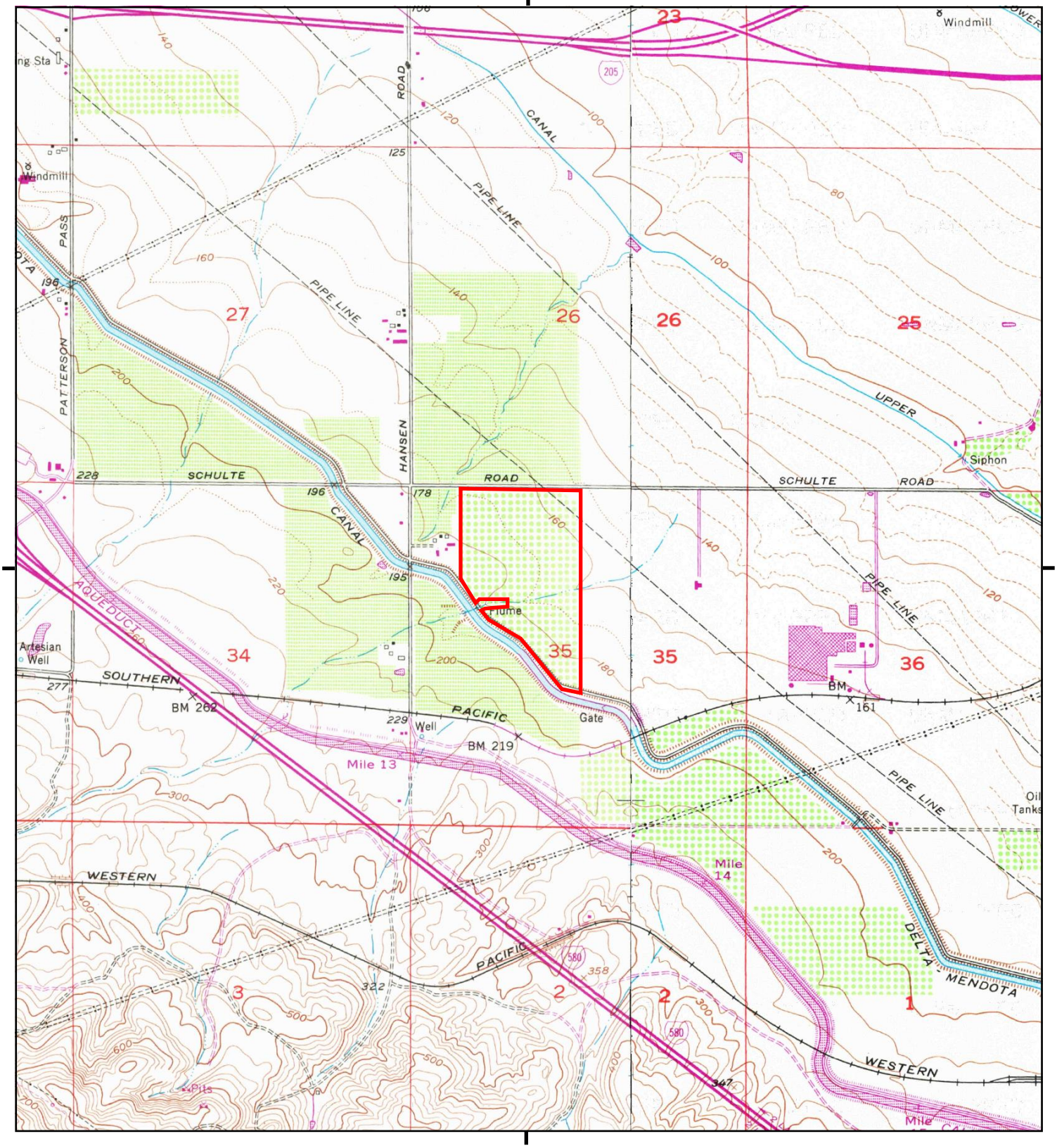
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Midway, 2012, 7.5-minute
SE, Tracy, 2012, 7.5-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

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

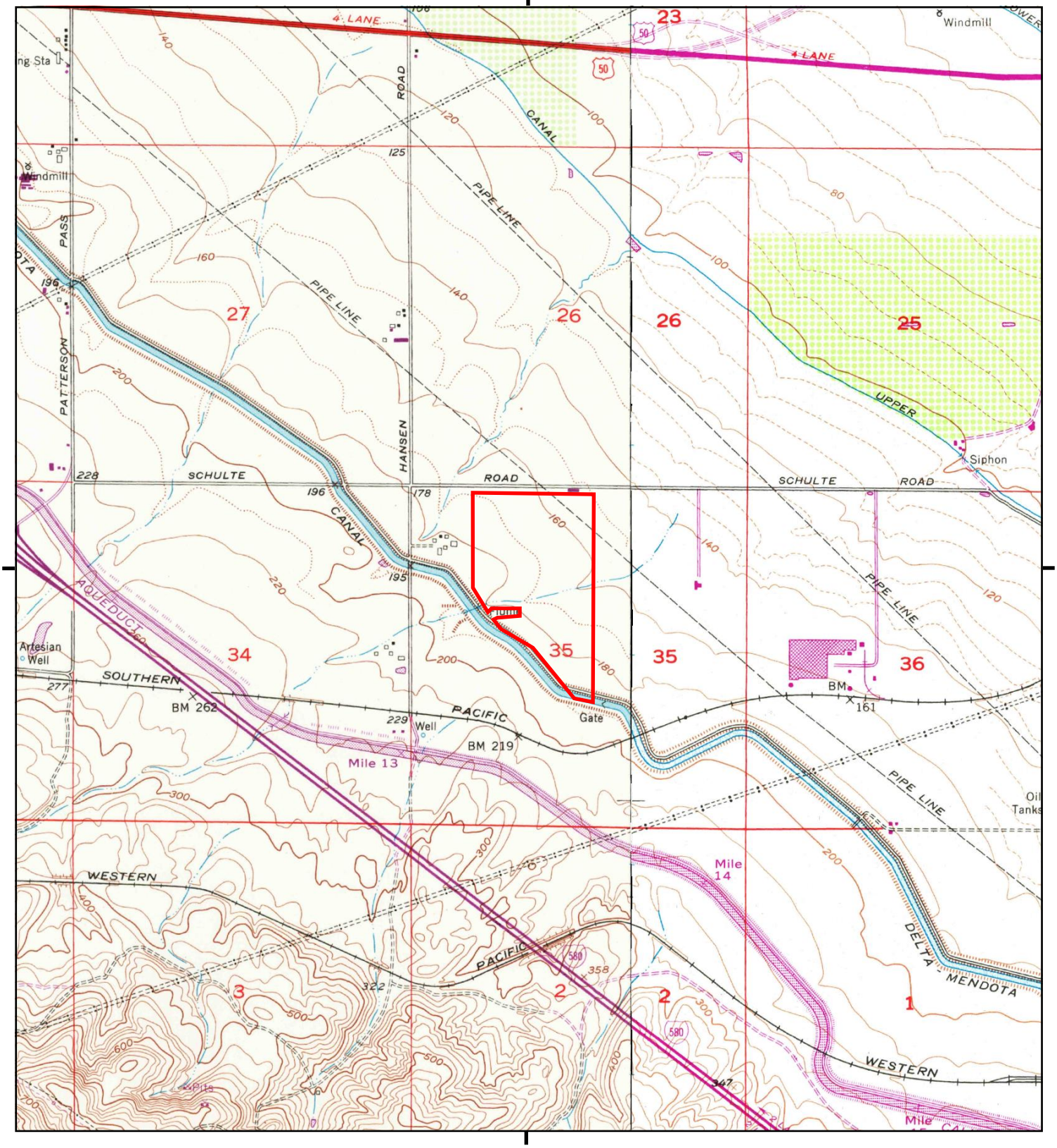
TP, Midway, 1980, 7.5-minute
SE, Tracy, 1981, 7.5-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N

Historical Topo Map

1968



This report includes information from the following map sheet(s).

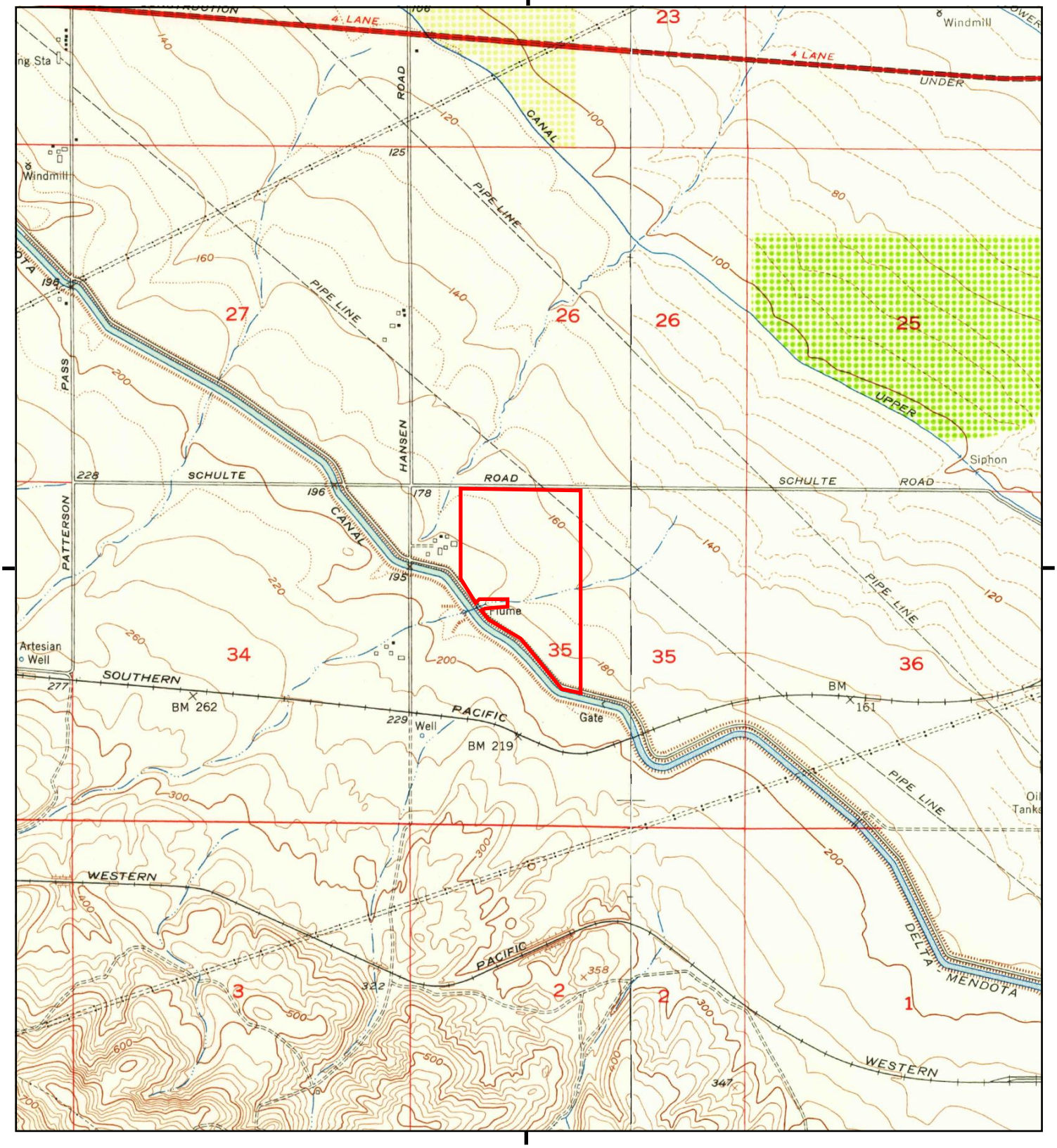
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Midway, 1968, 7.5-minute
SE, Tracy, 1968, 7.5-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

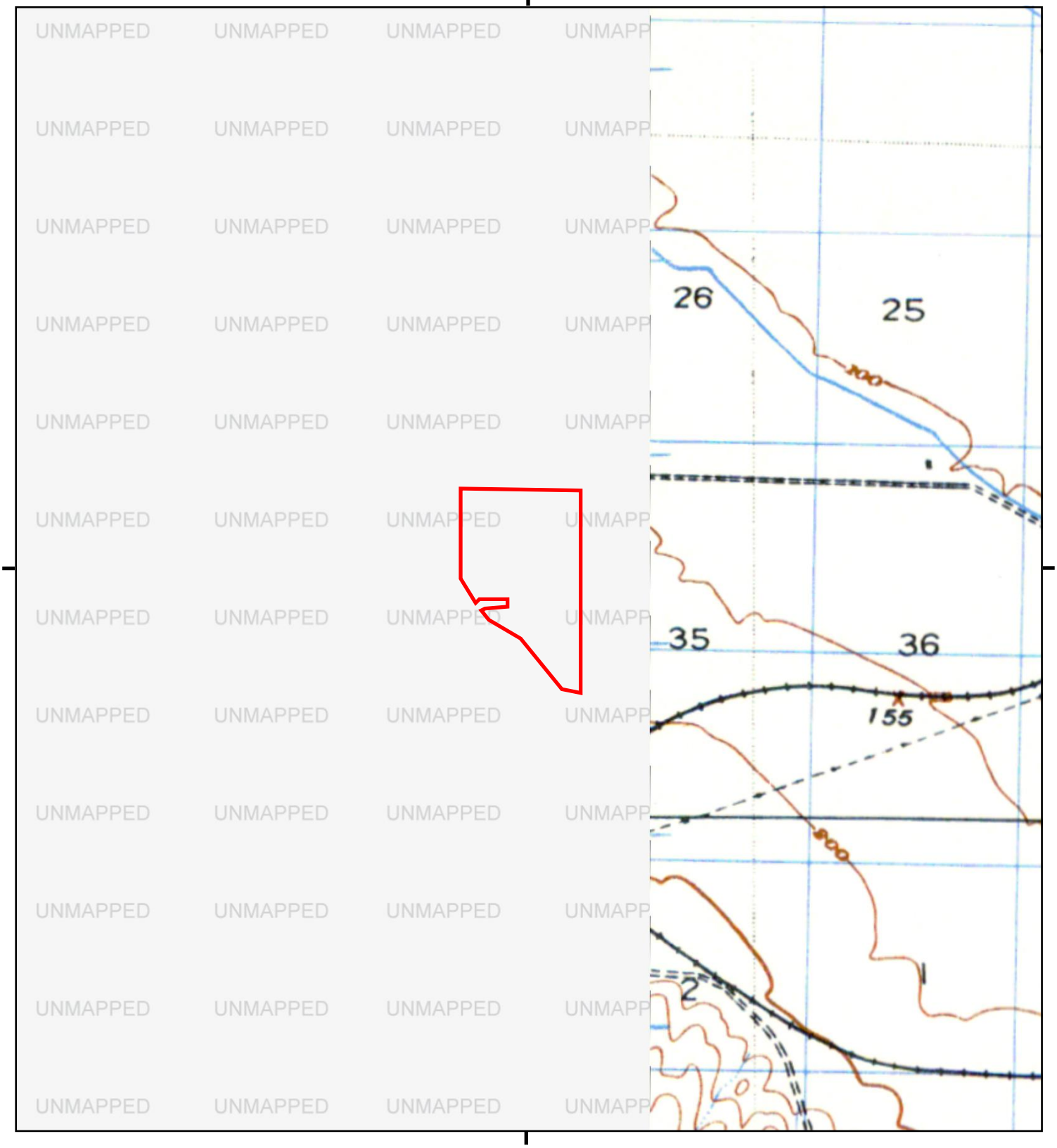
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Midway, 1953, 7.5-minute
SE, Tracy, 1954, 7.5-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

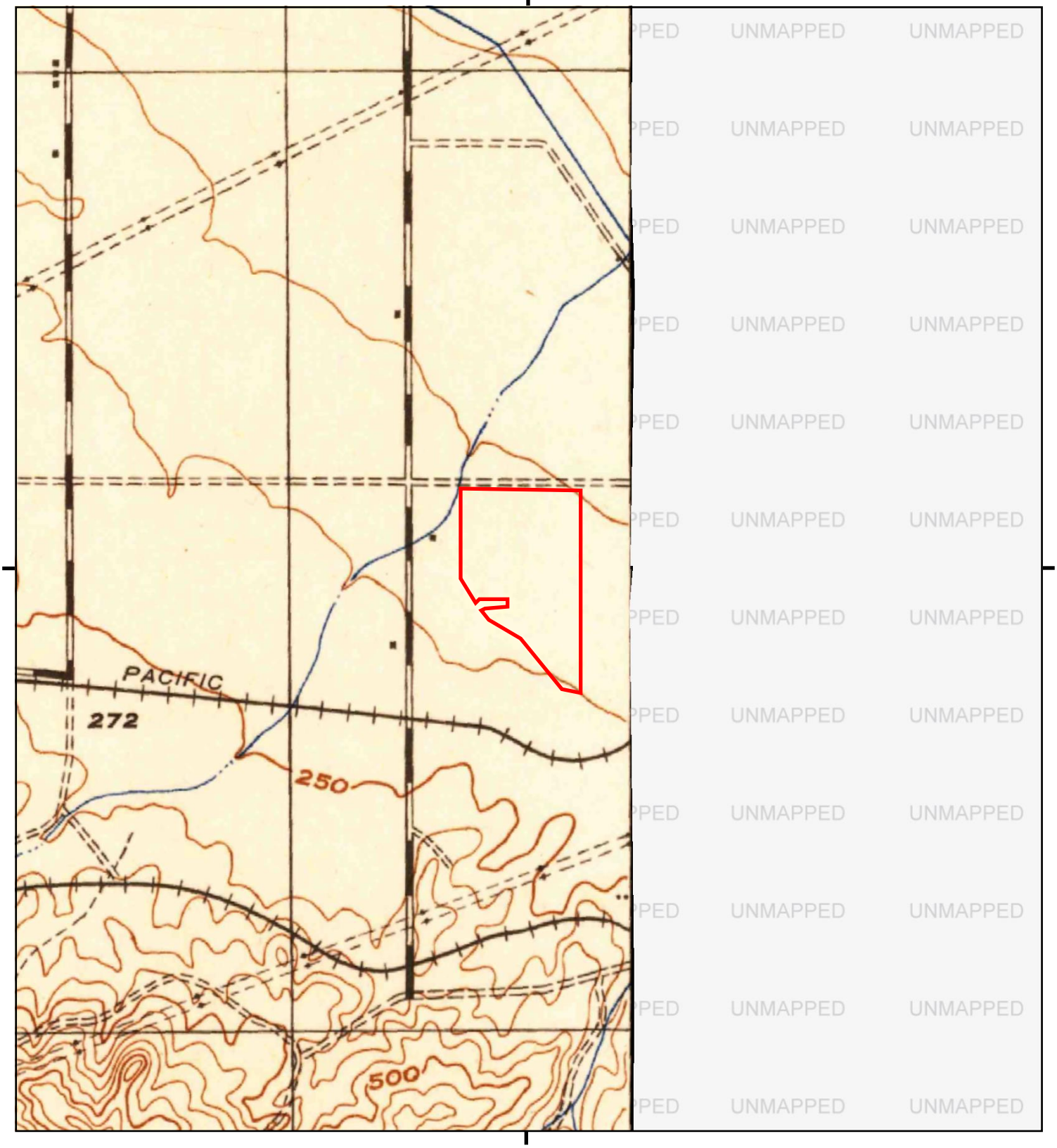
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, CARBONA, 1947, 15-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

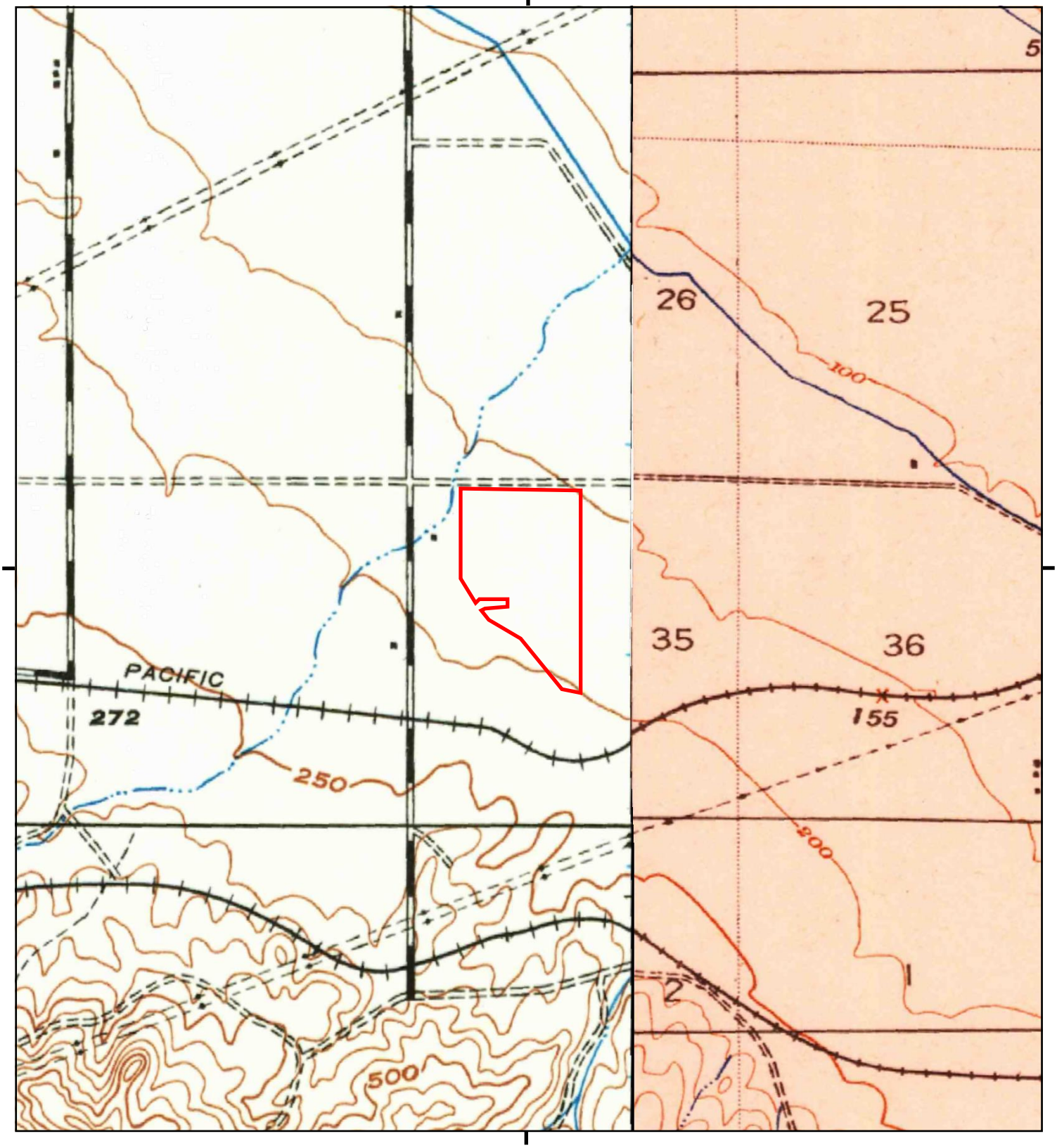
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Tesla, 1943, 15-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

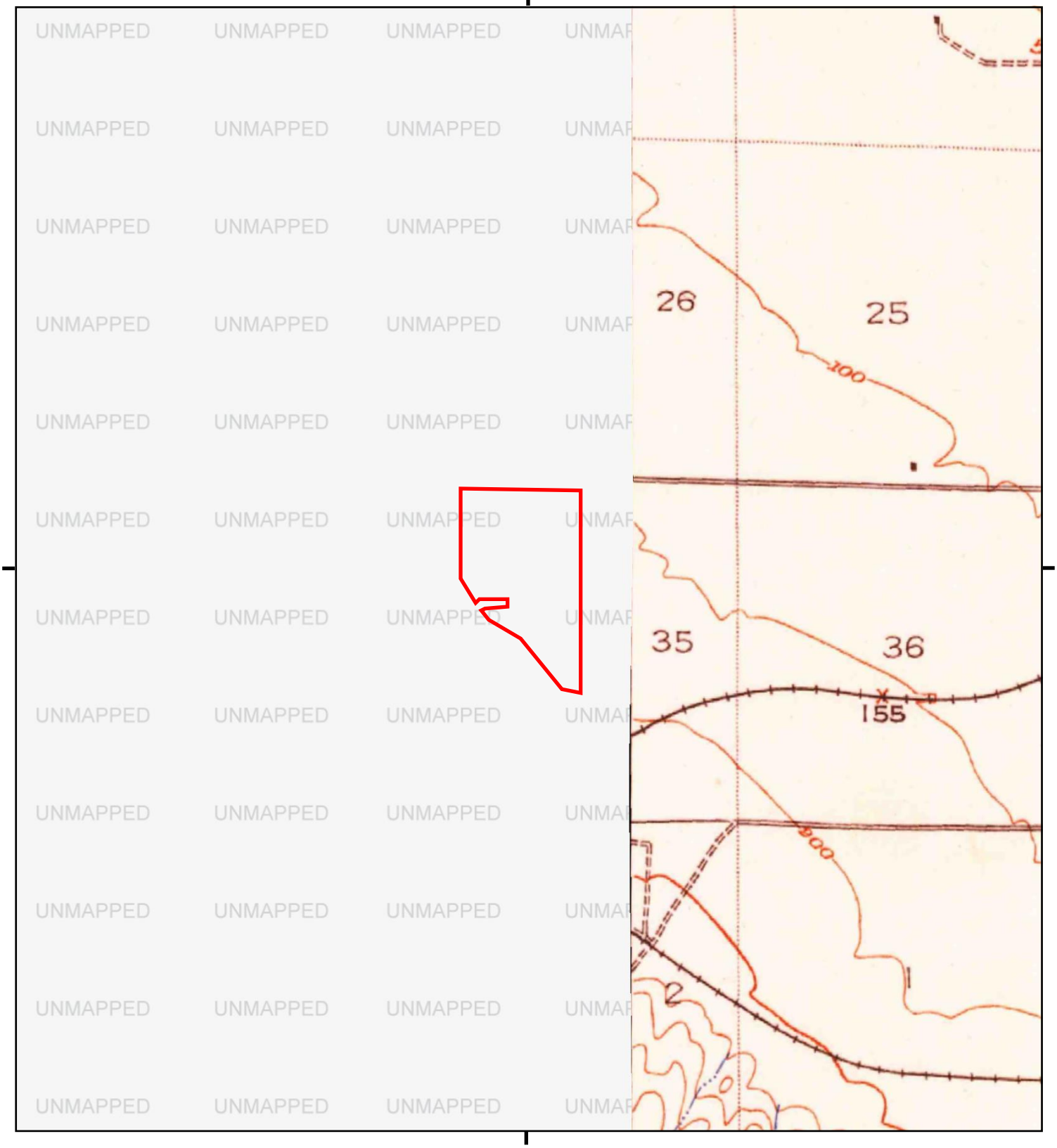
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Altamont, 1942, 15-minute
SE, Carbona, 1942, 15-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

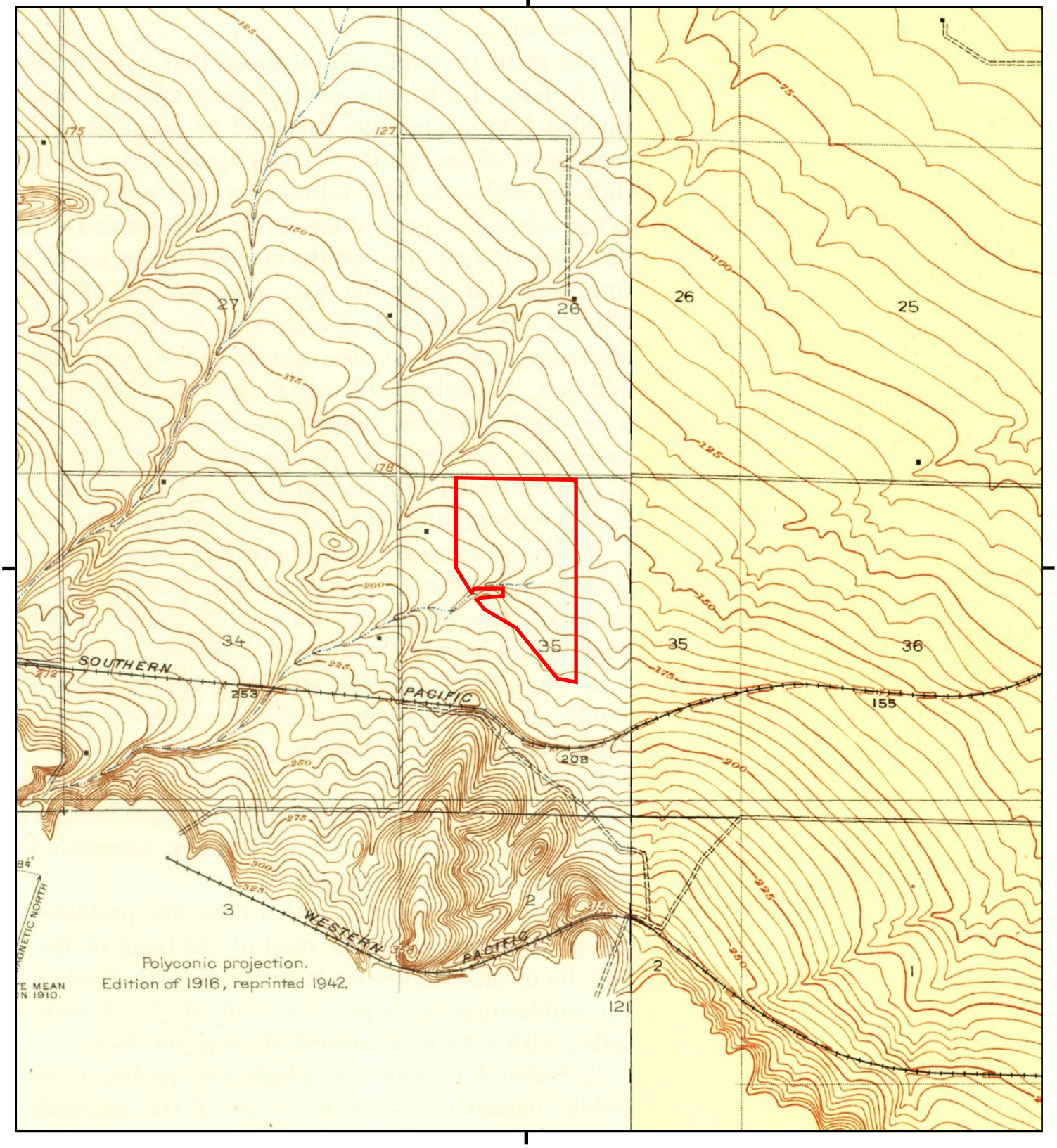
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

SE, Carbona, 1922, 15-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

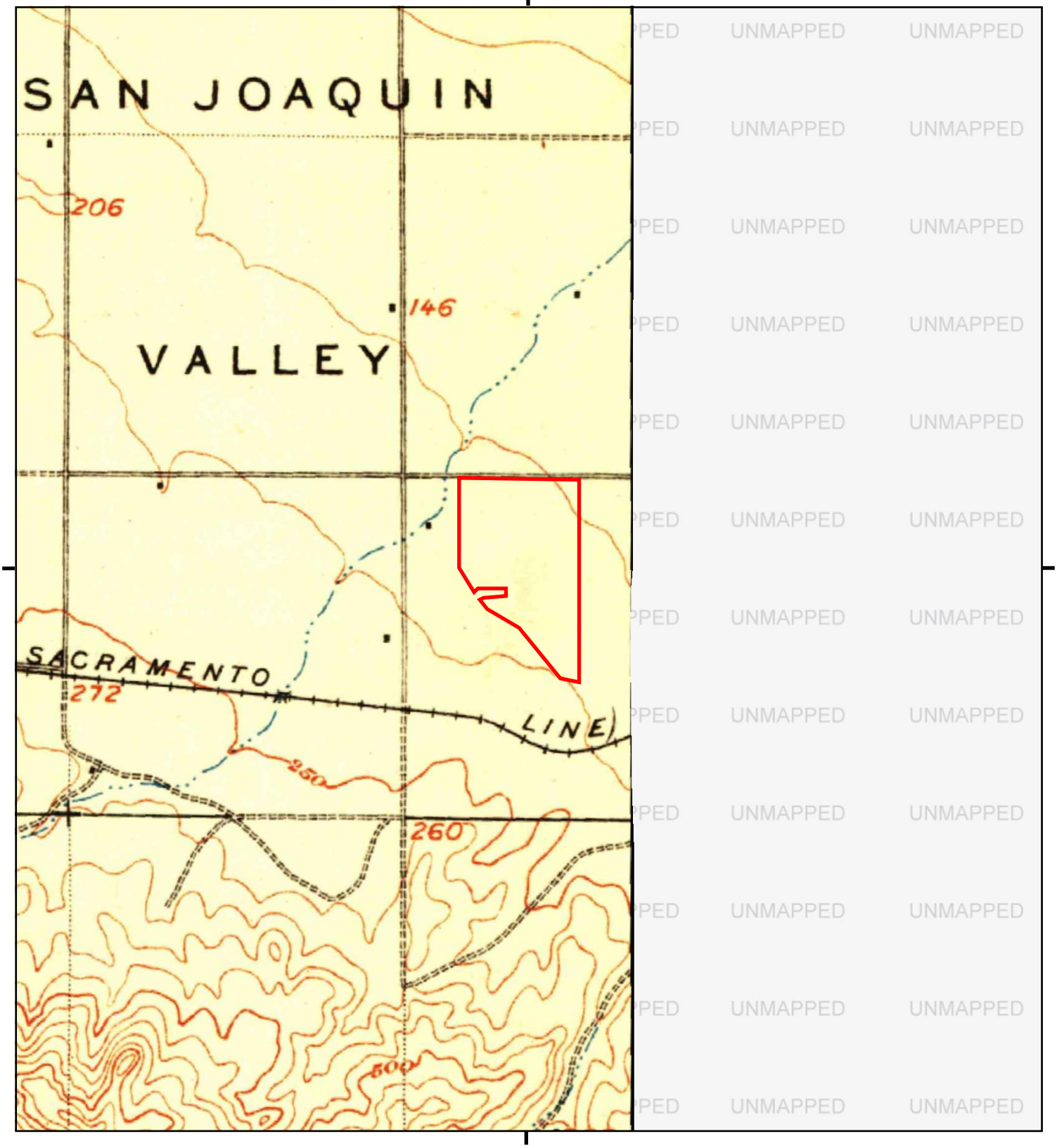
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Midway, 1916, 7.5-minute
SE, Tracy, 1916, 7.5-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

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, Tesla, 1907, 15-minute

SITE NAME: 16000 West Schulte Road
ADDRESS: 16000 West Schulte Road
Tracy, CA 95377
CLIENT: Kleinfelder, Inc.

N

APPENDIX E
LIMITED PHASE II ESA TABLE, FIGURE AND LABORATORY REPORT

DRAFT

Copyright 2018 Kleinfelder

TABLE 1
ARSENIC AND OCP SURFACE SAMPLE RESULTS
Proposed Costco E-Commerce Facility
16000 West Schulte Road
Tracy, California

Sample	Date Sampled	Sample Depth (feet bgs)	Arsenic (mg/kg) 6010B	OCPs (µg/kg) 8081A
SS-1,2,11,12 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-3,4,13,14 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-5,6,15,16 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-7,8,17,18 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-9,10,19,20 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-21,22,31,32 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-23,24,33,34 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-25,26,35,36 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-27,28,37,38 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-30,29,39,40 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-30,29,39,40 (COMPOSITE) DUP	4/17/2018	0.5	NA	<1.0-20
SS-41,42,51,52 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-43,44,53,54 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-45,46,55,56 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-47,48,57,58 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-48,50,59,60 (COMPOSITE)	4/17/2018	0.5	NA	<1.0-20
SS-61,62,71 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-61,62,71 (COMPOSITE) DUP	4/18/2018	0.5	NA	<1.0-20
SS-63,64,72,73 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-65,66,74,75 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-67,68,76,77 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-69,70,78,79 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-80,81,88 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-82,83,89,90 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-84,85,91,92 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-86,87,93,94 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-95,96,97,102 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-93,99,103,104 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-100,101,105,106 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-107,108,111 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-109,110,112,113 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-114,115,116 (COMPOSITE)	4/18/2018	0.5	NA	<1.0-20
SS-114,115,116 (COMPOSITE) DUP	4/18/2018	0.5	NA	<1.0-20
SS-1	4/17/2018	0.5	2.9	NA
SS-4	4/17/2018	0.5	2.9	NA
SS-15	4/17/2018	0.5	3.4	NA
SS-18	4/17/2018	0.5	3.4	NA
SS-10	4/17/2018	0.5	3.4	NA
SS-22	4/17/2018	0.5	2.5	NA
SS-33	4/17/2018	0.5	3.0	NA
SS-36	4/17/2018	0.5	3.4	NA
SS-27	4/17/2018	0.5	3.3	NA
SS-30	4/17/2018	0.5	3.3	NA
SS-30-DUP	4/17/2018	0.5	3.4	NA
SS-51	4/17/2018	0.5	2.7	NA
SS-54	4/17/2018	0.5	3.5	NA
SS-45	4/17/2018	0.5	3.2	NA
SS-48	4/17/2018	0.5	3.5	NA
SS-59	4/17/2018	0.5	3.4	NA
SS-71	4/18/2018	0.5	3.1	NA
SS-71-DUP	4/18/2018	0.5	3.0	NA
SS-63	4/18/2018	0.5	3.5	NA
SS-66	4/18/2018	0.5	3.4	NA
SS-76	4/18/2018	0.5	4.0	NA
SS-79	4/18/2018	0.5	3.8	NA
SS-80	4/18/2018	0.5	2.3	NA
SS-83	4/18/2018	0.5	4.1	NA
SS-91	4/18/2018	0.5	3.8	NA
SS-94	4/18/2018	0.5	3.9	NA

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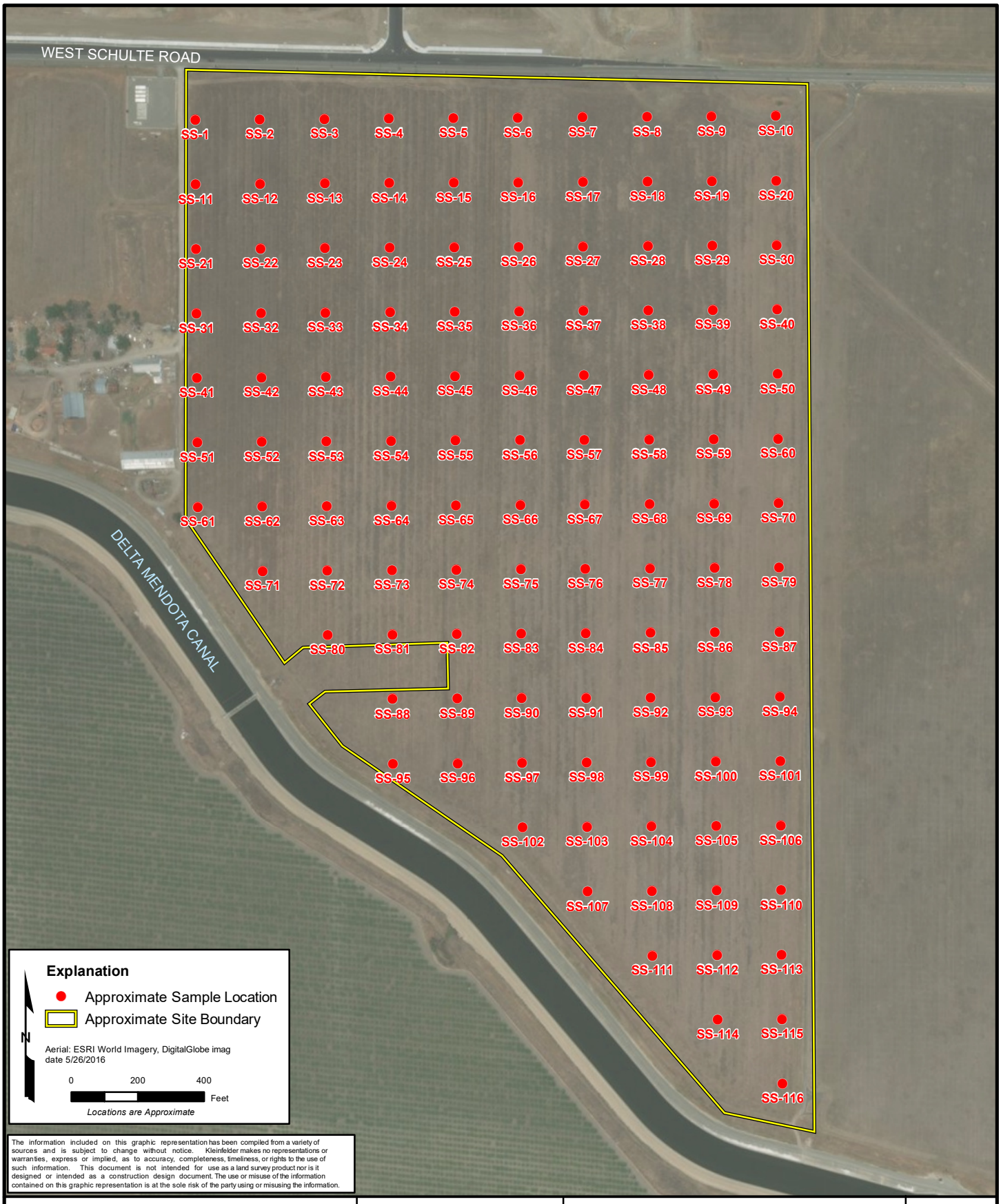
TABLE 1
ARSENIC AND OCP SURFACE SAMPLE RESULTS
Proposed Costco E-Commerce Facility
16000 West Schulte Road
Tracy, California

Sample	Date Sampled	Sample Depth (feet bgs)	Arsenic (mg/kg) 6010B	OCPs (µg/kg) 8081A
SS-95	4/18/2018	0.5	3.4	NA
SS-99	4/18/2018	0.5	3.9	NA
SS-105	4/18/2018	0.5	3.6	NA
SS-111	4/18/2018	0.5	3.9	NA
SS-109	4/18/2018	0.5	3.5	NA
SS-115	4/18/2018	0.5	4.3	NA
SS-115-DUP	4/18/2018	0.5	4.2	NA
ESL			0.067	NL or Vary
DTSC SLs - Residential			0.11	NL or Vary
DTSC SLs - Commercial			0.4	NL or Vary
TTLC (mg/kg)			500	
STLC (mg/L)			5	
TCLP Value (mg/L)			5	
	10 x STLC		50	
	20 x TCLP		100	

Notes:

OCPs	Organochlorine pesticides
mg/kg	Milligrams per kilogram
µg/kg	Micrograms per kilogram
bgs	Below ground surface
6010B / 8081A	United States Environmental Protection Agency (US EPA) analytical method number
<0.52	Not detected above the indicated laboratory reporting limit
ESL	San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Level (February 2016).
DTSC SLs	Recommended soil screening level (SL) provided in the California Environmental Protection Agency, Department of Toxic Substances Control, Office of Human and Ecological Risk (HERO) Human Health Risk Assessment Note No. 3, dated January 2018 (corrected February 2018).
TTLC	California Code of Regulations Title 22 Total Threshold Limit Concentration
STLC	California Code of Regulations Title 22 Soluble Threshold Limit Concentration
TCLP	Toxicity Characteristic Leaching Procedure
NL	Compound or value is not listed

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PLOTTED: 4/24/2018 8:14:27 PM, KHagan

FILE: L:\2019\20190071.001A - CSM Costco Tracy CA #179 Tracy Depot ENV\2.0 Technical Information\2.8 GIS

IRVINE, CA

KLEINFELDER
Bright People. Right Solutions.

PROJECT:	20190071
DRAWN:	APR 2018
DRAWN BY:	K. HAGAN
CHECKED BY:	M. CARROLL
FILE NAME:	Sampling.mxd

SAMPLE LOCATION MAP

PROPOSED COSTCO E-COMMERCE FACILITY
16000 WEST SCHULTE ROAD
TRACY, CALIFORNIA

FIGURE

E-1

CALIFORNIA LABORATORY SERVICES
Committed. Responsive. Flexible.

April 23, 2018

CLS Work Order #: 18D1101
COC #:

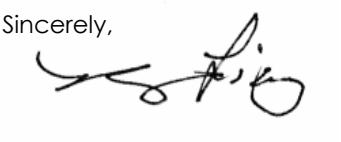
Paolo Dizon
Kleinfelder (Irvine)
2 Ada Stuite 250
Irvine, CA 92618

Project Name: Hom Property

Enclosed are the results of analyses for samples received by the laboratory on 04/19/18 16:10. Samples were analyzed pursuant to client request utilizing EPA or other ELAP approved methodologies. I certify that the results are in compliance both technically and for completeness.

Analytical results are attached to this letter. Please call if we can provide additional assistance.

Sincerely,



James Liang, Ph.D.
Laboratory Director

CA SWRCB ELAP Accreditation/Registration number 1233

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 18D1161 (1 of 10)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conti
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:

☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

ANALYSIS REQUESTED

PRESERVATIVES ▼

DATE	TIME	SAMPLE IDENTIFICATION (Box 1)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/17/18	1049	SS-1		Soil	1	Jar	3	X	Composite		X			
	1032	SS-2		Soil	1	Jar	3				X			
	10:58	SS-11		Soil	1	Jar	3				X			
	10:56	SS-12		Soil	1	Jar	3				X			
	11:12	SS-3		Soil	1	Jar	3		Composite		X			
	11:10	SS-4		Soil	1	Jar	3	X			X			
	11:15	SS-13		Soil	1	Jar	3				X			
	11:13	SS-14		Soil	1	Jar	3				X			
	11:22	SS-5		Soil	1	Jar	3		Composite		X			
	11:24	SS-6		Soil	1	Jar	3				X			
	11:19	SS-15		Soil	1	Jar	3				X			
	11:21	SS-16		Soil	1	Jar	3	X			X			

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:

FIELD CONDITIONS:

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME:

PRESERVATIVES (1) HCL (2) HNO3 (3) COLD (4) H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME
	Anthony Wohletz / Kleinfelder	4/17 1611
	Curtis Conti	4/19/18 1010

RECEIVED BY (Signature)	PRINT NAME/COMPANY
	KLF Fridge
	CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1010

CONDITIONS/COMMENTS: 1.9

SHIPPED BY: ☐ FEDEX ☐ UPS ☒ OTHER CLS AIR BILL #

Sent by: 4/19/18 1610

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 19D1101 (2 of 10)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conti
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:

☐ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:

FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION (Box 1)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/17/18	11:36	SS-7		Soil	1	Jar	3		Composite		X			
	11:34	SS-8		Soil	1	Jar	3				X			
	11:31	SS-17		Soil	1	Jar	3				X			
	11:29	SS-18		Soil	1	Jar	3	X			X			
	11:40	SS-9		Soil	1	Jar	3		Composite		X			
	11:38	SS-10		Soil	1	Jar	3	X			X			
	11:41	SS-19		Soil	1	Jar	3				X			
	11:43	SS-20		Soil	1	Jar	3				X			
	1:08	SS-21		Soil	1	Jar	3		Composite		X			
	1:06	SS-22		Soil	1	Jar	3				X			
	1:11	SS-31		Soil	1	Jar	3	X			X			
	1:10	SS-32		Soil	1	Jar	3				X			

AM ↑ PM ↓

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME:

PRESERVATIVES (1) HCL (2) HNO3 (3) = COLD (4)= H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/17 1611		KLF Field
	Curtis Conti	4/19/18	1360	CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1610 CONDITIONS/COMMENTS:

SHIPPED BY: ☐ FED EX ☐ UPS ☒ OTHER CLS AIR/BILL #

RECEIVED BY 4/19/18 1610

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 16D101 (2 of 10)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653
Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conn
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:
☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com
☐ OTHER

ANALYSIS REQUESTED

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:

FIELD CONDITIONS

DATE	TIME PM	SAMPLE IDENTIFICATION (Box 2)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES ▼	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/17/18	1257	SS-23		Soil	1	Jar	3		Composite		X			
	1:58	SS-24		Soil	1	Jar	3				X			
	12:54	SS-33		Soil	1	Jar	3	X			X			
	12:56	SS-34		Soil	1	Jar	3				X			
	12:29	SS-25		Soil	1	Jar	3		Composite		X			
	12:37	SS-26		Soil	1	Jar	3				X			
	12:35	SS-35		Soil	1	Jar	3				X			
	12:31	SS-36		Soil	1	Jar	3	X			X			
	12:18	SS-27		Soil	1	Jar	3	X	Composite		X			
	12:20	SS-28		Soil	1	Jar	3				X			
	12:22	SS-37		Soil	1	Jar	3				X			
	12:23	SS-38		Soil	1	Jar	3				X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (2) HNO3 (3) = COLD (4) = H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/17 1611		
	Curtis Conn	4/19/18 1340		KLF Fridge
RECEIVED AT LAB BY:		DATE/TIME: 4/19/18 1610	CONDITIONS/COMMENTS:	CLI

SHIPPED BY: ☐ FEDEX ☐ UPS ☑ OTHER CLI

AIR BILL #

RELINQUISHED BY 4/19/18 1600

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 18P1101 (4 of 10)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653
Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conti
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:
☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com
☐ OTHER

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:
FIELD CONDITIONS:

DATE	TIME PM	SAMPLE IDENTIFICATION (Box 2)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/17/18	12:03	SS-30-DUP		Soil	1	Jar	3	X			X			
4/17/18	12:05	SS-30		Soil	1	Jar	3	X	Composite*		X			*Also prepare a composite duplicate and analyze for OCPs (8081A)
4/18/18	13:25	SS-29		Soil	1	Jar	3				X			
4/17/18	12:09	SS-39		Soil	1	Jar	3				X			
4/17/18	12:07	SS-40		Soil	1	Jar	3				X			
4/18/18	13:01	SS-41		Soil	1	Jar	3				X			
4/17/18	1:49	SS-42		Soil	1	Jar	3		Composite		X			
"	1:45	SS-51		Soil	1	Jar	3	X			X			
"	1:46	SS-52		Soil	1	Jar	3				X			
4/17/18	2:05	SS-43		Soil	1	Jar	3		Composite		X			
"	2:01	SS-44		Soil	1	Jar	3				X			
"	2:04	SS-53		Soil	1	Jar	3				X			
"	2:02	SS-54		Soil	1	Jar	3	X			X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (3) = COLD (2) HNO_3 (4) = H_2SO_4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/18 1545		
	Curtis Conti	4/18 1840		KLF F. dgc
RECEIVED AT LAB BY:	DATE/TIME: 4/19/18 1610	CONDITIONS/COMMENTS:		CLS

SHIPPED BY: ☐ FEDEX ☐ UPS ☑ OTHER CLS AIR BILL #

RELINQUISHED BY: 4/19/18 1610K

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 18D1101 (5 of 10)

Report To:

Kleinfelder - 24411 Ridge Route Drive, Suite 225

Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)

Project Name: Hom Property

Sampled By: Anthony Wohletz / Curtis Conti

Job Description:

Site Location: Tracy, CA

Client Job Number: 20190071.001A

Destination Laboratory

☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

ANALYSIS REQUESTED

PRESERVATIVES

DATE	TIME PM	SAMPLE IDENTIFICATION (Box 3)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/17/18	2:15	SS-45		Soil	1	Jar	3	X	Composite		X			
/	2:17	SS-46		Soil	1	Jar	3				X			
	2:20	SS-55		Soil	1	Jar	3				X			
	2:21	SS-56		Soil	1	Jar	3				X			
	2:32	SS-47		Soil	1	Jar	3		Composite		X			
	2:30	SS-48		Soil	1	Jar	3	X			X			
	2:36	SS-57		Soil	1	Jar	3				X			
	2:39	SS-58		Soil	1	Jar	3				X			
	2:46	SS-49		Soil	1	Jar	3		Composite		X			
	2:58	SS-50		Soil	1	Jar	3				X			
↓	2:43	SS-59		Soil	1	Jar	3	X			X			
	2:45	SS-60		Soil	1	Jar	3				X			

GEOTRACKER

EDF REPORT ☐ YES ☐

GLOBAL ID:

FIELD CONDITIONS:

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME:

PRESERVATIVES (1) HCL (2) HNO3 (3) = COLD (4) = H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/17 1611		
	Gabe Gomez	4/18 1130	B340H	IRLP Fridge

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 0610 CONDITIONS/COMMENTS:

SHIPPED BY: ☐ FED EX ☐ UPS ☒ OTHER CL AIR/BILL #

RELINQUISHED BY: 4/19/18 1610H

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 18D1101 (2 of 10)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conn
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:

☒ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:

FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION (Blk 3)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS: 1	2	5	10	SPECIAL INSTRUCTIONS
4/18/18	10:13	SS-71-DUP		Soil	1	Jar	3	X			X			
	10:16	SS-61		Soil	1	Jar	3		Composite*		X			
	10:18	SS-62		Soil	1	Jar	3				X			*Also prepare a composite duplicate and analyze for OCPs (8081A)
	10:23	SS-71		Soil	1	Jar	3	X			X			
	10:26	SS-63		Soil	1	Jar	3	X	Composite		X			
	10:32	SS-64		Soil	1	Jar	3				X			
	10:34	SS-72		Soil	1	Jar	3				X			
	10:35	SS-73		Soil	1	Jar	3				X			
	9:46	SS-65		Soil	1	Jar	3				X			
	9:44	SS-66		Soil	1	Jar	3	X	Composite		X			
	9:43	SS-74		Soil	1	Jar	3				X			
	9:47	SS-75		Soil	1	Jar	3				X			

ANALYSIS REQUESTED

SUSPECTED CONSTITUENTS:

SAMPLE RETENTION TIME:

PRESERVATIVES (1) HCL (2) HNO3 (3) - COLD (4) - H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/18 1545		KLF Fridge
	Curtis Conn	4/19/18		CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1610 CONDITIONS/COMMENTS: 1°C

SHIPPED BY: ☐ FEDEX ☐ UPS ☒ OTHER CLS AIR BILL #

RELINQUISHED BY - 4/19/18 1610

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 147116 (7 of 14)

Report To:
Kleinfelder - 24411 Ridge Route Drive, Suite 225
Laguna Hills, CA 92653
Project Manager: Paolo Dizon (pdizon@kleinfelder.com)
Project Name: Hom Property
Sampled By: Anthony Wohletz / Curtis Conti
Job Description:
Site Location: Tracy, CA

Client Job Number: 20190071.001A
Destination Laboratory:
☒ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com
☐ OTHER

GEOTRACKER
EDF REPORT ☐ YES ☐
GLOBAL ID:
FIELD CONDITIONS:

DATE	TIME	SAMPLE BOX 4 IDENTIFICATION	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/18/18	9:34	SS-67		Soil	1	Jar	3		Composite		X			
	9:35	SS-68		Soil	1	Jar	3				X			
	9:30	SS-76		Soil	1	Jar	3	X			X			
	9:32	SS-77		Soil	1	Jar	3				X			
	9:29	SS-69		Soil	1	Jar	3		Composite		X			
	9:23	SS-70		Soil	1	Jar	3				X			
	9:22	SS-78		Soil	1	Jar	3				X			
	9:20	SS-79		Soil	1	Jar	3	X			X			
	10:17	SS-80		Soil	1	Jar	3	X	Composite		X			
	10:28	SS-81		Soil	1	Jar	3				X			
	10:24	SS-88		Soil	1	Jar	3				X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (2) HNO3 (3) = COLD (4)= H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/19 1545		KLF Fedex
	CARL CONTI	4/19/18 - 1340H		CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1610 CONDITIONS/COMMENTS:

SHIPPED BY: ☐ FED EX ☐ UPS ☒ OTHER CLS AIR BILL #

RELINQUISHED BY: 4/19/18 1610H

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 18-0404 (8 of 16)

Report To:

Kleinfelder - 24411 Ridge Route Drive, Suite 225

Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)

Project Name: Hom Property

Sampled By: Anthony Wohletz / Curtis Conti

Job Description:

Site Location: Tracy, CA

Client Job Number: 20190071.001A

Destination Laboratory

☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

ANALYSIS REQUESTED

GEOTRACKER

EDF REPORT ☐ YES ☐

GLOBAL ID:

FIELD CONDITIONS:

DATE	TIME AM	SAMPLE IDENTIFICATION (B2x4)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS 1	2	5	10	SPECIAL INSTRUCTIONS
4/18/19	10:40	SS-82		Soil	1	Jar	3				X			
	10:29	SS-83		Soil	1	Jar	3	X			X			
	10:43	SS-89		Soil	1	Jar	3				X			
	10:42	SS-90		Soil	1	Jar	3				X			
	10:58	SS-84		Soil	1	Jar	3				X			
	10:56	SS-85		Soil	1	Jar	3				X			
	10:52	SS-91		Soil	1	Jar	3	X			X			
	10:53	SS-92		Soil	1	Jar	3				X			
	11:07	SS-86		Soil	1	Jar	3				X			
	11:04	SS-87		Soil	1	Jar	3				X			
	11:04	SS-93		Soil	1	Jar	3				X			
	11:03	SS-94		Soil	1	Jar	3	X			X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (2) HNO3 (3) - COLD (4) - H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz / Kleinfelder	4/18 1545		KLF Field
	Carol Conner	4/19/19 - 1340		CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/19 1610 CONDITIONS/COMMENTS: 1 1-0

SHIPPED BY: ☐ FEDEX ☐ UPS ☒ OTHER CLS AIR BILL #

RELINQUISHED BY: 4/19/19 1610

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 160101 (1 of 10)

Report To:

Kleinfelder - 24411 Ridge Route Drive, Suite 225

Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)

Project Name: Hom Property

Sampled By: Anthony Wohletz / Curtis Conti

Job Description:

Site Location: Tracy, CA

Client Job Number: 20190071.001A

Destination Laboratory

☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

ANALYSIS REQUESTED

GEOTRACKER

EDF REPORT ☐ YES ☐

GLOBAL ID:

FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION (Box 5)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES ▼	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS: 1	2	5	10	SPECIAL INSTRUCTIONS
4/18/18	11:45	SS-95		Soil	1	Jar	3	X	Composite		X			
	11:46	SS-96		Soil	1	Jar	3				X			
	11:47	SS-97		Soil	1	Jar	3				X			
	11:48	SS-102		Soil	1	Jar	3				X			
	11:33	SS-98		Soil	1	Jar	3		Composite		X			
	11:34	SS-99		Soil	1	Jar	3	X			X			
	11:35	SS-103		Soil	1	Jar	3				X			
	11:36	SS-104		Soil	1	Jar	3				X			
	11:22	SS-100		Soil	1	Jar	3		Composite		X			
	11:23	SS-101		Soil	1	Jar	3				X			
	11:19	SS-105		Soil	1	Jar	3	X			X			
	11:20	SS-106		Soil	1	Jar	3				X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCL (3) – COLD (2) HNO_3 (4) – H_2SO_4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz	4/18 1545		
	CLS Conti	4/19/18 1304		KLF Fridge

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1610 CONDITIONS/COMMENTS: 19

SHIPPED BY: ☐ FED EX ☐ UPS ☑ OTHER CLS AIR BILL #

RELINQUISHED BY: 4/19/18 1604

CALIFORNIA LABORATORY SERVICES CHAIN OF CUSTODY

CLS ID. NO. 187101 (10 of 10)

Report To:

Kleinfelder - 24411 Ridge Route Drive, Suite 225

Laguna Hills, CA 92653

Project Manager: Paolo Dizon (pdizon@kleinfelder.com)

Project Name: Hom Property

Sampled By: Anthony Wohletz / Curtis Conti

Job Description:

Site Location: Tracy, CA

Client Job Number: 20190071.001A

Destination Laboratory

☑ CLS (916) 638-7301
3249 Fitzgerald Road
Rancho Cordova, CA
95742
www.californialab.com

☐ OTHER

ANALYSIS REQUESTED

GEOTRACKER

EDF REPORT ☐ YES ☐

GLOBAL ID:

FIELD CONDITIONS:

DATE	TIME	SAMPLE IDENTIFICATION (Box 5)	FIELD ID.	MATRIX	CONTAINER NO.	CONTAINER TYPE	PRESERVATIVES ▼	Arsenic (6010B)	Organochlorine Pesticides (8081A)	TURNAROUND TIME IN DAYS: 1	2	5	10	SPECIAL INSTRUCTIONS
	11:57	SS-107		Soil	1	Jar	3		Composite		X			
	11:58	SS-108		Soil	1	Jar	3		Composite		X			
	11:58	SS-111		Soil	1	Jar	3	X	Composite		X			
	12:07	SS-109		Soil	1	Jar	3	X	Composite		X			
	12:10	SS-110		Soil	1	Jar	3		Composite		X			
	12:11	SS-112		Soil	1	Jar	3		Composite		X			
	12:12	SS-113		Soil	1	Jar	3		Composite		X			
	12:15	SS-114		Soil	1	Jar	3		Composite		X			*Also prepare a composite duplicate and analyze for OCPs (8081A)
	12:43	SS-115		Soil	1	Jar	3	X	Composite*		X			
	12:44	SS-116		Soil	1	Jar	3		Composite*		X			
	12:43	SS-115-DUP		Soil	1	Jar	3	X	Composite*		X			

SUSPECTED CONSTITUENTS

SAMPLE RETENTION TIME

PRESERVATIVES (1) HCl (2) HNO3 (3) COLD (4) H2SO4

RELINQUISHED BY (Signature)	PRINT NAME/COMPANY	DATE/TIME	RECEIVED BY (Signature)	PRINT NAME/COMPANY
	Anthony Wohletz CLS Courier	1545 4/19/18		KLF Fridge CLS

RECEIVED AT LAB BY: DATE/TIME: 4/19/18 1610 CONDITIONS/COMMENTS: X 5

SHIPPED BY: ☐ FED EX ☐ UPS ☑ OTHER CLS AIR BILL #

RELINQUISHED BY: 4/19/18 1660

CLS LABS
SAMPLE RECEIVING EXCEPTION REPORTS

CLS Labs Job # 180101

Problem discovered by: CP **Date:** 4/19/18

Nature of problem

- PAGE 8 OF 10 SHOWS SAMPLES WITHOUT ANALYSES
- PAGE 10 OF 10 DOES NOT HAVE A SAMPLING DATE FOR ALL SAMPLES.

Client contacted? Yes / **No** ____ **Spoke With:** PAOLO DIZON

By whom: CHELLIE F **Date:** 4/20/18 **Time:** 1220 HRS

Client instructions:

- SAMPLES ON PAGE 8 OF 10 SHOULD BE 4:1 COMPS FOR 8081
- SAMPLES ON PAGE 10 OF 10 WERE SAMPLED ON 4/18/18.

Resolution of problem:

- LOGGED IN PER PAOLO DIZON.

H:\Will\Orellana\SampleException.Doc

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-1 (18D1101-01) Soil Sampled: 04/17/18 10:49 Received: 04/19/18 16:10									
Arsenic	**2.9**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-4 (18D1101-07) Soil Sampled: 04/17/18 11:10 Received: 04/19/18 16:10									
Arsenic	**2.9**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-15 (18D1101-13) Soil Sampled: 04/17/18 11:19 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-18 (18D1101-19) Soil Sampled: 04/17/18 11:29 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-10 (18D1101-22) Soil Sampled: 04/17/18 11:38 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-22 (18D1101-27) Soil Sampled: 04/17/18 13:06 Received: 04/19/18 16:10									
Arsenic	**2.5**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-33 (18D1101-33) Soil Sampled: 04/17/18 12:54 Received: 04/19/18 16:10									
Arsenic	**3.0**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-36 (18D1101-39) Soil Sampled: 04/17/18 12:33 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-27 (18D1101-41) Soil Sampled: 04/17/18 12:18 Received: 04/19/18 16:10									
Arsenic	**3.3**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-30-DUP (18D1101-46) Soil Sampled: 04/17/18 12:03 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-30 (18D1101-47) Soil Sampled: 04/17/18 12:05 Received: 04/19/18 16:10									
Arsenic	**3.3**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-51 (18D1101-54) Soil Sampled: 04/17/18 13:45 Received: 04/19/18 16:10									
Arsenic	**2.7**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-54 (18D1101-60) Soil Sampled: 04/17/18 14:02 Received: 04/19/18 16:10									
Arsenic	**3.5**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-45 (18D1101-62) Soil Sampled: 04/17/18 14:15 Received: 04/19/18 16:10									
Arsenic	**3.2**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-48 (18D1101-68) Soil Sampled: 04/17/18 14:30 Received: 04/19/18 16:10									
Arsenic	**3.5**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-59 (18D1101-74) Soil Sampled: 04/17/18 14:43 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-71-DUP (18D1101-77) Soil Sampled: 04/18/18 10:13 Received: 04/19/18 16:10									
Arsenic	**3.0**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-71 (18D1101-80) Soil Sampled: 04/18/18 10:08 Received: 04/19/18 16:10									
Arsenic	**3.1**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-63 (18D1101-82) Soil Sampled: 04/18/18 10:00 Received: 04/19/18 16:10									
Arsenic	**3.5**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-66 (18D1101-88) Soil Sampled: 04/18/18 09:44 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803303	04/20/18	04/21/18	EPA 6020	
SS-76 (18D1101-94) Soil Sampled: 04/18/18 09:30 Received: 04/19/18 16:10									
Arsenic	**4.0**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-79 (18D1101-AA) Soil Sampled: 04/18/18 09:20 Received: 04/19/18 16:10									
Arsenic	**3.8**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-80 (18D1101-AC) Soil Sampled: 04/18/18 10:27 Received: 04/19/18 16:10									
Arsenic	**2.3**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-83 (18D1101-AH) Soil Sampled: 04/18/18 10:39 Received: 04/19/18 16:10									
Arsenic	**4.1**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-91 (18D1101-AN) Soil Sampled: 04/18/18 10:52 Received: 04/19/18 16:10									
Arsenic	**3.8**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-94 (18D1101-AT) Soil Sampled: 04/18/18 11:03 Received: 04/19/18 16:10									
Arsenic	**3.9**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-95 (18D1101-AV) Soil Sampled: 04/18/18 11:45 Received: 04/19/18 16:10									
Arsenic	**3.4**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Metals by EPA 6000/7000 Series Methods

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-99 (18D1101-BB) Soil Sampled: 04/18/18 11:32 Received: 04/19/18 16:10									
Arsenic	**3.9**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-105 (18D1101-BH) Soil Sampled: 04/18/18 11:19 Received: 04/19/18 16:10									
Arsenic	**3.6**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-111 (18D1101-BM) Soil Sampled: 04/18/18 11:57 Received: 04/19/18 16:10									
Arsenic	**3.9**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-109 (18D1101-BO) Soil Sampled: 04/18/18 12:09 Received: 04/19/18 16:10									
Arsenic	**3.5**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-115 (18D1101-BU) Soil Sampled: 04/18/18 12:43 Received: 04/19/18 16:10									
Arsenic	**4.3**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	
SS-115-DUP (18D1101-BX) Soil Sampled: 04/18/18 12:43 Received: 04/19/18 16:10									
Arsenic	**4.2**	1.0	mg/kg	10	1803304	04/20/18	04/21/18	EPA 6020	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-1, 2, 11, 12 (COMPOSITE) (18D1101-05) Soil	**Sampled: 04/17/18 10:49**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*54 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*46-139*		"	"	"	"	
SS-3, 4, 13, 14 (COMPOSITE) (18D1101-10) Soil	**Sampled: 04/17/18 11:12**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-3, 4, 13, 14 (COMPOSITE) (18D1101-10) Soil	**Sampled: 04/17/18 11:12**	**Received: 04/19/18 16:10**							
Chlordane-technical	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*59 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*46-139*		"	"	"	"	
SS-5, 6, 15, 16 (COMPOSITE) (18D1101-15) Soil	**Sampled: 04/17/18 11:22**	**Received: 04/19/18 16:10**							
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-5, 6, 15, 16 (COMPOSITE) (18D1101-15) Soil	**Sampled: 04/17/18 11:22**	**Received: 04/19/18 16:10**							
Endrin	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*57 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69 %*	*46-139*		"	"	"	"	
SS-7, 8, 17, 18 (COMPOSITE) (18D1101-20) Soil	**Sampled: 04/17/18 11:32**	**Received: 04/19/18 16:10**							
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-7, 8, 17, 18 (COMPOSITE) (18D1101-20) Soil Sampled: 04/17/18 11:32 Received: 04/19/18 16:10									
Mirex	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*54 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*68 %*	*46-139*		"	"	"	"	
SS-9, 10, 19, 20 (COMPOSITE) (18D1101-25) Soil Sampled: 04/17/18 11:40 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*62 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*68 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project: Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-21, 22, 31, 32 (COMPOSITE) (18D1101-30) Soil	**Sampled: 04/17/18 13:08**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*46-139*		"	"	"	"	
SS-23, 24, 33, 34 (COMPOSITE) (18D1101-35) Soil	**Sampled: 04/17/18 12:57**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-23, 24, 33, 34 (COMPOSITE) (18D1101-35) Soil	**Sampled: 04/17/18 12:57**		**Received: 04/19/18 16:10**						
Chlordane-technical	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*46-139*		"	"	"	"	
SS-25, 26, 35, 36 (COMPOSITE) (18D1101-40) Soil	**Sampled: 04/17/18 12:39**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-25, 26, 35, 36 (COMPOSITE) (18D1101-40) Soil	**Sampled: 04/17/18 12:39**		**Received: 04/19/18 16:10**						
Endrin	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*65 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*72 %*	*46-139*		"	"	"	"	
SS-27, 28, 37, 38 (COMPOSITE) (18D1101-45) Soil	**Sampled: 04/17/18 12:18**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-27, 28, 37, 38 (COMPOSITE) (18D1101-45) Soil	**Sampled: 04/17/18 12:18**		**Received: 04/19/18 16:10**						
Mirex	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*66 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*72 %*	*46-139*		"	"	"	"	
SS-30, 29, 39, 40 (COMPOSITE) (18D1101-51) Soil	**Sampled: 04/17/18 12:05**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*59 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*63 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-41, 42, 51, 52 (COMPOSITE) (18D1101-56) Soil	**Sampled: 04/17/18 13:49**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*66 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*72 %*	*46-139*		"	"	"	"	
SS-43, 44, 53, 54 (COMPOSITE) (18D1101-61) Soil	**Sampled: 04/17/18 14:02**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-43, 44, 53, 54 (COMPOSITE) (18D1101-61) Soil	**Sampled: 04/17/18 14:02**		**Received: 04/19/18 16:10**						
Chlordane-technical	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*71 %*	*46-139*		"	"	"	"	
SS-45, 46, 55, 56 (COMPOSITE) (18D1101-66) Soil	**Sampled: 04/17/18 14:15**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-45, 46, 55, 56 (COMPOSITE) (18D1101-66) Soil	**Sampled: 04/17/18 14:15**		**Received: 04/19/18 16:10**						
Endrin	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*71 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*76 %*	*46-139*		"	"	"	"	
SS-47, 48, 57, 58 (COMPOSITE) (18D1101-71) Soil	**Sampled: 04/17/18 14:30**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-47, 48, 57, 58 (COMPOSITE) (18D1101-71) Soil	**Sampled: 04/17/18 14:30**		**Received: 04/19/18 16:10**						
Mirex	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*69 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*71 %*	*46-139*		"	"	"	"	
SS-49, 50, 59, 60 (COMPOSITE) (18D1101-76) Soil	**Sampled: 04/17/18 14:43**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*66 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*72 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-61, 62, 71 (COMPOSITE) (18D1101-81) Soil	**Sampled: 04/18/18 10:08**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*66 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*73 %*	*46-139*		"	"	"	"	
SS-63, 64, 72, 73 (COMPOSITE) (18D1101-86) Soil	**Sampled: 04/18/18 10:00**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-63, 64, 72, 73 (COMPOSITE) (18D1101-86) Soil	**Sampled: 04/18/18 10:00**		**Received: 04/19/18 16:10**						
Chlordane-technical	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*68 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*74 %*	*46-139*		"	"	"	"	
SS-65, 66, 74, 75 (COMPOSITE) (18D1101-91) Soil	**Sampled: 04/18/18 09:44**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-65, 66, 74, 75 (COMPOSITE) (18D1101-91) Soil	**Sampled: 04/18/18 09:44**		**Received: 04/19/18 16:10**						
Endrin	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*79 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69 %*	*46-139*		"	"	"	"	
SS-67, 68, 76, 77 (COMPOSITE) (18D1101-96) Soil	**Sampled: 04/18/18 09:30**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803320	04/20/18	04/22/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-67, 68, 76, 77 (COMPOSITE) (18D1101-96) Soil	**Sampled: 04/18/18 09:30**		**Received: 04/19/18 16:10**						
Mirex	ND	3.3	µg/kg	1	1803320	"	04/22/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*64 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*74 %*	*46-139*		"	"	"	"	
SS-69, 70, 78, 79 (COMPOSITE) (18D1101-AB) Soil	**Sampled: 04/18/18 09:20**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*68 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*76 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-80, 81, 88(COMPOSITE) (18D1101-AF) Soil	**Sampled: 04/18/18 10:27**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*59 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*68 %*	*46-139*		"	"	"	"	
SS-82, 83, 89, 90(COMPOSITE) (18D1101-AK) Soil	**Sampled: 04/18/18 10:39**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-82, 83, 89, 90(COMPOSITE) (18D1101-AK) Soil	**Sampled: 04/18/18 10:39**		**Received: 04/19/18 16:10**						
Chlordane-technical	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*80 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*75 %*	*46-139*		"	"	"	"	
SS-84, 85, 91, 92 (COMPOSITE) (18D1101-AP) Soil	**Sampled: 04/18/18 10:52**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-84, 85, 91, 92 (COMPOSITE) (18D1101-AP) Soil	**Sampled: 04/18/18 10:52**		**Received: 04/19/18 16:10**						
Endrin	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*58 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*62 %*	*46-139*		"	"	"	"	
SS-86, 87, 93, 94 (COMPOSITE) (18D1101-AU) Soil	**Sampled: 04/18/18 11:03**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-86, 87, 93, 94 (COMPOSITE) (18D1101-AU) Soil	**Sampled: 04/18/18 11:03**		**Received: 04/19/18 16:10**						
Mirex	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*65 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*74 %*	*46-139*		"	"	"	"	
SS-95, 96, 97, 102 (COMPOSITE) (18D1101-AZ) Soil	**Sampled: 04/18/18 11:45**		**Received: 04/19/18 16:10**						
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*57 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-98, 99, 103, 104 (COMPOSITE) (18D1101-BE) Soil Sampled: 04/18/18 11:32 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*54 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*63 %*	*46-139*		"	"	"	"	
SS-100, 101, 105, 106 (COMPOSITE) (18D1101-BJ) Soil Sampled: 04/18/18 11:19 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-100, 101, 105, 106 (COMPOSITE) (18D1101-BJ) Soil Sampled: 04/18/18 11:19 Received: 04/19/18 16:10									
Chlordane-technical	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*57 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*66 %*	*46-139*		"	"	"	"	
SS-107, 108, 111 (COMPOSITE) (18D1101-BN) Soil Sampled: 04/18/18 11:57 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-107, 108, 111 (COMPOSITE) (18D1101-BN) Soil Sampled: 04/18/18 11:57 Received: 04/19/18 16:10									
Endrin	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*57 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*60 %*	*46-139*		"	"	"	"	
SS-109, 110, 112, 113 (COMPOSITE) (18D1101-BS) Soil Sampled: 04/18/18 12:09 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-109, 110, 112, 113 (COMPOSITE) (18D1101-BS) Soil Sampled: 04/18/18 12:09 Received: 04/19/18 16:10									
Mirex	ND	3.3	µg/kg	1	1803276	"	04/23/18	EPA 8081A	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*60 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*67 %*	*46-139*		"	"	"	"	
SS-114, 115, 116 (COMPOSITE) (18D1101-BW) Soil Sampled: 04/18/18 12:43 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803276	04/20/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*69 %*	*46-139*		"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-30, 29, 39, 40 (COMPOSITE) DUP (18D1101-BY) Soil Sampled: 04/17/18 12:05 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803323	04/21/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*64 %*	*52-141*		"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*58 %*	*46-139*		"	"	"	"	
SS-61, 62, 71 (COMPOSITE) DUP (18D1101-BZ) Soil Sampled: 04/18/18 10:08 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803323	04/21/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-61, 62, 71 (COMPOSITE) DUP (18D1101-BZ) Soil Sampled: 04/18/18 10:08 Received: 04/19/18 16:10									
Chlordane-technical	ND	3.3	µg/kg	1	1803323	"	04/23/18	EPA 8081A	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	
Endrin	ND	3.3	"	"	"	"	"	"	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*61 %*		*52-141*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*56 %*		*46-139*	"	"	"	"	
SS-114, 115, 116 (COMPOSITE) DUP (18D1101-CA) Soil Sampled: 04/18/18 12:43 Received: 04/19/18 16:10									
4,4´-DDD	ND	3.3	µg/kg	1	1803323	04/21/18	04/23/18	EPA 8081A	
4,4´-DDE	ND	3.3	"	"	"	"	"	"	
4,4´-DDT	ND	3.3	"	"	"	"	"	"	
Aldrin	ND	1.0	"	"	"	"	"	"	
alpha-BHC	ND	1.7	"	"	"	"	"	"	
beta-BHC	ND	1.7	"	"	"	"	"	"	
Chlordane-technical	ND	3.3	"	"	"	"	"	"	
delta-BHC	ND	1.7	"	"	"	"	"	"	
Dieldrin	ND	1.0	"	"	"	"	"	"	
Endosulfan I	ND	1.7	"	"	"	"	"	"	
Endosulfan II	ND	3.3	"	"	"	"	"	"	
Endosulfan sulfate	ND	3.3	"	"	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
SS-114, 115, 116 (COMPOSITE) DUP (18D1101-CA) Soil	**Sampled: 04/18/18 12:43**		**Received: 04/19/18 16:10**						
Endrin	ND	3.3	µg/kg	1	1803323	"	04/23/18	EPA 8081A	
Endrin aldehyde	ND	3.3	"	"	"	"	"	"	
gamma-BHC (Lindane)	ND	1.7	"	"	"	"	"	"	
Heptachlor	ND	1.7	"	"	"	"	"	"	
Heptachlor epoxide	ND	1.7	"	"	"	"	"	"	
Methoxychlor	ND	17	"	"	"	"	"	"	
Mirex	ND	3.3	"	"	"	"	"	"	
Toxaphene	ND	20	"	"	"	"	"	"	
Surrogate: Decachlorobiphenyl		*64 %*		*52-141*	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		*55 %*		*46-139*	"	"	"	"	

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Metals by EPA 6000/7000 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803303 - EPA 3050B										
Blank (1803303-BLK1)				Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	ND	0.10	mg/kg							
LCS (1803303-BS1)				Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	9.66	0.10	mg/kg	10.0		97	75-125			
Matrix Spike (1803303-MS1)	**Source: 18D1101-01**			Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	9.97	1.0	mg/kg	10.0	2.86	71	75-125			QM-5
Matrix Spike Dup (1803303-MSD1)	**Source: 18D1101-01**			Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	9.89	1.0	mg/kg	10.0	2.86	70	75-125	0.9	30	QM-5
Batch 1803304 - EPA 3050B										
Blank (1803304-BLK1)				Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	ND	0.10	mg/kg							
LCS (1803304-BS1)				Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	9.85	0.10	mg/kg	10.0		99	75-125			
Matrix Spike (1803304-MS1)	**Source: 18D1101-94**			Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	10.6	1.0	mg/kg	10.0	4.00	66	75-125			QM-5
Matrix Spike Dup (1803304-MSD1)	**Source: 18D1101-94**			Prepared: 04/20/18 Analyzed: 04/21/18						
Arsenic	11.1	1.0	mg/kg	10.0	4.00	71	75-125	5	30	QM-5

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803276 - LUFT-DHS GCNV										
Blank (1803276-BLK1)				Prepared: 04/19/18 Analyzed: 04/23/18						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	1.7	"							
beta-BHC	ND	1.7	"							
gamma-BHC (Lindane)	ND	1.7	"							
delta-BHC	ND	1.7	"							
Chlordane-technical	ND	3.3	"							
4,4´-DDD	ND	3.3	"							
4,4´-DDE	ND	3.3	"							
4,4´-DDT	ND	3.3	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	1.7	"							
Endosulfan II	ND	3.3	"							
Endosulfan sulfate	ND	3.3	"							
Endrin	ND	3.3	"							
Endrin aldehyde	ND	3.3	"							
Heptachlor	ND	1.7	"							
Heptachlor epoxide	ND	1.7	"							
Methoxychlor	ND	17	"							
Mirex	ND	3.3	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*6.15*		*"*	*8.33*		*74*	*46-139*			
Surrogate: Decachlorobiphenyl	*7.96*		*"*	*8.33*		*95*	*52-141*			
LCS (1803276-BS1)				Prepared: 04/19/18 Analyzed: 04/23/18						
Aldrin	13.5	1.0	µg/kg	16.7		81	47-132			
gamma-BHC (Lindane)	13.2	1.7	"	16.7		79	56-133			
4,4´-DDT	16.4	3.3	"	16.7		98	46-137			
Dieldrin	15.1	1.0	"	16.7		91	44-143			
Endrin	16.1	3.3	"	16.7		97	30-147			
Heptachlor	13.3	1.7	"	16.7		80	33-148			
Surrogate: Tetrachloro-meta-xylene	*5.90*		*"*	*8.33*		*71*	*46-139*			

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803276 - LUFT-DHS GCNV										
LCS (1803276-BS1)				Prepared: 04/19/18 Analyzed: 04/23/18						
Surrogate: Decachlorobiphenyl	*8.20*		*µg/kg*	*8.33*		*98*	*52-141*			
LCS Dup (1803276-BSD1)				Prepared: 04/19/18 Analyzed: 04/23/18						
Aldrin	12.8	1.0	µg/kg	16.7		77	47-132	5	30	
gamma-BHC (Lindane)	12.7	1.7	"	16.7		76	56-133	4	30	
4,4´-DDT	15.7	3.3	"	16.7		94	46-137	5	30	
Dieldrin	14.3	1.0	"	16.7		86	44-143	6	30	
Endrin	15.1	3.3	"	16.7		91	30-147	6	30	
Heptachlor	12.8	1.7	"	16.7		77	33-148	4	30	
Surrogate: Tetrachloro-meta-xylene	*5.58*		*"*	*8.33*		*67*	*46-139*			
Surrogate: Decachlorobiphenyl	*7.66*		*"*	*8.33*		*92*	*52-141*			
Matrix Spike (1803276-MS1)	**Source: 18D0857-02**			Prepared: 04/19/18 Analyzed: 04/23/18						
Aldrin	14.2	10	µg/kg	16.7	ND	85	47-138			
gamma-BHC (Lindane)	20.1	17	"	16.7	ND	121	38-144			
4,4´-DDT	3270	33	"	16.7	ND	NR	41-157			QM-7T
Dieldrin	391	10	"	16.7	ND	NR	46-155			QM-7T
Endrin	ND	33	"	16.7	ND		34-149			QM-7T
Heptachlor	66.8	17	"	16.7	ND	401	36-155			QM-7T
Surrogate: Tetrachloro-meta-xylene	*15.7*		*"*	*20.8*		*76*	*46-139*			
Surrogate: Decachlorobiphenyl	*55.3*		*"*	*20.8*		*265*	*52-141*			*QS-4*
Matrix Spike Dup (1803276-MSD1)	**Source: 18D0857-02**			Prepared: 04/19/18 Analyzed: 04/23/18						
Aldrin	14.6	10	µg/kg	16.7	ND	87	47-138	3	35	
gamma-BHC (Lindane)	20.1	17	"	16.7	ND	120	38-144	0.3	35	
4,4´-DDT	3280	33	"	16.7	ND	NR	41-157	0.3	35	QM-7T
Dieldrin	437	10	"	16.7	ND	NR	46-155	11	35	QM-7T
Endrin	ND	33	"	16.7	ND		34-149		35	QM-7T
Heptachlor	89.2	17	"	16.7	ND	535	36-155	29	35	QM-7T
Surrogate: Tetrachloro-meta-xylene	*14.9*		*"*	*20.8*		*71*	*46-139*			
Surrogate: Decachlorobiphenyl	*62.7*		*"*	*20.8*		*301*	*52-141*			*QS-4*

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803320 - LUFT-DHS GCNV										
Blank (1803320-BLK1)				Prepared: 04/20/18 Analyzed: 04/22/18						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	1.7	"							
beta-BHC	ND	1.7	"							
gamma-BHC (Lindane)	ND	1.7	"							
delta-BHC	ND	1.7	"							
Chlordane-technical	ND	3.3	"							
4,4´-DDD	ND	3.3	"							
4,4´-DDE	ND	3.3	"							
4,4´-DDT	ND	3.3	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	1.7	"							
Endosulfan II	ND	3.3	"							
Endosulfan sulfate	ND	3.3	"							
Endrin	ND	3.3	"							
Endrin aldehyde	ND	3.3	"							
Heptachlor	ND	1.7	"							
Heptachlor epoxide	ND	1.7	"							
Methoxychlor	ND	17	"							
Mirex	ND	3.3	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*7.06*		*"*	*8.33*		*85*	*46-139*			
Surrogate: Decachlorobiphenyl	*9.08*		*"*	*8.33*		*109*	*52-141*			
LCS (1803320-BS1)				Prepared: 04/20/18 Analyzed: 04/22/18						
Aldrin	16.2	1.0	µg/kg	16.7		97	47-132			
gamma-BHC (Lindane)	15.9	1.7	"	16.7		95	56-133			
4,4´-DDT	18.7	3.3	"	16.7		112	46-137			
Dieldrin	17.4	1.0	"	16.7		104	44-143			
Endrin	18.2	3.3	"	16.7		109	30-147			
Heptachlor	15.9	1.7	"	16.7		95	33-148			
Surrogate: Tetrachloro-meta-xylene	*7.15*		*"*	*8.33*		*86*	*46-139*			

Kleinfelder (Irvine)	Project:	Hom Property
2 Ada Stuite 250	Project Number:	20190071.001A
Irvine, CA 92618	Project Manager:	Paolo Dizon

CLS Work Order #: 18D1101
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803320 - LUFT-DHS GCNV										
LCS (1803320-BS1)				Prepared: 04/20/18 Analyzed: 04/22/18						
Surrogate: Decachlorobiphenyl	*9.13*		*µg/kg*	*8.33*		*110*	*52-141*			
LCS Dup (1803320-BSD1)				Prepared: 04/20/18 Analyzed: 04/22/18						
Aldrin	15.9	1.0	µg/kg	16.7		95	47-132	2	30	
gamma-BHC (Lindane)	15.5	1.7	"	16.7		93	56-133	3	30	
4,4´-DDT	18.0	3.3	"	16.7		108	46-137	4	30	
Dieldrin	17.0	1.0	"	16.7		102	44-143	2	30	
Endrin	17.6	3.3	"	16.7		106	30-147	3	30	
Heptachlor	15.4	1.7	"	16.7		93	33-148	3	30	
Surrogate: Tetrachloro-meta-xylene	*6.45*		*"*	*8.33*		*77*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.30*		*"*	*8.33*		*100*	*52-141*			
Matrix Spike (1803320-MS1)	**Source: 18D1077-03**			Prepared: 04/20/18 Analyzed: 04/22/18						
Aldrin	17.2	1.0	µg/kg	16.7	ND	103	47-138			
gamma-BHC (Lindane)	14.6	1.7	"	16.7	ND	88	38-144			
4,4´-DDT	18.2	3.3	"	16.7	7.15	66	41-157			
Dieldrin	15.4	1.0	"	16.7	ND	92	46-155			
Endrin	14.6	3.3	"	16.7	ND	88	34-149			
Heptachlor	13.3	1.7	"	16.7	ND	80	36-155			
Surrogate: Tetrachloro-meta-xylene	*15.7*		*"*	*20.8*		*75*	*46-139*			
Surrogate: Decachlorobiphenyl	*15.0*		*"*	*20.8*		*72*	*52-141*			
Matrix Spike Dup (1803320-MSD1)	**Source: 18D1077-03**			Prepared: 04/20/18 Analyzed: 04/22/18						
Aldrin	18.5	1.0	µg/kg	16.7	ND	111	47-138	7	35	
gamma-BHC (Lindane)	15.2	1.7	"	16.7	ND	91	38-144	4	35	
4,4´-DDT	19.7	3.3	"	16.7	7.15	75	41-157	8	35	
Dieldrin	14.8	1.0	"	16.7	ND	89	46-155	3	35	
Endrin	14.9	3.3	"	16.7	ND	89	34-149	2	35	
Heptachlor	14.1	1.7	"	16.7	ND	84	36-155	6	35	
Surrogate: Tetrachloro-meta-xylene	*17.3*		*"*	*20.8*		*83*	*46-139*			
Surrogate: Decachlorobiphenyl	*16.5*		*"*	*20.8*		*79*	*52-141*			

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803323 - LUFT-DHS GCNV										
Blank (1803323-BLK1)				Prepared: 04/21/18 Analyzed: 04/23/18						
Aldrin	ND	1.0	µg/kg							
alpha-BHC	ND	1.7	"							
beta-BHC	ND	1.7	"							
gamma-BHC (Lindane)	ND	1.7	"							
delta-BHC	ND	1.7	"							
Chlordane-technical	ND	3.3	"							
4,4´-DDD	ND	3.3	"							
4,4´-DDE	ND	3.3	"							
4,4´-DDT	ND	3.3	"							
Dieldrin	ND	1.0	"							
Endosulfan I	ND	1.7	"							
Endosulfan II	ND	3.3	"							
Endosulfan sulfate	ND	3.3	"							
Endrin	ND	3.3	"							
Endrin aldehyde	ND	3.3	"							
Heptachlor	ND	1.7	"							
Heptachlor epoxide	ND	1.7	"							
Methoxychlor	ND	17	"							
Mirex	ND	3.3	"							
Toxaphene	ND	20	"							
Surrogate: Tetrachloro-meta-xylene	*5.10*		*"*	*8.33*		*61*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.85*		*"*	*8.33*		*106*	*52-141*			
LCS (1803323-BS1)				Prepared: 04/21/18 Analyzed: 04/23/18						
Aldrin	14.9	1.0	µg/kg	16.7		89	47-132			
gamma-BHC (Lindane)	14.5	1.7	"	16.7		87	56-133			
4,4´-DDT	17.0	3.3	"	16.7		102	46-137			
Dieldrin	16.3	1.0	"	16.7		98	44-143			
Endrin	16.9	3.3	"	16.7		101	30-147			
Heptachlor	14.2	1.7	"	16.7		85	33-148			
Surrogate: Tetrachloro-meta-xylene	*6.94*		*"*	*8.33*		*83*	*46-139*			

Kleinfelder (Irvine)	Project:	Hom Property
2 Ada Stuite 250	Project Number:	20190071.001A
Irvine, CA 92618	Project Manager:	Paolo Dizon

CLS Work Order #: 18D1101
COC #:

Organochlorine Pesticides by EPA Method 8081A - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1803323 - LUFT-DHS GCNV										
LCS (1803323-BS1)				Prepared: 04/21/18 Analyzed: 04/23/18						
Surrogate: Decachlorobiphenyl	*9.57*		*µg/kg*	*8.33*		*115*	*52-141*			
LCS Dup (1803323-BSD1)				Prepared: 04/21/18 Analyzed: 04/23/18						
Aldrin	14.8	1.0	µg/kg	16.7		89	47-132	0.6	30	
gamma-BHC (Lindane)	14.3	1.7	"	16.7		86	56-133	0.9	30	
4,4´-DDT	18.0	3.3	"	16.7		108	46-137	6	30	
Dieldrin	16.7	1.0	"	16.7		100	44-143	2	30	
Endrin	17.5	3.3	"	16.7		105	30-147	4	30	
Heptachlor	14.2	1.7	"	16.7		85	33-148	0.1	30	
Surrogate: Tetrachloro-meta-xylene	*5.55*		*"*	*8.33*		*67*	*46-139*			
Surrogate: Decachlorobiphenyl	*8.61*		*"*	*8.33*		*103*	*52-141*			
Matrix Spike (1803323-MS1)		**Source: 18D1101-BY**		Prepared: 04/21/18 Analyzed: 04/23/18						
Aldrin	15.0	1.0	µg/kg	16.7	ND	90	47-138			
gamma-BHC (Lindane)	14.9	1.7	"	16.7	ND	90	38-144			
4,4´-DDT	16.8	3.3	"	16.7	ND	101	41-157			
Dieldrin	15.5	1.0	"	16.7	ND	93	46-155			
Endrin	16.4	3.3	"	16.7	ND	98	34-149			
Heptachlor	14.2	1.7	"	16.7	ND	85	36-155			
Surrogate: Tetrachloro-meta-xylene	*13.5*		*"*	*20.8*		*65*	*46-139*			
Surrogate: Decachlorobiphenyl	*15.5*		*"*	*20.8*		*75*	*52-141*			
Matrix Spike Dup (1803323-MSD1)		**Source: 18D1101-BY**		Prepared: 04/21/18 Analyzed: 04/23/18						
Aldrin	13.5	1.0	µg/kg	16.7	ND	81	47-138	11	35	
gamma-BHC (Lindane)	14.5	1.7	"	16.7	ND	87	38-144	3	35	
4,4´-DDT	15.8	3.3	"	16.7	ND	95	41-157	6	35	
Dieldrin	14.8	1.0	"	16.7	ND	89	46-155	4	35	
Endrin	15.7	3.3	"	16.7	ND	94	34-149	5	35	
Heptachlor	13.3	1.7	"	16.7	ND	80	36-155	7	35	
Surrogate: Tetrachloro-meta-xylene	*12.9*		*"*	*20.8*		*62*	*46-139*			
Surrogate: Decachlorobiphenyl	*14.3*		*"*	*20.8*		*69*	*52-141*			

Kleinfelder (Irvine)	Project:	Hom Property	
2 Ada Stuite 250	Project Number:	20190071.001A	**CLS Work Order #: 18D1101**
Irvine, CA 92618	Project Manager:	Paolo Dizon	COC #:

Notes and Definitions

QS-4	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QM-7T	The spike recovery was outside acceptance limits for these analytes in both the MS and MSD due to toxaphene/chlordane interference from the source. The batch was accepted based on acceptable LCS/LCSD recovery.
QM-5	The spike recovery was outside acceptance limits for the MS and/or MSD due to matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit (or method detection limit when specified)
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

APPENDIX E

Environmental Noise Assessment

Environmental Noise Assessment

Tracy Costco Depot

City of Tracy, California

June 2, 2022

Project #191010

Prepared for:

DE NOVO PLANNING GROUP

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This section provides a general description of the existing noise sources in the Project vicinity, a discussion of the regulatory setting, and identifies potential noise impacts associated with the proposed Project. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for significant noise-related impacts. However, one impact remains significant and unavoidable.

There were no Notice of Preparation comments received regarding this topic. As discussed in the Initial Study (see Appendix A), the proposed Project is not 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. The closest airport is the Tracy Municipal Airport, located approximately three and a half miles southeast of the Project site. As such, there is ***no impact*** related to these CEQA topics, and these topics are not relevant to the proposed Project and will not be addressed further in this EIR beyond the discussion and analysis in the Initial Study.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
$L_{(n)}$	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L_{50} is the sound level exceeded 50 percent of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.

Noise Unwanted sound.

SEL Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70 dBA sound is half as loud as an 80 dBA sound, and twice as loud as a 60 dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn}, and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn}, but includes a +5 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	*NOISE LEVEL (DBA)*	*COMMON INDOOR ACTIVITIES*
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less

acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1 dBA change cannot be perceived;
- Outside of the laboratory, a 3 dBA change is considered a just-perceivable difference;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10 dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Existing and Surrounding Land Uses

The Project site is located at 16000 West Schulte Road in unincorporated San Joaquin County, California (Figures 2.0-1 and 2.0-2). The Project site is within the Tracy Sphere of Influence (SOI) 10-Year Planning Horizon and is immediately adjacent to the Tracy city limits to the north of the site. The site contains undeveloped land previously used for agricultural purposes.

The Project site is immediately south of the intersection of Bud Lyons Way and West Schulte Road. The Project site is bounded on the north by West Schulte Road, on the west by an unnamed driveway serving the adjacent rural residence, on the south by the Delta Mendota Canal, and on the east by vacant agricultural land.

In the vicinity of the Project site, surrounding land uses include mostly vacant and agricultural lands, as well as some existing rural residential and industrial uses. Rural residential uses are located directly west of the Project site. Under the proposed Project, these rural residential land uses will remain outside the boundaries of the City of Tracy, within the boundaries of San Joaquin County.

Existing Ambient Noise Levels

To quantify the existing ambient noise environment in the Project vicinity, three continuous (24-hour) noise level measurements were conducted near receptors adjacent to the Project site from November 7th to November 8th, 2019. A short-term noise level measurement was conducted at one location on the northwestern Project boundary on November 7th, 2019. The noise measurement locations are shown on Figure 3.11-1. The noise level measurement survey results are provided in Table 3.11-2. Appendix B of Appendix E shows the complete results of the continuous noise monitoring at sites LT-1, LT-2, LT-3, and ST-1.

TABLE 3.11-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

SITE	LOCATION	L_{DN}	AVERAGE MEASURED HOURLY NOISE LEVELS, dB					
			DAYTIME (7AM-10PM)			NIGHTTIME (10PM-7AM)		
			L_{EQ}	L_{50}	L_{MAX}	L_{EQ}	L_{50}	L_{MAX}
CONTINUOUS (24-HOUR) NOISE LEVEL MEASUREMENTS								
LT-1	Western Project Boundary	63	56	52	74	57	54	72
LT-2	Southwestern Project Boundary	56	48	44	61	49	48	60
LT-3	Southeastern Project Boundary	55	47	42	61	49	47	56
SHORT-TERM NOISE LEVEL MEASUREMENTS								
ST-1	Northwestern Project Boundary	N/A	72	58	88	N/A	N/A	N/A

SOURCE: SAXELBY ACOUSTICS, 2019.

The sound level meters were programmed to record the maximum, median, and average noise levels at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L_{50}) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 812, 820, and 831 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

EXISTING ROADWAY NOISE LEVELS

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. While the newer FHWA traffic noise model (TNM 3.0) is required for use on federally funded highway projects, the FHWA RD-77-108 model is still widely used in the industry and recognized as an accurate screening tool, typically resulting in slight over-predictions in traffic noise levels at typical receptor setback distances.

Traffic volumes for existing conditions were obtained from the traffic data prepared for the proposed Project (Kimley Horn, 2021). Vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Table 3.11-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix C of Appendix E.

TABLE 3.11-3: EXISTING TRAFFIC NOISE LEVELS AND DISTANCES TO CONTOURS

ROADWAY	*SEGMENT*	*EXTERIOR TRAFFIC NOISE LEVEL, DB L_{DN}*
Mountain House Pkwy.	North of I-205	65.0
Mountain House Pkwy.	South of I-205	67.2
Hansen Rd.	South of Old Schulte Rd.	47.4
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	51.6
Old Schulte Rd.	West of S. Lammers Rd.	57.1
S. Lammers Rd.	North of Old Schulte Rd.	66.3
S. Lammers Rd.	South of Old Schulte Rd.	66.4
S. Lammers Rd.	South of Western Pacific Wy.	64.2
S. Lammers Rd.	South of Valpico Rd.	55.9

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM KIMLEY HORN AND SAXELBY ACOUSTICS, 2021.

3.11.2 REGULATORY SETTING

FEDERAL

There are no federal regulations related to noise that apply to the proposed Project.

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA standards are discussed more below under the Thresholds of Significance section.

LOCAL

The Project site is located within an unincorporated area of San Joaquin County and requires annexation into the City of Tracy. The City of Tracy addresses noise in the Noise Element of the General Plan and in the Tracy Municipal Code.

City of Tracy General Plan

The Noise Element establishes standards to provide compatible noise environments for new development or redevelopment projects and to control excessive noise exposure of existing developments. Goals, policies, actions, and standards provided in the Noise Element provide the basis for decision-making on determining land use compatibility with noise sources associated with the proposed Project, as well as mitigation requirements. The following objectives and policies are specfically relavaent to the prposed project:

Objective N-1.2 Control sources of excessive noise.

Policies

P2. Mitigation measures shall be required for new development projects that exceed the following criteria:

- Cause the Ldn at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the Ldn at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance Limits.

P4. All construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours or 7:00 a.m. to 7:00 p.m. In addition, the following construction noise control measures shall be included as requirements at construction sites to minimize construction noise impacts:

- Equip all internal combustion engine-driven equipment with intake and exhaust mufflers that are in good condition and appropriate for the equipment.
- Locate stationary noise-generating equipment as far as possible from sensitive receptors when sensitive receptors adjoin or are near a construction area.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.

Figure 9-3 of the Noise Element shows a summary of different land uses in the City and their associated acceptable and unacceptable noise levels. These guidelines state that environments with noise levels ranging up to 60 dBA Ldn are considered "normally acceptable" for new residential land use development; environments with ambient noise levels greater than 60 dBA and up to 75 dBA Ldn are considered "conditionally acceptable" for new residential development.

City of Tracy Municipal Code

Title 4, Chapter 12, Article 9 of the Tracy Municipal Code also contains guidance with the intent to control noise and vibration to promote and maintain the health, safety, and welfare of its residents. Section 4.12.720 of the Municipal Code generally prohibits certain activities that have the potential to result in loud, excessive, or unreasonable noise levels. According to the general sound level limits for residential districts, no person shall cause or allow the creation of any noise to the extent that the one-hour average sound level, at any point on or beyond the boundaries of the property on which the sound is produced to exceed 55 dBA for any one-hour average period. Specific activities enumerated in the municipal code that could potentially pertain to the proposed project include minor maintenance to or improvement of real property. This limitation prohibits the generation of construction noise, other than between the hours of 7:00 a.m. and 10:00 p.m. on weekdays or between the hours of 7:00 a.m. and 10:00 p.m. on weekends and federal holidays. The noise ordinance also specifically prohibits the operation of any pneumatic or air hammer, pile driver, steam shovel, derrick, steam or electric hoist, parking lot cleaning equipment, or other appliance, the use of which is attended by loud or unusual noise, between the hours of 10:00 p.m. and 7:00 a.m on weekends and federal holidays.

San Joaquin County General Plan

Table PHS-2 of the San Joaquin County 2035 General Plan establishes an acceptable exterior noise level standard of 65 dBA L_{dn} and an interior noise level standard of 45 dBA L_{dn} for residential uses exposed to transportation noise sources.

For non-transportation noise sources, the General Plan establishes the standards for sensitive uses. See Table 3.11-4.

TABLE 3.11-4: SAN JOAQUIN COUNTY GENERAL PLAN NON-TRANSPORTATION NOISE STANDARDS[1,2]

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREA[3] DAYTIME (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[3] NIGHTTIME (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: THESE STANDARDS APPLY TO NEW OR EXISTING RESIDENTIAL AREAS AFFECTED BY NEW OR EXISTING NON-TRANSPORTATION SOURCES.

[1] WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

[2] REFER TO MOUNTAIN HOUSE MASTER PLAN, TABLE 11.2, EXTERIOR NOISE STANDARDS FOR NOISE-SENSITIVE USES AFFECTED BY NON- TRANSPORTATION NOISE SOURCES, PAGE 11.12, FOR MOUNTAIN HOUSE NOISE STANDARDS.

[3] EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

SOURCE: SAN JOAQUIN COUNTY GENERAL PLAN, TABLE PHS-1.

San Joaquin County Development Regulations

The San Joaquin County Development Regulations, Section 9-1025.9(b), establish land use noise level standards for new non-transportation or "stationary" noise sources, as outlined below that would be applicable to the proposed Project.

9-1025.9(B) – STATIONARY NOISE SOURCES.

Proposed projects that will create new stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 9-1025.9(b), Part II (Table 3.11-5).

TABLE 3.11-5: STATIONARY NOISE SOURCES

NOISE LEVEL DESCRIPTOR	*OUTDOOR ACTIVITY AREAS[1] DAYTIME[2] (7 A.M. TO 10 P.M.)*	*OUTDOOR ACTIVITY AREAS[1] NIGHTTIME[2] (10 P.M. TO 7 A.M.)*
Hourly equivalent sound level (L_{eq}), dB	50	45
Maximum sound level (L_{max}), dB	70	65

NOTES: [1]WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

[2]EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 DB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

(ORD. 3675; ORD. 4036 § 2(PART), 1999)

SOURCE: SAN JOAQUIN COUNTY DEVELOPMENT REGULATIONS.

VIBRATION STANDARDS

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person's perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Tracy does not have specific policies pertaining to vibration levels. Human and structural response to different vibration levels is influenced by a number of factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.11-6 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 3.11-6: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

P.P.V.		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBORN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the Project will have a significant impact related to noise if it will result in:

- Generation of a 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; and/or
- Generation of excessive groundborne vibration or groundborne noise levels.

Determination of a Significant Increase in Noise Levels

TEMPORARY CONSTRUCTION NOISE IMPACTS

With temporary noise impacts (construction), identification of "substantial increases" depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Per the City of Tract General Plan noise Policy P4, "All construction in the vicinity of noise sensitive land uses, such as residences, hospitals, or convalescent homes, shall be limited to daylight hours or 7:00 a.m. to 7:00 p.m. Per the City of Tracy noise ordinance, construction activities operating between 10 p.m. and 7 a.m. that create a noise disturbance at the property boundary of a residence are prohibited.

For short-term noise associated with project construction, Saxelby Acoustics recommends use of the Caltrans increase criteria of 12 dBA (Caltrans Traffic Noise Protocol, 2020) to determine whether the construction noise constitutes a significant increase under CEQA.

OPERATIONAL IMPACTS

The noise standards applicable to the proposed Project include the relevant portions of the City of Tracy and County of San Joaquin General Plan and Municipal Code described in the Regulatory Setting section above (Section 3.11.2), and the following standards. Generally, a project may have a significant effect on the environment if it will substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been developed. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local project criteria or ordinances, or substantially increase noise levels at noise sensitive land uses. The potential increase in traffic noise from the proposed Project is a factor in determining significance.

Per noise Policy P2, the following test of significance would be applied to operational noise increases:

- Cause the Ldn at noise-sensitive uses to increase by 3 dB or more and exceed the "normally acceptable" level.
- Cause the Ldn at noise-sensitive uses to increase 5 dB or more and remain "normally acceptable."
- Cause new noise levels to exceed the City of Tracy Noise Ordinance Limits.

It should be noted that 60 dBA Ldn is the City's "normally acceptable" noise standard.

IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: The proposed Project has the potential to generate 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. (Significant and Unavoidable)

Traffic Noise Environment at Off-Site Receptors With and Without the Project

Implementation of the proposed Project would result in an increase in daily traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Tables 3.11-8 and 3.11-9 show the predicted traffic noise level increases on the local roadway network for Background, Background Plus Project, Cumulative No Project, and Cumulative Plus Project conditions. Appendix C of Appendix E provides the complete inputs and results of the FHWA traffic noise modeling.

TABLE 3.11-8: BACKGROUND AND BACKGROUND PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			BACK.	*BACK. + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Mountain House Pkwy.	North of I-205	165	65.0	65.1	0.1	+ 1.5 dB	No
Mountain House Pkwy.	South of I-205	120	67.2	68.3	1.1	+ 1.5 dB	No
Hansen Rd.	South of Old Schulte Rd.	225	47.4	47.4	0.0	+ 5.0 dB	No
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	840	51.6	55.2	3.6	+ 5.0 dB	No
Old Schulte Rd.	West of S. Lammers Rd.	600	57.1	57.5	0.4	+ 5.0 dB	No
S. Lammers Rd.	North of Old Schulte Rd.	85	66.3	66.4	0.1	+ 1.5 dB	No
S. Lammers Rd.	South of Old Schulte Rd.	100	66.4	66.6	0.2	+ 1.5 dB	No
S. Lammers Rd.	South of Western Pacific Wy.	110	64.2	64.5	0.3	+ 3.0 dB	No
S. Lammers Rd.	South of Valpico Rd.	115	55.9	56.0	0.1	+ 5.0 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2021.

TABLE 3.11-9: CUMULATIVE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	*SEGMENT*	*APPROX. RECEPTOR DISTANCE*	*NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS*				
			CUMULATIVE	*CUMULATIVE + PROJECT*	*CHANGE*	*CRITERIA*	*SIGNIFICANT?*
Mountain House Pkwy.	North of I-205	165	67.3	67.4	0.1	+ 1.5 dB	No
Mountain House Pkwy.	South of I-205	120	71.4	71.5	0.2	+ 1.5 dB	No
Hansen Rd.	South of Old Schulte Rd.	225	56.5	56.7	0.2	+ 5.0 dB	No
Old Schulte Rd.	Hansen Rd. to Bud Lyons Wy.	840	55.2	56.4	1.1	+ 5.0 dB	No
Old Schulte Rd.	West of S. Lammers Rd.	600	57.4	57.7	0.3	+ 5.0 dB	No
S. Lammers Rd.	North of Old Schulte Rd.	85	71.1	71.2	0.0	+ 1.5 dB	No
S. Lammers Rd.	South of Old Schulte Rd.	100	70.3	70.4	0.1	+ 1.5 dB	No

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN}, dB) AT NEAREST SENSITIVE RECEPTORS				
			CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
S. Lammers Rd.	South of Western Pacific Wy.	110	69.7	69.7	0.1	+ 5.0 dB	No
S. Lammers Rd.	South of Valpico Rd.	115	69.1	69.1	0.0	+ 5.0 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2021.

Project-Generated Non-Transportation Noise Environment at Off-Site Receptors

The primary non-transportation noise sources associated with the proposed Project are on-site parking lot circulation and the proposed loading docks. In order to evaluate these noise sources at the nearest sensitive receptors, Saxelby Acoustics used the SoundPLAN noise prediction model to generate noise level predictions according to the assumptions outlined below.

The SoundPLAN noise prediction model was used to plot noise contours and to calculate noise levels at the sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors).

It should be noted that sound power is a measure of the total acoustic energy emitted by a noise source and is irrespective of distance from the source. Sound power is input into the SoundPLAN model as a representation of the total acoustic energy emitted by a specific noise source. Sound power levels in this report are A-weighted decibel levels, noted as "dBA, PWL" per industry standards. The model then corrects for the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) which affect sound propagation from the noise source to the receiver location.

LOADING DOCK NOISE GENERATION

To determine typical noise levels associated with the proposed loading docks, noise level measurement data from a United Natural Foods, Inc. (UNFI) warehouse was used. The UNFI facility is an approximately 400,000 s.f. facility located in Rocklin, California and includes a large cold storage facility for distribution of groceries. The noise level measurements were conducted at a distance of 200 feet from the center of the loading dock and circulation area. Activities during the peak hour of loading dock activities included truck arrival/departures, truck idling, truck backing, air brake release, and operation of truck-mounted refrigeration units.

The results of the UNFI noise measurements indicate that a busy hour generated an average noise level of 61 dBA L_{eq} at a distance of 200 feet from the center of the loading dock truck maneuvering lanes. This analysis assumes that the proposed loading docks would operate at this level of activity in a busy hour during either daytime (7:00 a.m. to 10:00 p.m.) or nighttime (10:00 p.m. to 7:00 a.m.). The data from the UNFI facility was scaled up to represent the larger proposed project. It should be

noted that the collected noise measurement data occurred during the week of Thanksgiving which is one of the busiest times of year for the business and included refrigeration trucks.

PARKING LOT CIRCULATION

Based upon the Project traffic study, the peak hour trips for the proposed Project would be 276 autos and 125 tractor-trailers. Based upon noise measurements conducted of vehicle movements in parking lots, the sound exposure level (SEL) for a single passenger vehicle is 71 dBA at a distance of 50 feet while the SEL of a tractor-trailer is 85 dBA at the same distance.

Saxelby Acoustics used the SoundPLAN noise model to calculate noise levels at the nearest sensitive receptors. Input data included the loading dock and parking lot noise generation, as discussed above. Figure 3.11-2 shows the results of this analysis for the site layout in terms of the nighttime (10:00 p.m. to 7:00 a.m.) peak hour average (L_{eq}). Daytime (7:00 a.m. to 10:00 p.m.) noise levels are expected to be similar to the nighttime scenario. Figure 3.11-3 shows the results of this analysis in terms of the peak hour maximum noise levels (L_{max}). Due to the nature of loading dock operation and parking lot circulation, the maximum noise levels are the same for both daytime and nighttime.

Construction Noise Environment

During the construction of the proposed Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-10, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet.

TABLE 3.11-10: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	*MAXIMUM LEVEL, DB AT 50 FEET*
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Conclusions

INCREASED TRAFFIC NOISE LEVELS AT EXISTING RECEPTORS

The City of Tracy guidelines specify criteria to determine the significance of traffic noise impacts. Where existing traffic noise levels are less than 60 dB L_{dn}, at the outdoor activity areas of noise-sensitive uses, a +5.0 dB L_{dn} increase in roadway noise levels will be considered significant. According to Table 3.11-8 and Table 3.11-9, the maximum increase is traffic noise at the nearest sensitive receptor is predicted to be 3.6 dBA. At this location, the existing ambient noise level is predicted to be approximately 51.6 dBA L_{dn}. All other project increases are expected to be less than 1.5 dBA.

Therefore, impacts resulting at existing receptors from increased traffic noise would be considered ***less-than-significant***.

OPERATIONAL NOISE LEVELS AT EXISTING RECEPTORS

Operational noise levels at the existing residential receptors to the west of the site resulting from the proposed Project are quantified and shown in Figures 3.11-2 and 3.11-3. Figure 3.11-2 shows the average (L_{eq}) Project noise contours and Figure 3.11-3 shows the maximum (L_{max}) Project noise contours.

Based upon Figure 3.11-2, the proposed Project would generate peak hour noise levels of up to 54 dBA L_{eq} at the outdoor activity areas of adjacent residential uses. The adjacent residential uses would remain outside of the City of Tracy limits, so noise generated by the proposed Project at these locations would be subject to the San Joaquin County noise criteria. The predicted noise levels of up to 54 dBA L_{eq} would exceed the San Joaquin County non-transportation noise limits of 50 dBA L_{eq} during daytime (7:00 a.m. to 10:00 p.m.) hours and 45 dBA L_{eq} during nighttime (10:00 p.m. to 7:00 a.m.) hours.

Based upon Figure 3.11-3, the proposed Project is predicted to generate maximum noise levels of approximately 68 dBA L_{max} at the residential uses to the west of the Project site. This would comply with the San Joaquin County maximum noise level limits of 70 dBA L_{max} during daytime hours but would exceed the County's 65 dBA L_{max} standard during nighttime hours.

In order to reduce project-related noise levels, Saxelby Acoustics used the Sound PLAN noise model to evaluate the use of noise barriers for reducing project-related noise levels at the adjacent residential uses. Figure 3.11-4 shows the exterior noise levels in terms of the peak hour average (L_{eq}) noise level, with a 20-foot-tall acoustically absorbent screen wall located along the western boundary of the Project site. The resulting noise levels of up to 50 dBA L_{eq} would comply with the County's 50 dBA L_{eq} daytime standard but would still exceed the County's 45 dBA L_{eq} nighttime noise standard. As such, a sound wall would not result in noise levels at or below the County's nighttime noise standard. Therefore, the County's exterior noise standards would still be exceeded and this would be a ***significant and unavoidable*** impact.

CONSTRUCTION NOISE

During the construction phases of the proposed Project, noise from construction activities would add to the noise environment in the immediate Project vicinity. Based upon the Table 3.11-10 data, the proposed Project is predicted to generate construction noise levels of up to 90 dBA Lmax at a distance of 50 feet. The closest sensitive receptor to the Project site is approximately 1,300 feet from the center of the Project construction area. At this distance, construction noise would attenuate to approximately 62 dBA Lmax . Existing ambient noise levels as measured at Site LT-2 were measured to average 61 dBA Lmax in the vicinity of the nearest noise sensitive receptors. This increase of 1 dBA would be less than the 12 dBA test of significance for temporary construction noise impacts.

Compliance with the City's permissible hours of construction, as well as implementing the best management noise reduction techniques and practices (both outlined in Mitigation Measure 3.11-1), would ensure that construction noise would not result in a substantial temporary increase in ambient noise levels that would result in annoyance or sleep disturbance of nearby sensitive receptors. Therefore, with implementation of Mitigation Measure 3.11-1, temporary construction noise impacts would be ***less than significant***.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *To reduce potential construction noise impacts during Project construction, the following multi-part mitigation measure shall be implemented for the Project:*

- *All construction equipment powered by internal combustion engines shall be muffled and maintained.*
- *Quiet construction equipment, particularly air compressors, shall be selected whenever possible.*
- *All stationary noise-generating construction equipment such as generators or air compressors shall be located as far as is practical from existing residences. In addition, the Project contractor shall place such stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the Project site.*
- *Unnecessary idling of internal combustion engines shall be prohibited.*
- *The construction contractor shall, to the maximum extent practical, locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the Project site during all Project construction.*
- *Construction shall be limited to 7:00 a.m. to 7:00 p.m. per General Plan Policy P4.*

These requirements shall be noted on the Project improvement plans.

Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage.

The primary vibration-generating activities would be grading, utilities placement, and parking lot construction. Table 3.11-11 shows the typical vibration levels produced by construction equipment.

With the exception of vibratory compactors, the Table 3.11-11 data indicate that construction vibration levels anticipated for the proposed Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Structures that could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 60 feet, or further, from the Project site. Therefore, this is a ***less-than-significant*** impact and no mitigation is required.

TABLE 3.11-11: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	*P.P.V. AT 25 FEET (INCHES/SECOND)*	*P.P.V. AT 50 FEET (INCHES/SECOND)*	*P.P.V. AT 100 FEET (INCHES/SECOND)*
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.



Tracy Costco Depot

City of Tracy, California

Figure 3.11-1

Noise Measurement Sites

Legend

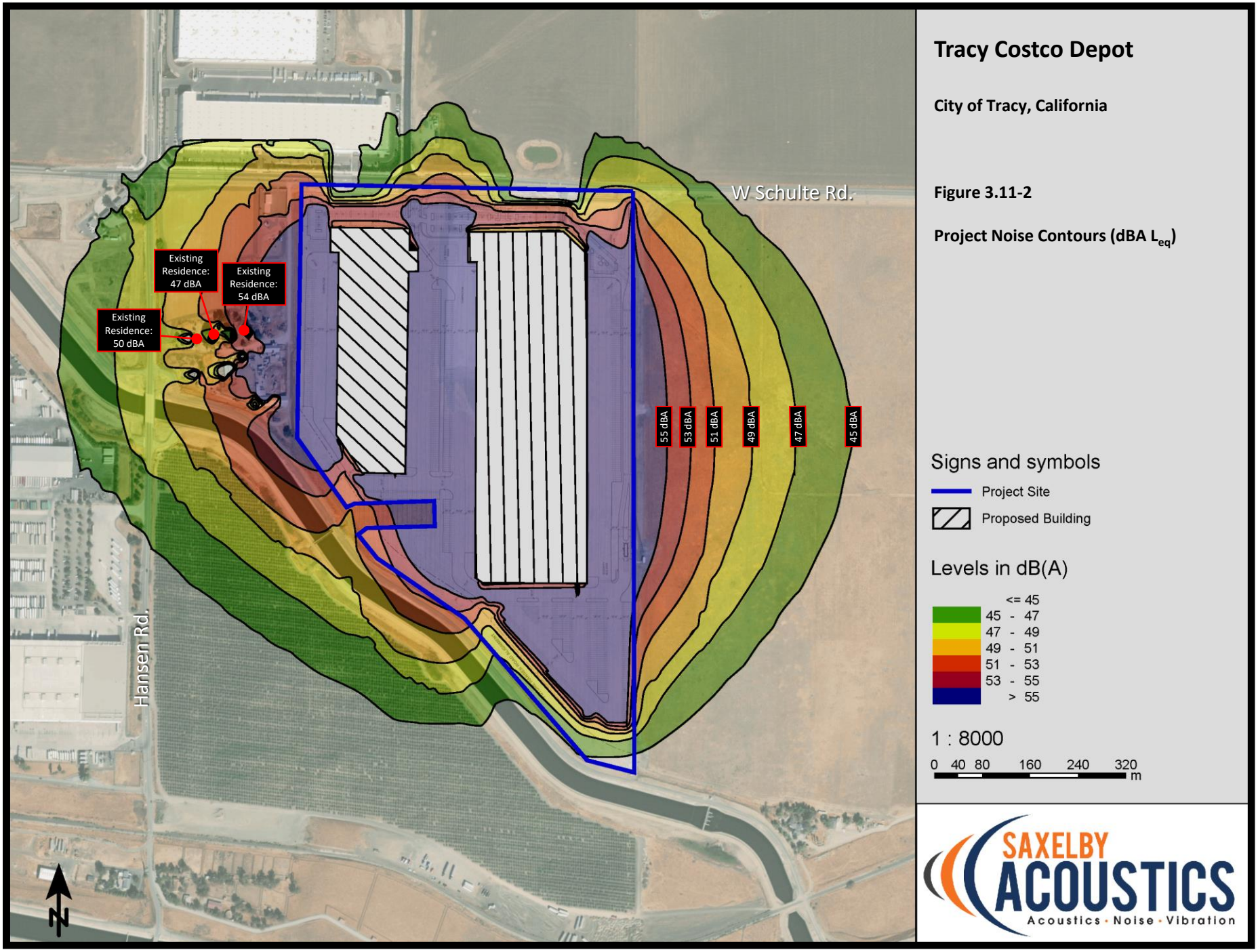
- Project Site
- Noise Measurement Site - Long Term
- Noise Measurement Site - Short Term

0 m 100 m 200 m 300 m

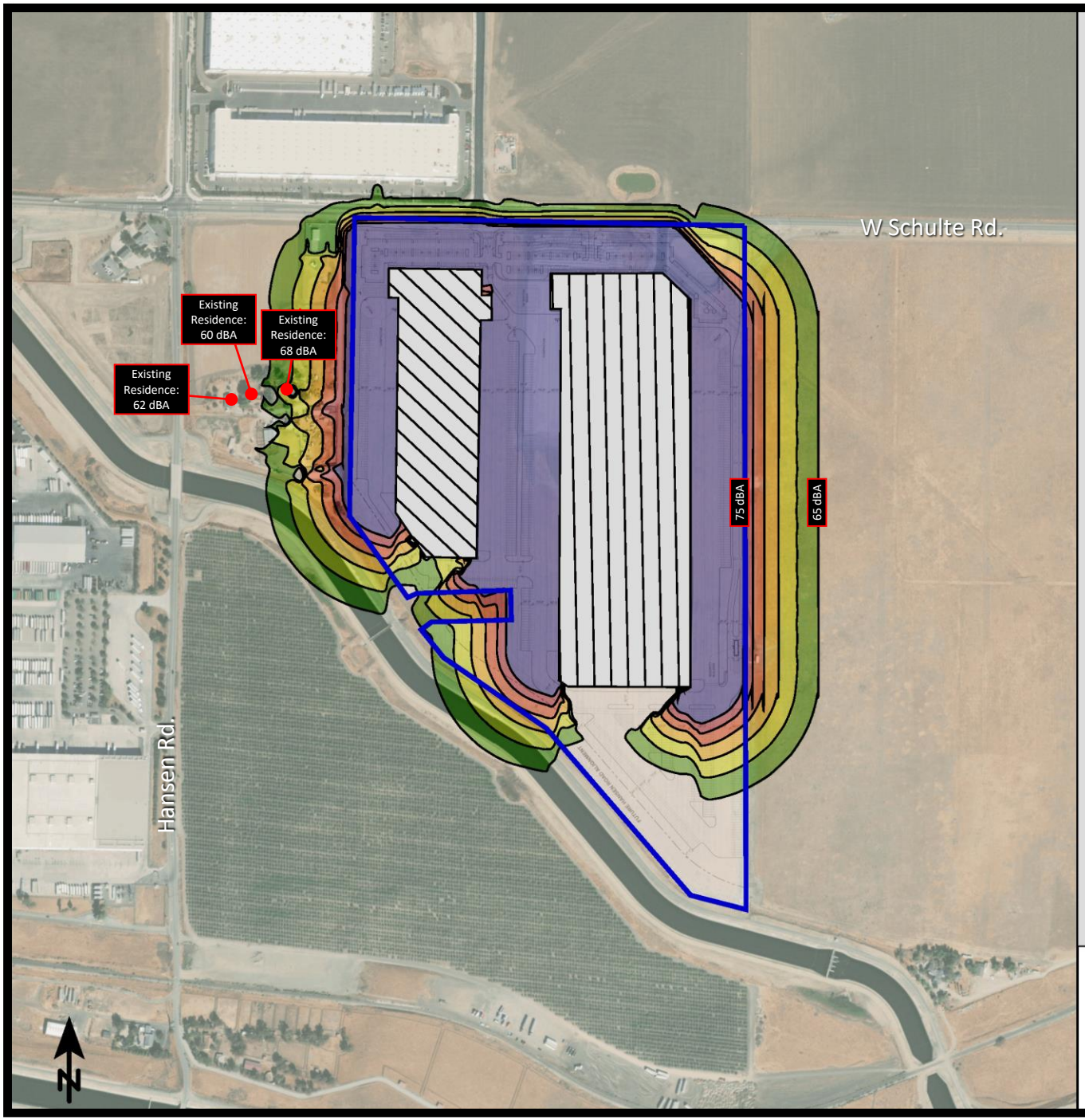
Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 07/14/2021

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W Schulte Rd.
Hansen Rd.
Existing Residence: 47 dBA
Existing Residence: 54 dBA
Existing Residence: 50 dBA
55 dBA
53 dBA
51 dBA
49 dBA
47 dBA
45 dBA
N
Tracy Costco Depot
City of Tracy, California
Figure 3.11-2
Project Noise Contours (dBA L_{eq})
Signs and symbols
Project Site
Proposed Building
Levels in dB(A)
<= 45
45 - 47
47 - 49
49 - 51
51 - 53
53 - 55
> 55
1 : 8000
0 40 80 160 240 320
m
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Tracy Costco Depot

City of Tracy, California

Figure 3.11-3

Project Noise Contours (dBA L_{max})

Signs and symbols

- Project Site
- Proposed Building

Levels in dB(A)

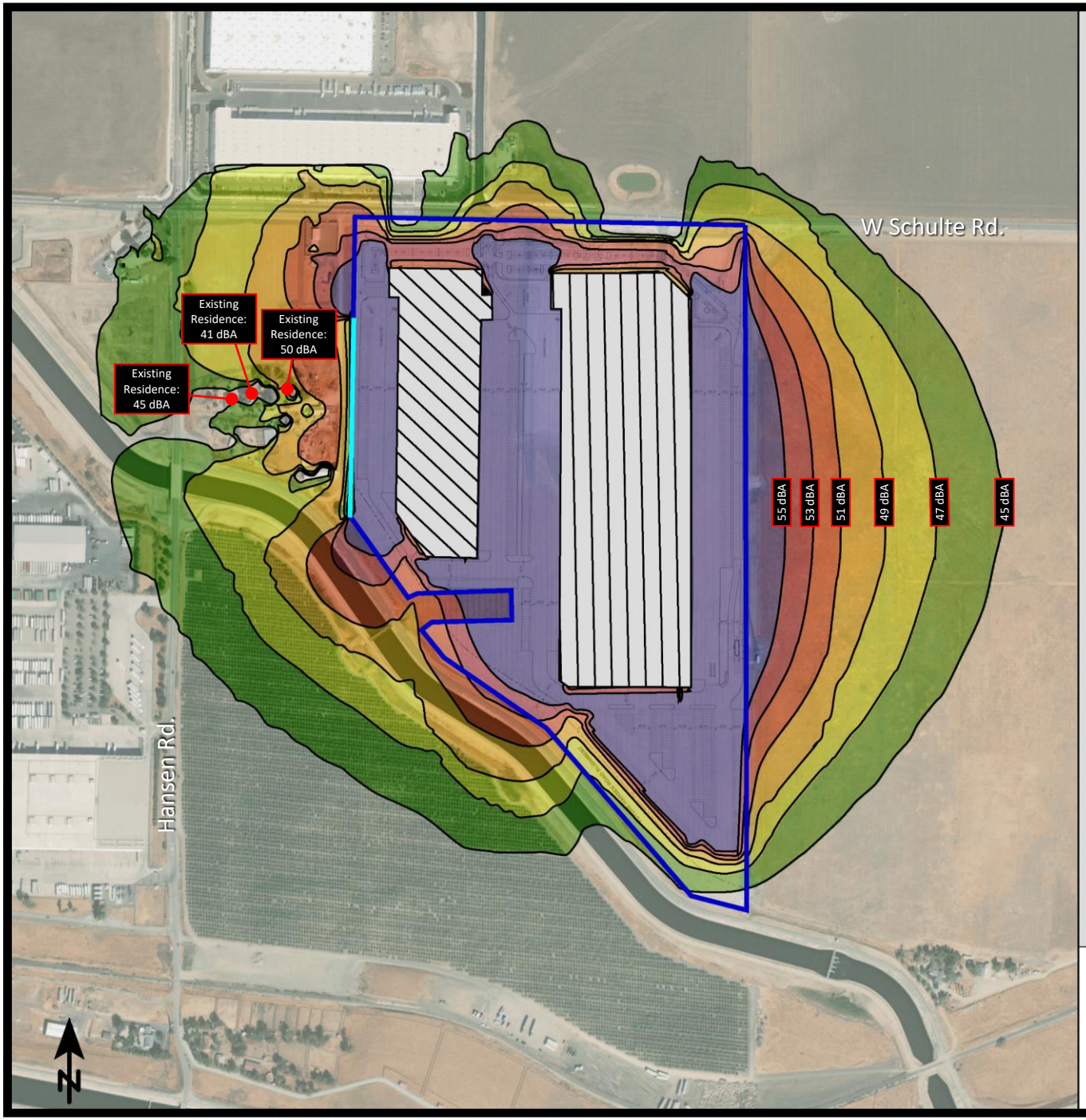
- <= 65
- 65 - 67
- 67 - 69
- 69 - 71
- 71 - 73
- 73 - 75
- > 75

1 : 8000

0 40 80 160 240 320 m

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Tracy Costco Depot

City of Tracy, California

Figure 3.11-4

Project Noise Contours with 20-Foot Wall (dBA L_{eq})

Signs and symbols

- Project Site
- 20-Foot Wall
- Proposed Building

Levels in dB(A)

- <= 45
- 45 - 47
- 47 - 49
- 49 - 51
- 51 - 53
- 53 - 55
- > 55

1 : 8000

0 40 80 160 240 320 m

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Appendix A: Acoustical Terminology

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given space consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
ASTC	Apparent Sound Transmission Class. Similar to STC but includes sound from flanking paths and correct for room reverberation. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Attenuation	The reduction of an acoustic signal.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, A Bell is defined as the logarithm of the ratio of the sound pressure squared over the reference pressure squared. A Decibel is one-tenth of a Bell.
CNEL	Community Noise Equivalent Level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by +5 dBA and nighttime hours weighted by +10 dBA.
DNL	See definition of Ldn.
IIC	Impact Insulation Class. An integer-number rating of how well a building floor attenuates impact sounds, such as footsteps. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Frequency	The measure of the rapidity of alterations of a periodic signal, expressed in cycles per second or hertz (Hz).
Ldn	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
Leq	Equivalent or energy-averaged sound level.
Lmax	The highest root-mean-square (RMS) sound level measured over a given period of time.
L(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L50 is the sound level exceeded 50% of the time during the one-hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
NIC	Noise Isolation Class. A rating of the noise reduction between two spaces. Similar to STC but includes sound from flanking paths and no correction for room reverberation.
NNIC	Normalized Noise Isolation Class. Similar to NIC but includes a correction for room reverberation.
Noise	Unwanted sound.
NRC	Noise Reduction Coefficient. NRC is a single-number rating of the sound-absorption of a material equal to the arithmetic mean of the sound-absorption coefficients in the 250, 500, 1000, and 2,000 Hz octave frequency bands rounded to the nearest multiple of 0.05. It is a representation of the amount of sound energy absorbed upon striking a particular surface. An NRC of 0 indicates perfect reflection; an NRC of 1 indicates perfect absorption.
RT60	The time it takes reverberant sound to decay by 60 dB once the source has been removed.
Sabin	The unit of sound absorption. One square foot of material absorbing 100% of incident sound has an absorption of 1 Sabin.
SEL	Sound Exposure Level. SEL is a rating, in decibels, of a discrete event, such as an aircraft flyover or train pass by, that compresses the total sound energy into a one-second event.
SPC	Speech Privacy Class. SPC is a method of rating speech privacy in buildings. It is designed to measure the degree of speech privacy provided by a closed room, indicating the degree to which conversations occurring within are kept private from listeners outside the room.
STC	Sound Transmission Class. STC is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings/floors, doors, windows and exterior wall configurations. The STC rating is typically used to rate the sound transmission of a specific building element when tested in laboratory conditions where flanking paths around the assembly don't exist. A larger number means more attenuation. The scale, like the decibel scale for sound, is logarithmic.
Threshold of Hearing	The lowest sound that can be perceived by the human auditory system, generally considered to be 0 dB for persons with perfect hearing.
Threshold of Pain	Approximately 120 dB above the threshold of hearing.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
Simple Tone	Any sound which can be judged as audible as a single pitch or set of single pitches.

Appendix B: Continuous and Short-Term Ambient Noise Measurement Results

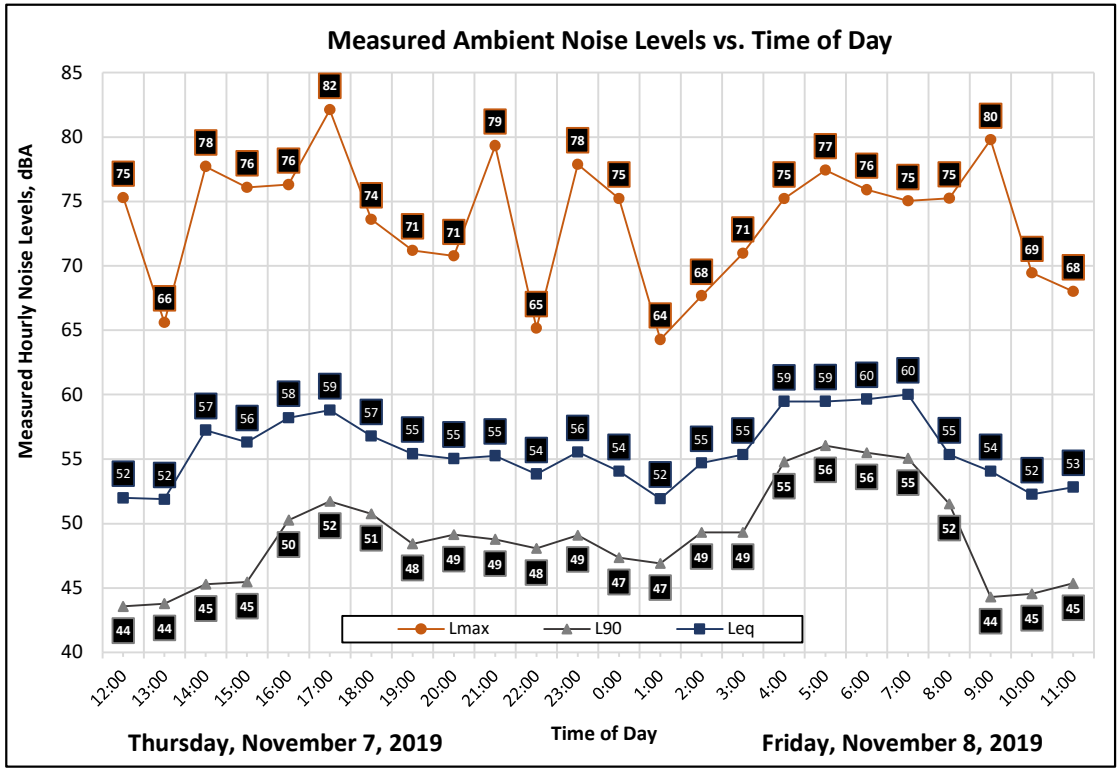


Appendix B1: Continuous Noise Monitoring Results

Site: LT-1
Project: Tracy Costco Depot
Location: Western Project Boundary
Coordinates: 37.7211602°, -121.5105462°
Meter: LDL 820-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, November 7, 2019	12:00	52	75	48	44
Thursday, November 7, 2019	13:00	52	66	49	44
Thursday, November 7, 2019	14:00	57	78	51	45
Thursday, November 7, 2019	15:00	56	76	53	45
Thursday, November 7, 2019	16:00	58	76	56	50
Thursday, November 7, 2019	17:00	59	82	56	52
Thursday, November 7, 2019	18:00	57	74	56	51
Thursday, November 7, 2019	19:00	55	71	54	48
Thursday, November 7, 2019	20:00	55	71	53	49
Thursday, November 7, 2019	21:00	55	79	52	49
Thursday, November 7, 2019	22:00	54	65	52	48
Thursday, November 7, 2019	23:00	56	78	53	49
Friday, November 8, 2019	0:00	54	75	50	47
Friday, November 8, 2019	1:00	52	64	50	47
Friday, November 8, 2019	2:00	55	68	52	49
Friday, November 8, 2019	3:00	55	71	54	49
Friday, November 8, 2019	4:00	59	75	58	55
Friday, November 8, 2019	5:00	59	77	59	56
Friday, November 8, 2019	6:00	60	76	59	56
Friday, November 8, 2019	7:00	60	75	58	55
Friday, November 8, 2019	8:00	55	75	54	52
Friday, November 8, 2019	9:00	54	80	49	44
Friday, November 8, 2019	10:00	52	69	48	45
Friday, November 8, 2019	11:00	53	68	50	45

Statistics	Leq	Lmax	L50	L90
Day Average	56	74	52	48
Night Average	57	72	54	51
Day Low	52	66	48	44
Day High	60	82	58	55
Night Low	52	64	50	47
Night High	60	78	59	56
Ldn	63	Day %		59
CNEL	63	Night %		41



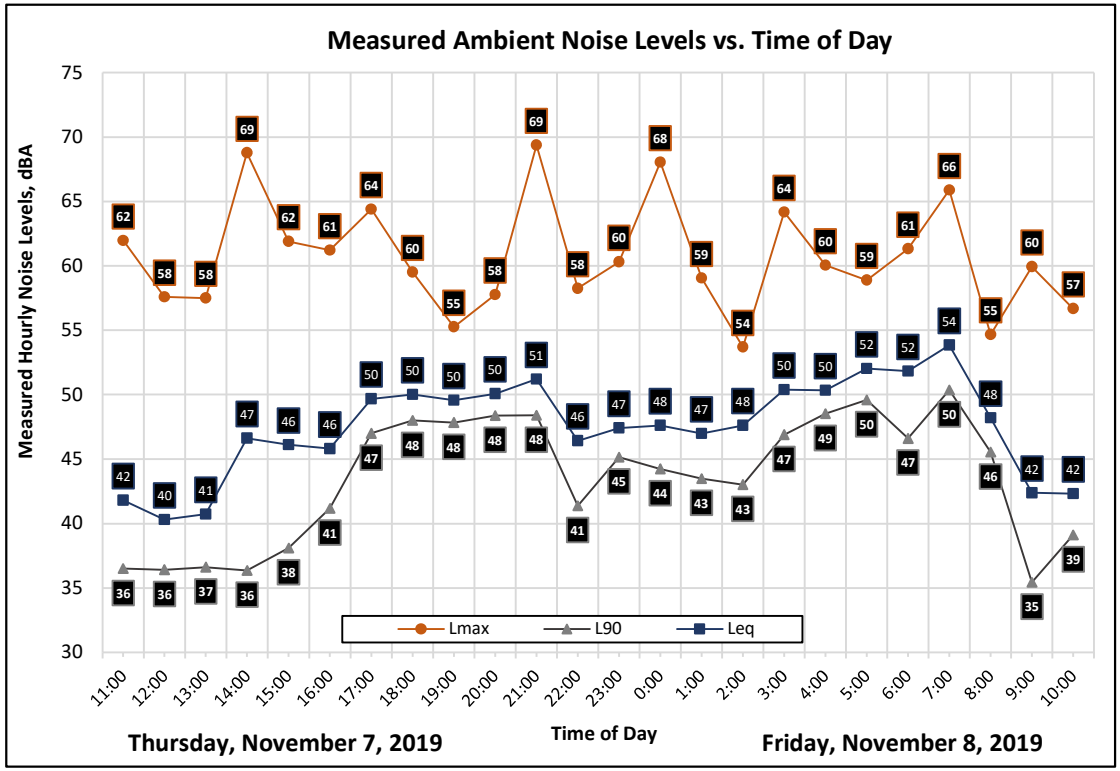


Appendix B2: Continuous Noise Monitoring Results

Site: LT-2
Project: Tracy Costco Depot
Location: Southwestern Project Boundary
Coordinates: 37.7172131°, -121.5098727°
Meter: LDL 812-2
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, November 7, 2019	11:00	42	62	38	36
Thursday, November 7, 2019	12:00	40	58	38	36
Thursday, November 7, 2019	13:00	41	58	38	37
Thursday, November 7, 2019	14:00	47	69	38	36
Thursday, November 7, 2019	15:00	46	62	41	38
Thursday, November 7, 2019	16:00	46	61	45	41
Thursday, November 7, 2019	17:00	50	64	49	47
Thursday, November 7, 2019	18:00	50	60	50	48
Thursday, November 7, 2019	19:00	50	55	49	48
Thursday, November 7, 2019	20:00	50	58	50	48
Thursday, November 7, 2019	21:00	51	69	50	48
Thursday, November 7, 2019	22:00	46	58	46	41
Thursday, November 7, 2019	23:00	47	60	47	45
Friday, November 8, 2019	0:00	48	68	46	44
Friday, November 8, 2019	1:00	47	59	46	43
Friday, November 8, 2019	2:00	48	54	47	43
Friday, November 8, 2019	3:00	50	64	50	47
Friday, November 8, 2019	4:00	50	60	50	49
Friday, November 8, 2019	5:00	52	59	52	50
Friday, November 8, 2019	6:00	52	61	51	47
Friday, November 8, 2019	7:00	54	66	52	50
Friday, November 8, 2019	8:00	48	55	47	46
Friday, November 8, 2019	9:00	42	60	41	35
Friday, November 8, 2019	10:00	42	57	41	39

Statistics	Leq	Lmax	L50	L90
Day Average	48	61	44	42
Night Average	49	60	48	45
Day Low	40	55	38	35
Day High	54	69	52	50
Night Low	46	54	46	41
Night High	52	68	52	50
Ldn	56	Day %		56
CNEL	56	Night %		44



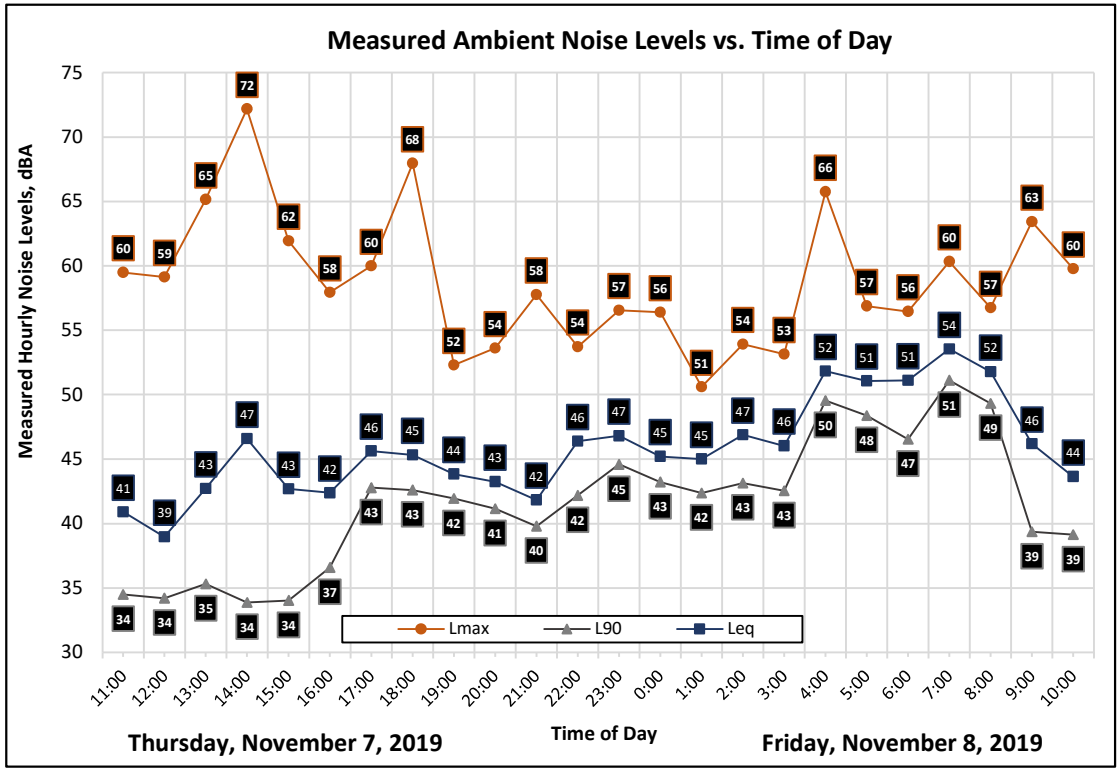


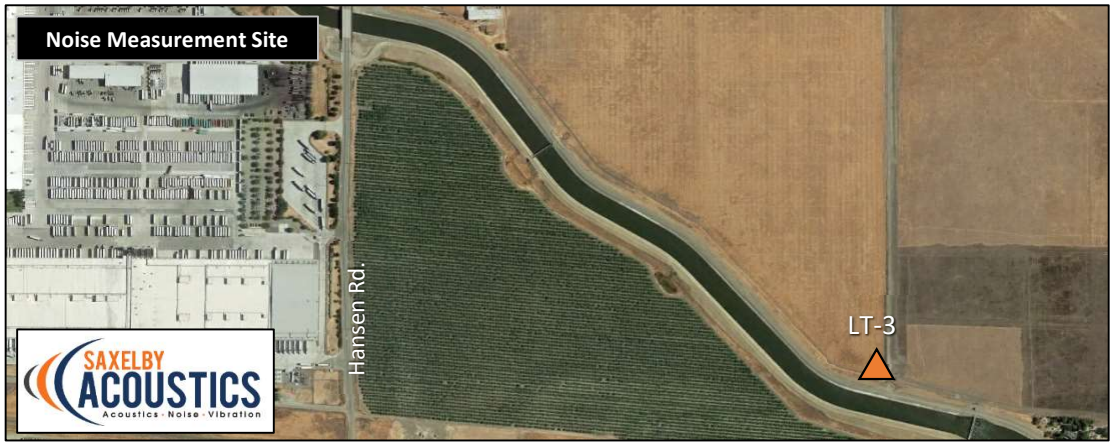
Appendix B3: Continuous Noise Monitoring Results

Site: LT-3
Project: Tracy Costco Depot
Location: Southeastern Project Boundary
Coordinates: 37.7129822°, -121.5039416°
Meter: LDL 812-1
Calibrator: CAL200

Date	Time	Measured Level, dBA			
		L_{eq}	L_{max}	L_{50}	L_{90}
Thursday, November 7, 2019	11:00	41	60	36	34
Thursday, November 7, 2019	12:00	39	59	36	34
Thursday, November 7, 2019	13:00	43	65	37	35
Thursday, November 7, 2019	14:00	47	72	36	34
Thursday, November 7, 2019	15:00	43	62	37	34
Thursday, November 7, 2019	16:00	42	58	40	37
Thursday, November 7, 2019	17:00	46	60	45	43
Thursday, November 7, 2019	18:00	45	68	44	43
Thursday, November 7, 2019	19:00	44	52	43	42
Thursday, November 7, 2019	20:00	43	54	43	41
Thursday, November 7, 2019	21:00	42	58	41	40
Thursday, November 7, 2019	22:00	46	54	46	42
Thursday, November 7, 2019	23:00	47	57	46	45
Friday, November 8, 2019	0:00	45	56	45	43
Friday, November 8, 2019	1:00	45	51	45	42
Friday, November 8, 2019	2:00	47	54	47	43
Friday, November 8, 2019	3:00	46	53	45	43
Friday, November 8, 2019	4:00	52	66	51	50
Friday, November 8, 2019	5:00	51	57	50	48
Friday, November 8, 2019	6:00	51	56	51	47
Friday, November 8, 2019	7:00	54	60	53	51
Friday, November 8, 2019	8:00	52	57	51	49
Friday, November 8, 2019	9:00	46	63	44	39
Friday, November 8, 2019	10:00	44	60	41	39

Statistics	Leq	Lmax	L50	L90
Day Average	47	61	42	40
Night Average	49	56	47	45
Day Low	39	52	36	34
Day High	54	72	53	51
Night Low	45	51	45	42
Night High	52	66	51	50
Ldn	55	Day %		51
CNEL	55	Night %		49





Appendix B4 : Short Term Noise Monitoring Results

Site: ST-1
Project: Tracy Costco Depot
Location: Northwestern Boundary
Coordinates: 37.7217911°, -121.5109462°

Meter: LDL 831-1
Calibrator: CAL200

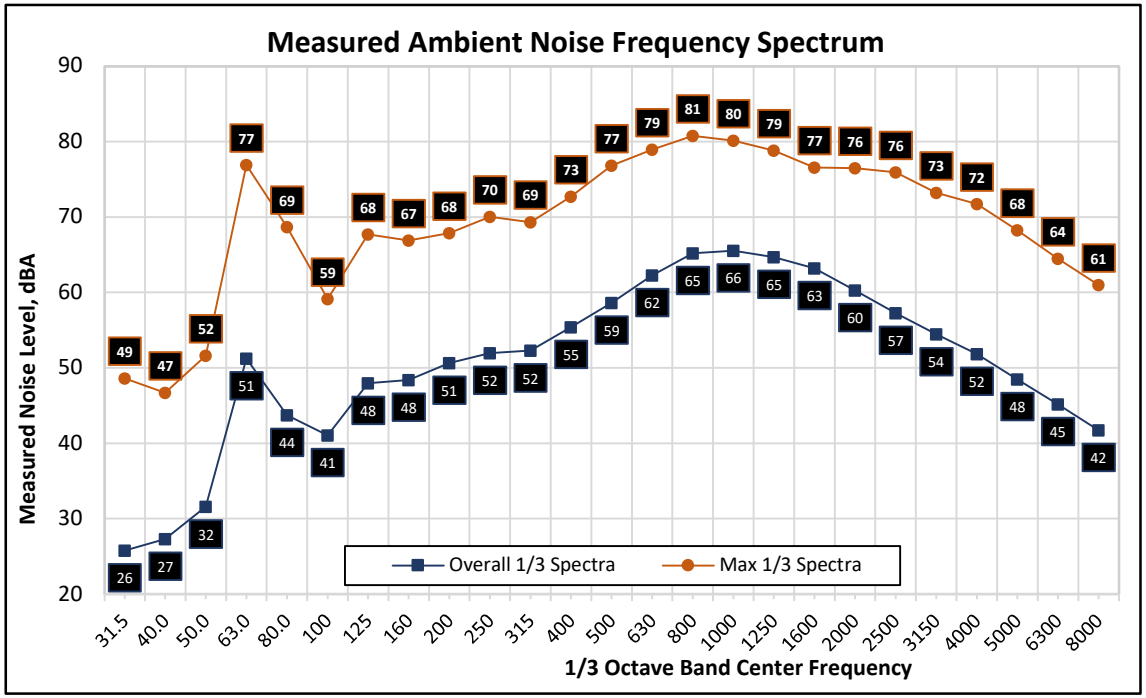
Start: 2019-11-07 12:18:26
Stop: 2019-11-07 12:28:26
SLM: Model 831
Serial: 3141

Measurement Results, dBA

Duration:	0:10
L_{eq}:	72
L_{max}:	88
L_{min}:	39
L_{50}:	58
L_{90}:	41

Notes

Primary noise source is traffic on W. Schulte Rd. Lmax from passing heavy trucks (RV, semi truck, fire truck).





Appendix C: Traffic Noise Calculation Inputs and Results



Appendix C-1
FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 191010 Tracy Costco Depot
Description: Background
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Mountain House Pk	North of I-205	18,410	70	0	30	1.0%	3.0%	45	165	0	355	165	76	65.0
2	Mountain House Pk	South of I-205	18,870	70	0	30	1.0%	3.0%	45	120	0	361	167	78	67.2
3	Hansen Rd.	South of Old Schulte Rd.	660	70	0	30	1.0%	1.0%	45	225	0	33	15	7	47.4
4	Old Schulte Rd.	Handsen Rd to Bud Lyons Wy.	4,630	70	0	30	1.0%	10.0%	50	840	0	233	108	50	51.6
5	Old Schulte Rd.	West of S. Lammers Rd.	9,840	70	0	30	1.0%	10.0%	50	600	0	385	179	83	57.1
6	S. Lammers Rd.	North of Old Schulte Rd.	10,400	70	0	30	1.0%	2.0%	45	85	0	224	104	48	66.3
7	S. Lammers Rd.	South of Old Schulte Rd.	13,460	70	0	30	1.0%	2.0%	45	100	0	266	124	57	66.4
8	S. Lammers Rd.	South of Western Pacific Wy.	9,370	70	0	30	1.0%	2.0%	45	110	0	209	97	45	64.2
9	S. Lammers Rd.	South of Valpico Rd.	1,490	70	0	30	1.0%	2.0%	45	115	0	61	28	13	55.9

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Appendix C-2
FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 191010 Tracy Costco Depot
Description: Background Plus Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Mountain House Pk	North of I-205	18,820	70	0	30	1.0%	3.0%	45	165	0	360	167	78	65.1
2	Mountain House Pk	South of I-205	20,610	70	0	30	1.0%	4.7%	45	120	0	429	199	92	68.3
3	Hansen Rd.	South of Old Schulte Rd.	660	70	0	30	1.0%	1.0%	45	225	0	33	15	7	47.4
4	Old Schulte Rd.	Handsen Rd to Bud Lyons Wy.	6,100	70	0	30	1.0%	22.5%	50	840	0	402	186	87	55.2
5	Old Schulte Rd.	West of S. Lammers Rd.	10,690	70	0	30	1.0%	10.0%	50	600	0	406	189	88	57.5
6	S. Lammers Rd.	North of Old Schulte Rd.	10,570	70	0	30	1.0%	2.0%	45	85	0	227	105	49	66.4
7	S. Lammers Rd.	South of Old Schulte Rd.	14,140	70	0	30	1.0%	2.0%	45	100	0	275	128	59	66.6
8	S. Lammers Rd.	South of Western Pacific Wy.	10,050	70	0	30	1.0%	2.0%	45	110	0	219	102	47	64.5
9	S. Lammers Rd.	South of Valpico Rd.	1,530	70	0	30	1.0%	2.0%	45	115	0	62	29	13	56.0

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Appendix C-3
FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 191010 Tracy Costco Depot
Description: Cumulative
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Mountain House Pk	North of I-205	31,530	70	0	30	1.0%	3.0%	45	165	0	508	236	109	67.3
2	Mountain House Pk	South of I-205	49,540	70	0	30	1.0%	3.0%	45	120	0	687	319	148	71.4
3	Hansen Rd.	South of Old Schulte Rd.	5,390	70	0	30	1.0%	1.0%	45	225	0	132	61	28	56.5
4	Old Schulte Rd.	Handsen Rd to Bud Lyons Wy.	10,580	70	0	30	1.0%	10.0%	50	840	0	404	187	87	55.2
5	Old Schulte Rd.	West of S. Lammers Rd.	10,620	70	0	30	1.0%	10.0%	50	600	0	405	188	87	57.4
6	S. Lammers Rd.	North of Old Schulte Rd.	31,480	70	0	30	1.0%	2.0%	45	85	0	469	218	101	71.1
7	S. Lammers Rd.	South of Old Schulte Rd.	33,600	70	0	30	1.0%	2.0%	45	100	0	490	227	106	70.3
8	S. Lammers Rd.	South of Western Pacific Wy.	33,100	70	0	30	1.0%	2.0%	45	110	0	485	225	104	69.7
9	S. Lammers Rd.	South of Valpico Rd.	30,840	70	0	30	1.0%	2.0%	45	115	0	463	215	100	69.1

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Appendix C-4

FHWA-RD-77-108 Highway Traffic Noise Prediction Model

Project #: 191010 Tracy Costco Depot
Description: Cumulative Plus Project
Ldn/CNEL: Ldn
Hard/Soft: Soft

Segment	Roadway	Segment	ADT	Day %	Eve %	Night %	% Med. Trucks	% Hvy. Trucks	Speed	Distance	Offset (dB)	Contours (ft.) - No Offset 60 dBA	65 dBA	70 dBA	Level, dBA
1	Mountain House Pk	North of I-205	31,940	70	0	30	1.0%	3.0%	45	165	0	512	238	110	67.4
2	Mountain House Pk	South of I-205	50,700	70	0	30	1.0%	3.1%	45	120	0	703	326	151	71.5
3	Hansen Rd.	South of Old Schulte Rd.	5,580	70	0	30	1.0%	1.0%	45	225	0	135	63	29	56.7
4	Old Schulte Rd.	Handsen Rd to Bud Lyons Wy.	12,100	70	0	30	1.0%	12.3%	50	840	0	480	223	103	56.4
5	Old Schulte Rd.	West of S. Lammers Rd.	11,310	70	0	30	1.0%	10.0%	50	600	0	422	196	91	57.7
6	S. Lammers Rd.	North of Old Schulte Rd.	31,760	70	0	30	1.0%	2.0%	45	85	0	472	219	102	71.2
7	S. Lammers Rd.	South of Old Schulte Rd.	34,010	70	0	30	1.0%	2.0%	45	100	0	494	229	106	70.4
8	S. Lammers Rd.	South of Western Pacific Wy.	33,510	70	0	30	1.0%	2.0%	45	110	0	489	227	105	69.7
9	S. Lammers Rd.	South of Valpico Rd.	31,010	70	0	30	1.0%	2.0%	45	115	0	464	215	100	69.1

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APPENDIX F

Traffic Analysis

Kimley»Horn

MEMORANDUM

From: Frederik Venter, PE and Colin Ogilvie | Kimley-Horn and Associates

To: Robert Armijo, PE | City of Tracy

Date: September 12, 2022

Re: **Costco Direct Delivery Center Traffic Analysis**

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1. Executive Summary

The proposed Costco Direct Delivery Center (Project) consists of two buildings totaling 1,782,317 square feet of warehouse space located south of Old Schulte Road.

The Project proposes three driveways along Old Schulte Road (two signals and one right-in, right-out).

The project will generate 401 AM and 87 PM peak hour trips. In the AM 30.8% and in the PM 21.7% will be trucks, respectively.

The following sections summarize the findings of this report:

Traffic Review

VMT Analysis

The proposed Costco distribution warehouse project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.4 VMT per Employee. The evaluation tool estimates that the Project would generate 24.8 VMT per Employee, and the Project exceeds the threshold by 164%.

TDM Program

This program recommends TDM measures that would individually reduce the Project's VMT and trips with the goal of obtaining a feasible maximum of 15% VMT reduction. **Table 1** lists the toolbox of potential TDM measures that could partially mitigate the Project's VMT impact. Maximum TDM reductions are provided for each TDM element. The applicant will select specific TDM measures in consultation with the City to mitigate the VMT impact.

This TDM program aims to achieve a feasible maximum of 15% VMT reduction, with the opportunity for 13% VMT reduction coming from the VMT Banking Fee Program as discussed after this section.

For the TDM program, the following TDM measures are being proposed:

1. Commuting Strategies– 1%
    a. Emergency Ride Home (ERH) Program: The Project will provide an occansional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available.
2. Shared Mobility Strategies – 1%
    a. Designated Parking for Car Share Vehicles: The Project will provide preferential parking in convient locations in terms of free or reduced parking fees, priority parking, or reserved parking for commuters who carpool, vanpool, ride-share, or use alternatively fueled vehicles.

VMT Banking Fees

The City of Tracy VMT Banking Fee Program is a programmatic approach to respond to the need for feasible VMT mitigation programs. Programmatic approaches that rely on collectively funding larger projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The VMT Banking Fee Program calculates the cost per VMT reduction as $633.11. Therefore, to achieve a the 13% reduction needed after implementation of the TDM program, the project would be responsible to pay $510,286.66. This is calculated as 13% being equivalent to a 3.224 VMT per employee reduction. Since there are 250 employees and each employee needs to reduce by 3.224 VMT at a cost of $633.11 per VMT the calculation is as follows:

VMT Banking Fee = 250 employees x 3.224 VMT per employee x $633.11 per VMT = $510,286.66

The VMT banking fee calculation has been provided in **Table 2**. In case that the VMT Banking Fee Program is not in place, the TDM program will need to achieve the full 15% reduction.

Table 1 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction	Applicant Preferred Measure	VMT Reduction Applied
Parking Strategies				
Reduce Parking Supply	Reduce the number of available parking spots provided to employees.	1%		0%
Unbundle Parking	Remove free parking at the site, and charge employees for parking. The higher the cost of parking, the higher the reduction.	1%		0%
Parking Cash-out	Provide employees a choice of forgoing current parking for a cash payment to be determined by the employer. The higher the cash payment and eligible employees, the higher the reduction.	2%		0%
Transit Strategies				
Transit Stops	Coordinate with local transit agency to provide bus stop near the site. Real time transportation information displays support on-the-go decision making to support sustainable trip making.	1%		0%
Implement Neighborhood Shuttle	Implement project-operated or project-sponsored neighborhood shuttle serving residents, employees, and visitors of the project site	2%		0%
Transit Subsidies	Involves the subsidization of transit fare for residents and employees of the project site. This strategy assumes transit service is already present in the project area. Pays for employees to use local transit. This could either be a discounted ticket or a full-reimbursed transit ticket.	2%		0%
Communication & Information Strategies				
Travel Behavior Change Program	Involves the development of a travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Provide a web site that allows employees to research other modes of transportation for commuting. Employee-focused travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. DIBS	1%		0%
Promotions & Marketing	Involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices with passive educational and promotional materials. Marketing and public information campaign to promote awareness of TDM program with an on-site coordinator to monitor program. DIBS	1%		0%
Commuting Strategies				
Employer Sponsored Vanpool or Shuttle	Implementation of employer-sponsored employee vanpool or shuttle providing new opportunities for access to connect employees to the project site.	2%		0%
Emergency Ride Home (ERH) Program	Provide an occasional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available. DIBS	1%	x	1%
Telecommuting Alternative work schedule	Four-Ten work schedule results in 20% weekly VMT reduction, 10% trip reduction equals 15% VMT reduction	7%		0%
On-site Childcare	Provide on-site childcare to remove the need to drive a child to daycare at a separate location.	1%		0%
Shared Mobility Strategies				
Ride Share Program	Increase vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading	2%		0%

Table 1 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction	Applicant Preferred Measure	VMT Reduction Applied
	and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. Need a point person for the business on-site			
Employee/Employer Car Share	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on -site.	1%		0%
	Provide an on-site car vehicle for employees to use for short trips. This allows for employees to run errands or travel for lunch.	1%		0%
Designated Parking Spaces for Car Share Vehicles	Reserved car share spaces closer to the building entrance.	1%	x	1%
Bicycle Infrastructure Strategies				
Bike Share Program	Participate in a bike share program/On site bike share program	1%		0%
Implement/Improve On-street Bicycle Facility	Implement or provides funding for improvements to corridors and crossings for bike networks identified within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel.	1%		0%
Include Bike Parking Per City Code	Implement short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations	1%		0%
Include Secure Bike Parking and Showers	Implement additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel.	1%		0%
Bicycle Repair Station / Services	On-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.	1%		0%
Neighborhood Enhancement Strategies				
Traffic Calming Improvements	Implement traffic calming improvements on streets and intersections throughout and around the project site.	1%		0%
Pedestrian Network Improvements	Implement pedestrian network improvements throughout and around the project site that encourages people to walk.	2%		0%
Miscellaneous Strategies				
Virtual Care Strategies for Hospitals	Implement options for virtual care for health services for hospitals.	2%		0%
On-Site Affordable Housing	Provide a percentage of on-site affordable housing for employees that is less than 100%.	1%		0%
Job Creation Land Use (e.g. Office)	Provide offices or other job creation land use. Applies to housing projects.	3%		0%

Table 2 – VMT Banking Fees Calculations

Project Building Area (ksf)	1,745.1
Employees per ksf	
Project Employees	250
Project VMT/EMP	24.8
Project Total Employee VMT	6,200.0
Project VMT/EMP Difference	164%
TDM %	2%
Banking Fee %	13%
Project Total Employee VMT Reduction for Fee Calculation	806.0
Project Total Employee VMT/EMP Reduction for Fee Calculation	3.224
Banking Fee $	**$ 510,286.66**

Background Plus Project

Deficiencies in LOS operations, exacerbated or caused by the project, will either be fully or partially eliminated by implementing the following improvements for Background conditions. Background conditions include Existing plus approved project traffic on the study road network. All improvements listed were also identified in the Cordes Phase 2nd Consistency Analysis (June 2020) except for Intersection #11 which is triggered by the Costco project.

- Intersection #1 - International Parkway & I-205 Westbound Ramps (AM Peak Hour)
  - Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.
  - AM intersection operations improve from an LOS F to a LOS A.
- Intersection #3 - International Parkway & Old Schulte Road (AM and PM Peak Hours)
  - Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.
  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #4 - International Parkway & I-580 Westbound Ramps (AM and PM Peak Hours)
  - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #5 - International Parkway & I-580 Eastbound Ramps (AM and PM Peak Hours)

  - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
  - Refer to the FTOAR for more information regarding LOS improvements.
- Intersection #6 - Hansen Road & Old Schulte Road (AM Peak Hour)
  - Add one additional westbound and eastbound through lane at the intersection to establish a 4-lane facility. Old Schulte Road will remain a 2-lane facility over the Delta-Mendota Canal Bridge.
  - AM intersection operations improve from LOS E to LOS C.
- Intersection #11 – Lammers Road & Old Schulte Road (AM Peak Hour)
  - Provide an overlap phase for the eastbound right turn.
  - AM intersection operations improve from LOS E to LOS D.
- Intersection #12 - Lammers Road & Western Pacific Way (AM Peak Hour)
  - Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.
  - AM intersection operations improve from LOS F to LOS C.
- Intersection #13 - Lammers Road & Valpico Road (AM Peak Hour)
  - Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.
  - AM intersection operations improve from LOS F to LOS C
- The project shall, at a minimum, provide emergency access to the future Hansen Road. It is anticipated that the property immediately west of the Project site (APN 209-23-025) may develop in the near future and that Hansen Road will be extended to Old Schulte Road.

Table 3 provides a summary of improvements as well as the Costco Obligations for the Background Plus Project Conditions.

Cumulative Plus Project

No additional improvements have been identified for Cumulative Conditions, The Project will, however, pay the City TIF fees.

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Table 3 – Costco Obligations (Background Plus Project Conditions)

Costco Intersection #	Intersection /Location	Peak Hour	Background Plus Project Conditions		
			Improvement	Recommended Costco Improvement?	Costco Project Obligation
1	International Pkwy & I-205 WB Ramps	AM	Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
3	International Pkwy & Old Schulte Rd	AM & PM	Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
4	International Pkwy & I-580 WB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
5	International Pkwy & I-580 EB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
6[1]	Hansen Road & Old Schulte Rd	AM	Add one additional westbound and eastbound through lane at the intersection to establish a 4-lane facility. Old Schulte Road will remain a 2-lane facility over the Delta-Mendota Canal Bridge.	Y	Costco to implement
11	Lammers Rd & Old Schulte Rd	AM	Provide an overlap phase for the eastbound right turn.	Y	Costco to implement
12[1]	Lammers Rd & Western Pacific Way	AM	Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
13	Lammers Rd & Valpico Rd	AM	Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.

Notes:

1. Costco will construct improvement if not already implemented by another development. This improvement is anticipated to be included in the City of Tracy Transportation Master Plan (TMP) Fee Program Update. If included, Costco could receive reimbursement for improvements within the fee program.
2. Kimley-Horn traffic study identified TIF, this is not reflected in the conditions.

Engineering Review

Table 4 provides the summary of the engineering comments for the Project.

Table 4 – Engineering Review Summary

Section	Recommendations/Comments
Driveway Access Review	• Driveway #1 - Revise striping to the following: 1 left turn and 1 through/right turn lane. • Driveway #2 - Provide Stop (R1-1), Right Turn Only (R3-5R), and One Way (R6-1) signage. • Driveway #3 - A left turn lane and a right turn pocket are needed for the signal. • Emergency vehicle access(es) may be required off Hansen Road.
Internal Circulation Review	• Approximately 100 feet is provided between Old Schulte Road and the internal drive aisle. This is only enough space for 4 passenger car vehicles or 1 STAA and 1 passenger car vehicle per lane. Since this is the only location where a passenger car can perform a left turn out of the site, this is not adequate during the shift change peaks. To alleviate congestion at this point, it is recommended to provide an eastbound U-turn lane (that could potentially convert to a future left turn lane) at the Old Schulte Road and Project Driveway #3 signalized intersection. • At Project Driveway #1, the northern internal crosswalk should be removed as this will conflict with vehicles entering and exiting the Project. This crossing should occur at the signal instead or at the southern internal crosswalk. • Provide a three way stop at the Project Driveway #1 internal intersection with the inbound movement as the free movement. • No project detail is known for the eastern adjacent parcel that will share Project Driveway #3. The cross access shown will be reviewed in the future, once a development application is submitted for the adjacent parcel. • Provide clear signage and/or pavement markings for trucks entering Project Driveway #3 that designates security versus bypass lanes. • Provide truck turning templates at reverse curve within Project Driveway #3.
Vehicle Turning Templates	• STAA trucks are unable to perform northbound right turn at Driveways #1. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site. • STAA trucks are unable to perform eastbound and northbound right turns at Driveways #3. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site. • A westbound left turn must be provided at Driveway #3 and it must accommodate a STAA truck turning template.
External Network Review	• Provide more detail on the transitions between existing conditions on both the east and west end of the Project limits. • Provide the striping at the intersection of Old Schulte Road and Project Driveway #3. This approach must include a westbound left turn pocket that can accommodate a CA-STAA truck. • Revise the signing and striping for the southbound movement at Old Schulte Road and Bud Lyons Way. Provide one left turn and one through/right lane. • The Westbound right turn lane at the intersection of Old Schulte Road and Bud Lyons is existing and should be shown on the plan set. • Provide eastbound shoulder stripe. • Lengthen the westbound left turn lane at Project Driveway #1 to accommodate 375 feet of deceleration and 150 feet of storage. • Emergency vehicles access(es) may be required off Hansen Road. In addition, the City typically requires all street frontage improvements to be constructed by the Project developer.

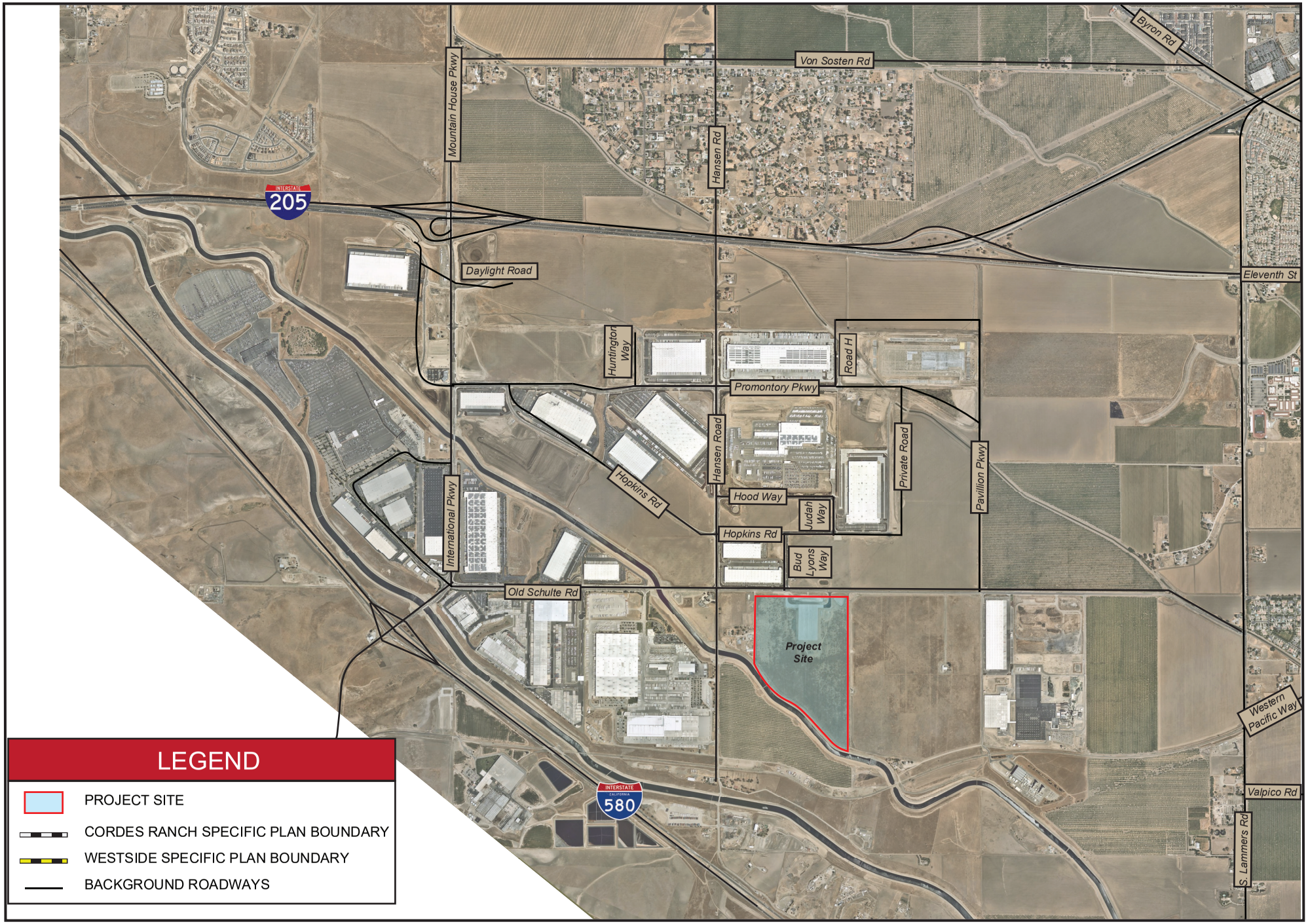
2. Introduction

This memorandum presents a traffic review of the Costco Direct Delivery Center (Project) located south of Old Schulte Road (West Schulte Road) and north of the proposed Hansen Road Extension in Tracy, California. The Project consists of two warehouse buildings:

- Building 1: 543,326 Square Feet
- Building 2: 1,201,727 Square Feet
- Total: 1,745,053 Square Feet

Figure 1 provides a Project vicinity map. The Project is located on agricultural land in the City of Tracy Sphere of Influence. Adjacent development includes industrial uses in the County of San Joaquin and Cordes Ranch. Regional access to the site is via I-205 and I-580 via the Mountain House and Patterson Pass interchanges, respectively. Additional industrial development is also occurring to the east of the Project site, and the future Westside Specific Plan area is located to the northeast of the site. The Project will be annexed into the City.

The Project site plan is shown in **Figure 2**. The Project proposes three access points along Old Schulte Road (two signals and one right-in, right-out) and none along the future Hansen Road.



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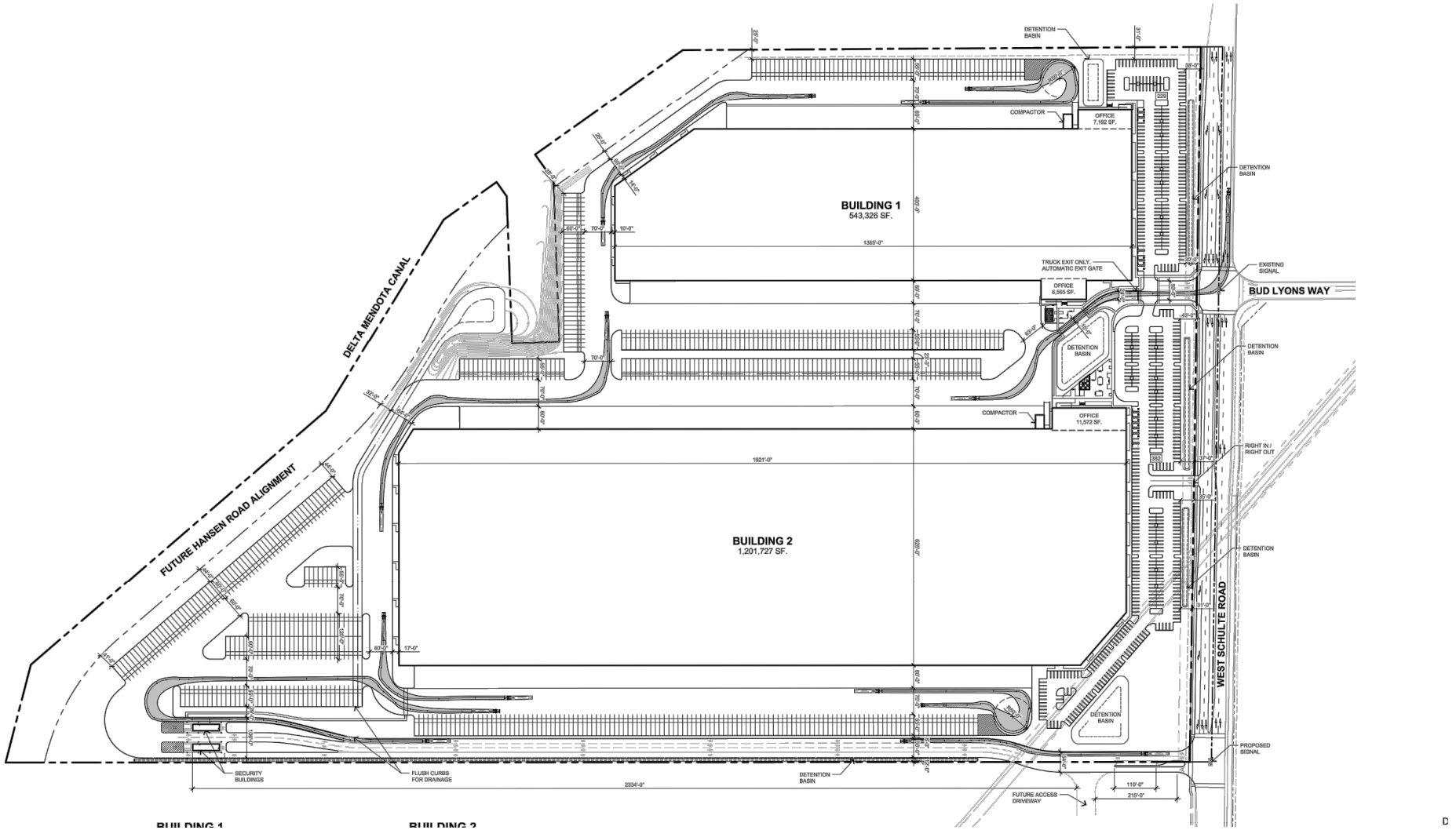
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Figure 1

Project Vicinity Map

December 2021

Costco Depot Traffic Analysis



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Figure 2

Project Site Plan

Tracy Costco Direct Delivery Center

3. VMT Analysis

VMT Calculations

In 2018, the California state legislature, in approving Senate Bill (SB) 743, directed the Office of Planning and Research to develop guidelines for assessing transportation impacts based on vehicle miles traveled, or VMT. In response to SB 743, CEQA and its implementing guidelines (CEQA Guidelines) were significantly amended regarding the methods by which lead agencies are to evaluate a project's transportation impacts. As described in CEQA Guidelines Section 15064.3(a):

Generally, vehicle miles traveled is the most appropriate measure of transportation impacts. For the purposes of this section, "vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. Except as provided in subdivision (b)(2) below (regarding roadway capacity), a project's effect on automobile delay shall not constitute a significant environmental impact.

This section of the Guidelines continues to set forth the criteria for analyzing transportation impacts. Currently, the City is studying their own thresholds, but none have been adopted.

In 2013, SB 743 was signed into law by California Governor Jerry Brown with a goal of reducing Greenhouse Gas (GHG) emissions, promoting the development of infill land use projects and multimodal transportation networks, and to promote a diversity of land uses within developments. One significant outcome resulting from this statue is the removal of automobile delay and congestion, commonly known as Level of Service (LOS), as a basis for determining significant transportation impacts under the California Environmental Quality Act (CEQA).

The Governor's Office of Planning and Research (OPR) has documented recommended analysis guidelines for SB 743 in its *Technical Advisory on Evaluating Transportation Impacts in CEQA* (2018) which provides for Vehicle Miles Traveled (VMT) as the principal measure to replace LOS for determining significant transportation impacts. VMT is a measure of total vehicular travel that accounts for the number of vehicle trips and the length of those trips. OPR selected VMT, in part, because jurisdictions are already familiar with this metric. VMT is already used in CEQA to study other potential impacts such as Greenhouse Gases (GHG), air quality, and energy impacts and is used in planning for regional Sustainable Communities Strategies (SCS).

VMT also allows for an analysis of a project's impact throughout the City rather than only in the vicinity of the proposed project, allowing for a better understanding of the full extent of a project's transportation-related impact. It should be noted that SB 743 still allows the City of Tracy to use LOS for other planning purposes outside the scope of CEQA.

Understanding how the local roadway network functions from an engineering standpoint is still critical to local land use agencies to monitor traffic flow, identify safety issues, establish fees and manage congestion. However, for the purposes of evaluating environmental impacts under CEQA, the new regulations have removed congestion from the range of required subjects analyzed within CEQA documents.

The proposed Costco Direct Delivery Center project was evaluated using the City of Tracy VMT Calculator. For the surrounding industrial land use area, the City's threshold is 9.4 VMT per Employee. The evaluation

tool estimates that the Project would generate 24.8 VMT per Employee, and the Project exceeds the threshold by 164%.

Per the City's VMT threshold and SB 743 guidelines, the Project causes a significant transportation impact. For projects that would cause a VMT impact, VMT reduction strategies such as introducing transportation demand management (TDM), or additional multimodal infrastructure can be implemented to reasonably mitigate the VMT impact which is estimated from research literature and case studies.

Potential Mitigations

The Project exceeds the City threshold by 164% and this reduction is not feasible. The California Air Pollution Control Officers Association (CAPCOA) indicates that up to 15% of VMT reduction can reasonably be achieved. The Project has the option to "purchase" additional VMT from the VMT banking fee above 15%. For the purpose of this report, a maximum of 15% is assumed.

TDM Program

This program recommends TDM measures that would individually reduce the Project's VMT and trips with the goal of obtaining a feasible maximum of 15% VMT reduction. **Table 5** lists the toolbox of potential TDM measures that could partially mitigate the Project's VMT impact. Maximum TDM reductions are provided for each TDM element. The applicant will select specific TDM measures in consultation with the City to partially mitigate the VMT impact.

This TDM program aims to achieve a feasible maximum of 15% VMT reduction, with the opportunity for 13% VMT reduction coming from the VMT Banking Fee Program as discussed after this section. In the case that the VMT Banking Fee is not in place, the TDM program will need to achieve the full 15% reduction.

For the TDM program, the following TDM measures are being proposed:

1. Commuting Strategies– 1%
    a. Emergency Ride Home (ERH) Program: The Project will provide an occansional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available.
2. Shared Mobility Strategies – 1%
    a. Designated Parking for Car Share Vehicles: The Project will provide preferential parking in convient locations in terms of free or reduced parking fees, priority parking, or reserved parking for commuters who carpool, vanpool, ride-share, or use alternatively fueled vehicles.

VMT Banking Fees

The City of Tracy VMT Banking Fee Program is a programmatic approach to respond to the need for feasible VMT mitigation programs. Programmatic approaches that rely on collectively funding larger projects allow a project to obtain an amount of mitigation commensurate with their impact, include only a single payment without the complexity of ongoing management, and do not require on-going mitigation monitoring. Programmatic approaches can also provide a public benefit in terms of funding transportation

improvements that would not otherwise be constructed, resulting in improvements to congestion, GHG emissions, increased transportation choices, and additional opportunities for active transportation.

The VMT Banking Fee Program calculates the cost per VMT reduction as $633.11. Therefore, to achieve a the 13% reduction needed after implementation of the TDM program, the project would be responsible to pay $510,286.66. This is calculated as 13% being equivalent to a 3.224 VMT per employee reduction. Since there are 250 employees and each employee pneeds to reduce by 3.224 VMT at a cost of $633.11 per VMT the calculation is as follows:

VMT Banking Fee = 250 employees x 3.224 VMT per employee x $633.11 per VMT = $510,286.66

The VMT banking fee calculation has been provided in **Table 6**.

Table 5 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction	Applicant Preferred Measure	VMT Reduction Applied
Parking Strategies				
Reduce Parking Supply	Reduce the number of available parking spots provided to employees.	1%		0%
Unbundle Parking	Remove free parking at the site, and charge employees for parking. The higher the cost of parking, the higher the reduction.	1%		0%
Parking Cash-out	Provide employees a choice of forgoing current parking for a cash payment to be determined by the employer. The higher the cash payment and eligible employees, the higher the reduction.	2%		0%
Transit Strategies Strategies				
Transit Stops	Coordinate with local transit agency to provide bus stop near the site. Real time transportation information displays support on-the-go decision making to support sustainable trip making.	1%		0%
Implement Neighborhood Shuttle	Implement project-operated or project-sponsored neighborhood shuttle serving residents, employees, and visitors of the project site	2%		0%
Transit Subsidies	Involves the subsidization of transit fare for residents and employees of the project site. This strategy assumes transit service is already present in the project area. Pays for employees to use local transit. This could either be a discounted ticket or a full-reimbursed transit ticket.	2%		0%
Communication & Information Strategies				
Travel Behavior Change Program	Involves the development of a travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. Provide a web site that allows employees to research other modes of transportation for commuting. Employee-focused travel behavior change program that targets individuals' attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. DIBS	1%		0%
Promotions & Marketing	Involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices with passive educational and promotional materials. Marketing and public information campaign to promote awareness of TDM program with an on-site coordinator to monitor program. DIBS	1%		0%
Commuting Strategies				
Employer Sponsored Vanpool or Shuttle	Implementation of employer-sponsored employee vanpool or shuttle providing new opportunities for access to connect employees to the project site.	2%		0%

Table 5 – TDM Measures

Transportation Demand Management Measure	Description	Max VMT Reduction	Applicant Preferred Measure	VMT Reduction Applied
Emergency Ride Home (ERH) Program	Provide an occasional subsidized ride to commuters who use alternative modes. Guaranteed ride home for people if they need to go home in the middle of the day due to an emergency or stay late and need a ride at a time when transit service is not available. DIBS	1%	x	1%
Telecommuting Alternative work schedule	Four-Ten work schedule results in 20% weekly VMT reduction, 10% trip reduction equals 15% VMT reduction	7%		0%
On-site Childcare	Provide on-site childcare to remove the need to drive a child to daycare at a separate location.	1%		0%
Shared Mobility Strategies				
Ride Share Program	Increase vehicle occupancy by providing ride-share matching services, designating preferred parking for ride-share participants, designing adequate passenger loading/unloading and waiting areas for ride-share vehicles, and providing a website or message board to connect riders and coordinate rides. Need a point person for the business on-site	2%		0%
Employee/Employer Car Share	Implement car sharing to allow people to have on-demand access to a vehicle, as-needed. This may include providing membership to an existing program located within 1/4 mile, contracting with a third-party vendor to extend membership-based service to an area, or implementing a project-specific fleet that supports the residents and employees on -site.	1%		0%
	Provide an on-site car vehicle for employees to use for short trips. This allows for employees to run errands or travel for lunch.	1%		0%
Designated Parking Spaces for Car Share Vehicles	Reserved car share spaces closer to the building entrance.	1%	x	1%
Bicycle Infrastructure Strategies				
Bike Share Program	Participate in a bike share program/On site bike share program	1%		0%
Implement/Improve On-street Bicycle Facility	Implement or provides funding for improvements to corridors and crossings for bike networks identified within a one-half mile buffer area of the project boundary, to support safe and comfortable bicycle travel.	1%		0%
Include Bike Parking Per City Code	Implement short and long-term bicycle parking to support safe and comfortable bicycle travel by providing parking facilities at destinations	1%		0%
Include Secure Bike Parking and Showers	Implement additional end-of-trip bicycle facilities to support safe and comfortable bicycle travel.	1%		0%
Bicycle Repair Station / Services	On-site bicycle repair tools and space to use them supports on-going use of bicycles for transportation.	1%		0%
Neighborhood Enhancement Strategies				
Traffic Calming Improvements	Implement traffic calming improvements on streets and intersections throughout and around the project site.	1%		0%
Pedestrian Network Improvements	Implement pedestrian network improvements throughout and around the project site that encourages people to walk.	2%		0%
Miscellaneous Strategies				
Virtual Care Strategies for Hospitals	Implement options for virtual care for health services for hospitals.	2%		0%
On-Site Affordable Housing	Provide a percentage of on-site affordable housing for employees that is less than 100%.	1%		0%
Job Creation Land Use (e.g. Office)	Provide offices or other job creation land use. Applies to housing projects.	3%		0%

Table 6 – VMT Banking Fees Calculations

Project Building Area (ksf)	1,745.1
Employees per ksf	
Project Employees	250
Project VMT/EMP	24.8
Project Total Employee VMT	6,200.0
Project VMT/EMP Difference	164%
TDM %	2%
Banking Fee %	13%
Project Total Employee VMT Reduction for Fee Calculation	806.0
Project Total Employee VMT/EMP Reduction for Fee Calculation	3.224
Banking Fee $	**$ 510,286.66**

4. Analysis Methodology

Study Intersections

The following intersections were analyzed for this study:

1. International Pkwy & I-205 WB Ramps
2. International Pkwy & I-205 EB Ramps
3. International Pkwy & Old Schulte Rd
4. International Pkwy & I-580 WB Ramps
5. International Pkwy & I-580 EB Ramps
6. Hansen Rd & Old Schulte Rd
7. Bud Lyons Wy/Project Driveway #1 & Old Schulte Rd
8. Project Driveway #2 & Old Schulte Rd
9. Project Driveway #3 & Old Schulte Rd
10. Pavillion Pkwy & Old Schulte Rd
11. Lammers Rd & Old Schulte Rd
12. Lammers Rd & Western Pacific Wy
13. Lammers Rd & Valpico Rd

These intersections were selected based on the City threshold established in the City of Tracy Transportation Master Plan and the General Plan. The intersection analysis will not be used for CEQA purposes but only for conditions of approval for implementing engineering improvements.

Study Conditions

The following scenarios were analyzed to determine if the Project causes study intersections to degrade to an unacceptable level of service (LOS):

- **Background Conditions** – represents the following:
  - Existing traffic counts
    - May 2019 traffic counts

        - One supplemental count at Old Schulte Road and Bud Lyons Way was collected on November 19, 2020 from 5:00 AM to 8:00 AM and 3:00 PM to 6:00 PM while the COVID-19 pandemic and associated shelter in place restrictions were in effect. The industrial facilities near the count location were operational and counts were reviewed against pre-pandemic volumes and deemed acceptable to use for this study.
    - Plus Approved but unconstructed projects' traffic volumes
        - Cordes Ranch Scheme 170A Transportation Impact Analysis dated November 1, 2017
        - Cordes Ranch 2nd Consistency Analysis (Phase 1K) Traffic Study Memorandum dated June 30, 2020
- **Background Plus Project Conditions** – represents Background Conditions plus traffic generated by the proposed Project
- **Cumulative Conditions** – represents the following:
    - Future 2035 volumes derived from the City of Tracy Travel Demand Model, excluding the Project site traffic
    - Plus Project trips from the Cordes Ranch 2nd Consistency Analysis (Phase 1K) Traffic Study Memorandum dated June 30th, 2020
- **Cumulative Plus Project Conditions** – represents Cumulative Conditions along with traffic generated by the proposed Project

5. Background Conditions

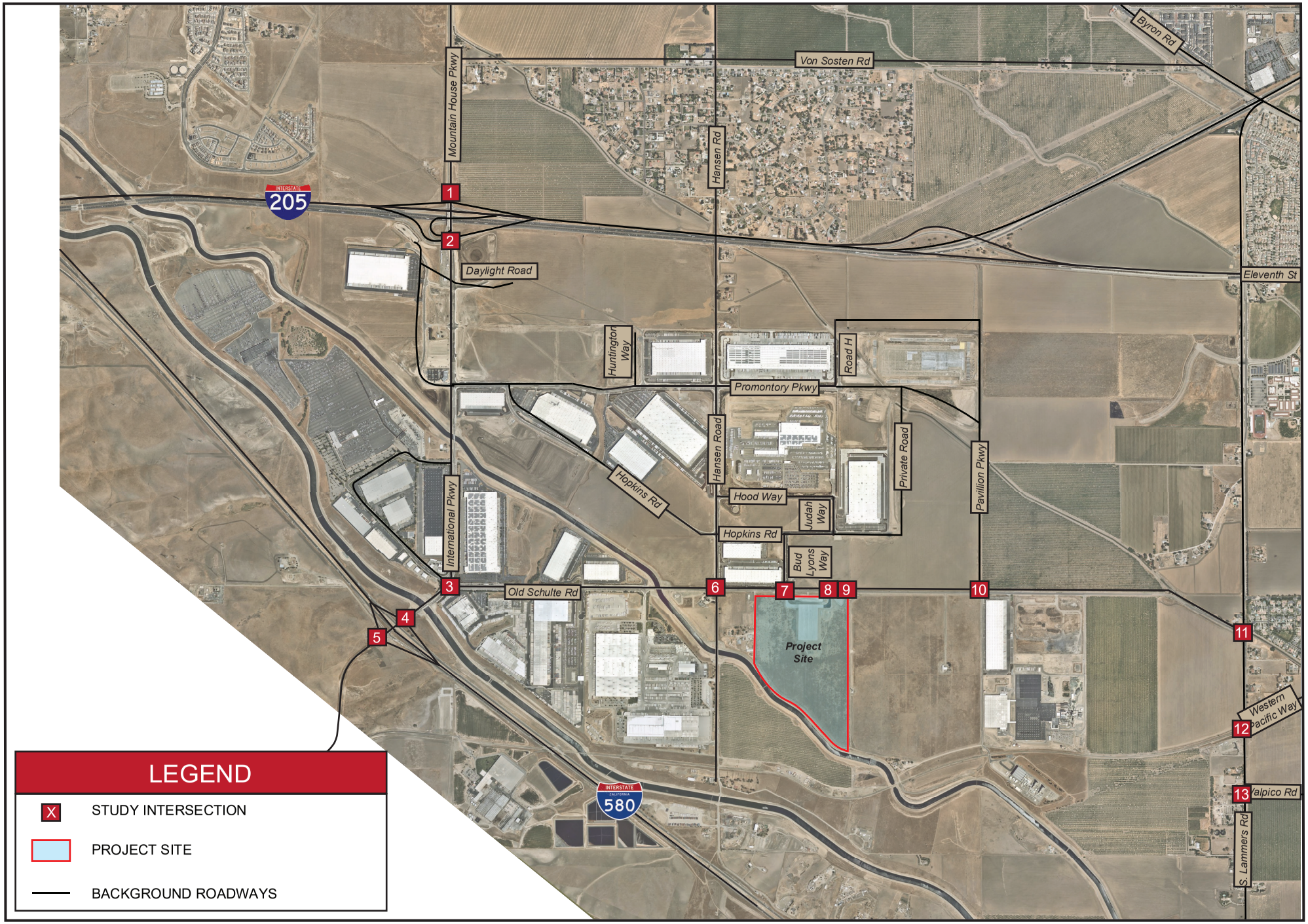
Background Conditions are based on Existing Conditions traffic volumes plus traffic generated by approved but unconstructed projects. Background Conditions also assumed an updated roadway network reflecting the Cordes Ranch Phase 1K street improvement plan.

The Background Conditions roadway network is shown in **Figure 3**. The Background Conditions lane geometry is shown in **Figure 4** and traffic volumes are shown in **Figure 5**.

Results of the Background Conditions level of service analysis are presented in **Table 7**. All intersections operated at acceptable levels of service except for the following:

- Intersection #1 - International Pkwy & I-205 WB Ramps (AM Peak Hour)
- Intersection #3 - International Pkwy & Old Schulte Rd (AM and PM Peak Hours)
- Intersection #4 - International Pkwy & I-580 WB Ramps (AM and PM Peak Hours)
- Intersection #5 - International Pkwy & I-580 EB Ramps (AM and PM Peak Hours)
- Intersection #6 - Hansen Rd & Old Schulte Rd (AM Peak Hour)
- Intersection #7 - Bud Lyons Wy/Project Driveway #1 & Old Schulte Rd (AM Peak Hour)
- Intersection #10 - Pavillion Pkwy & Old Schulte Rd (AM Peak Hour)
- Intersection #12 - Lammers Rd & Western Pacific Wy (AM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (AM Peak Hour)

Analysis output sheets for Background Conditions are provided in the **Appendix**.



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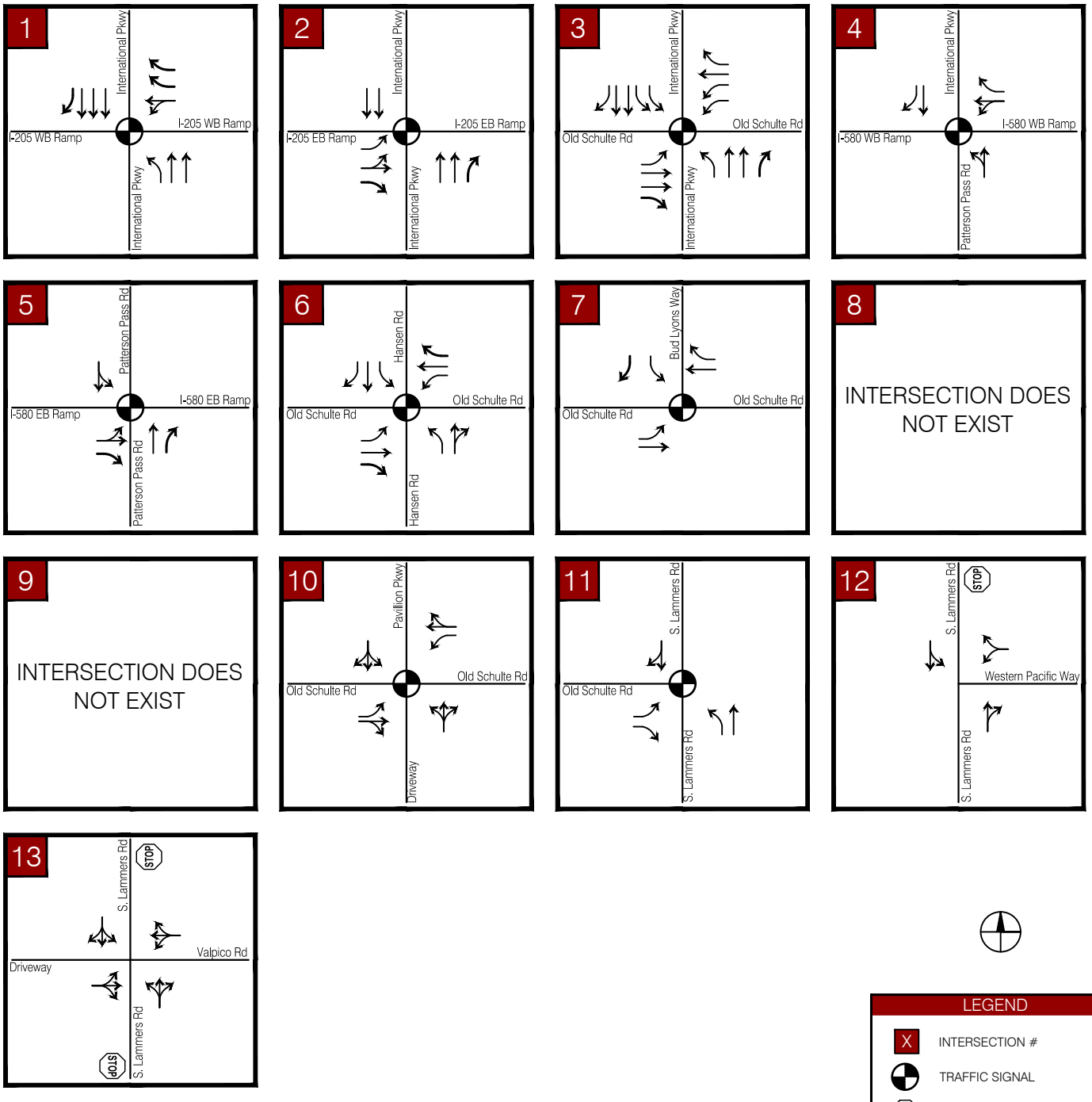
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Figure 3

Background Conditions Overview Map

Costco Depot Traffic Analysis

December 2021



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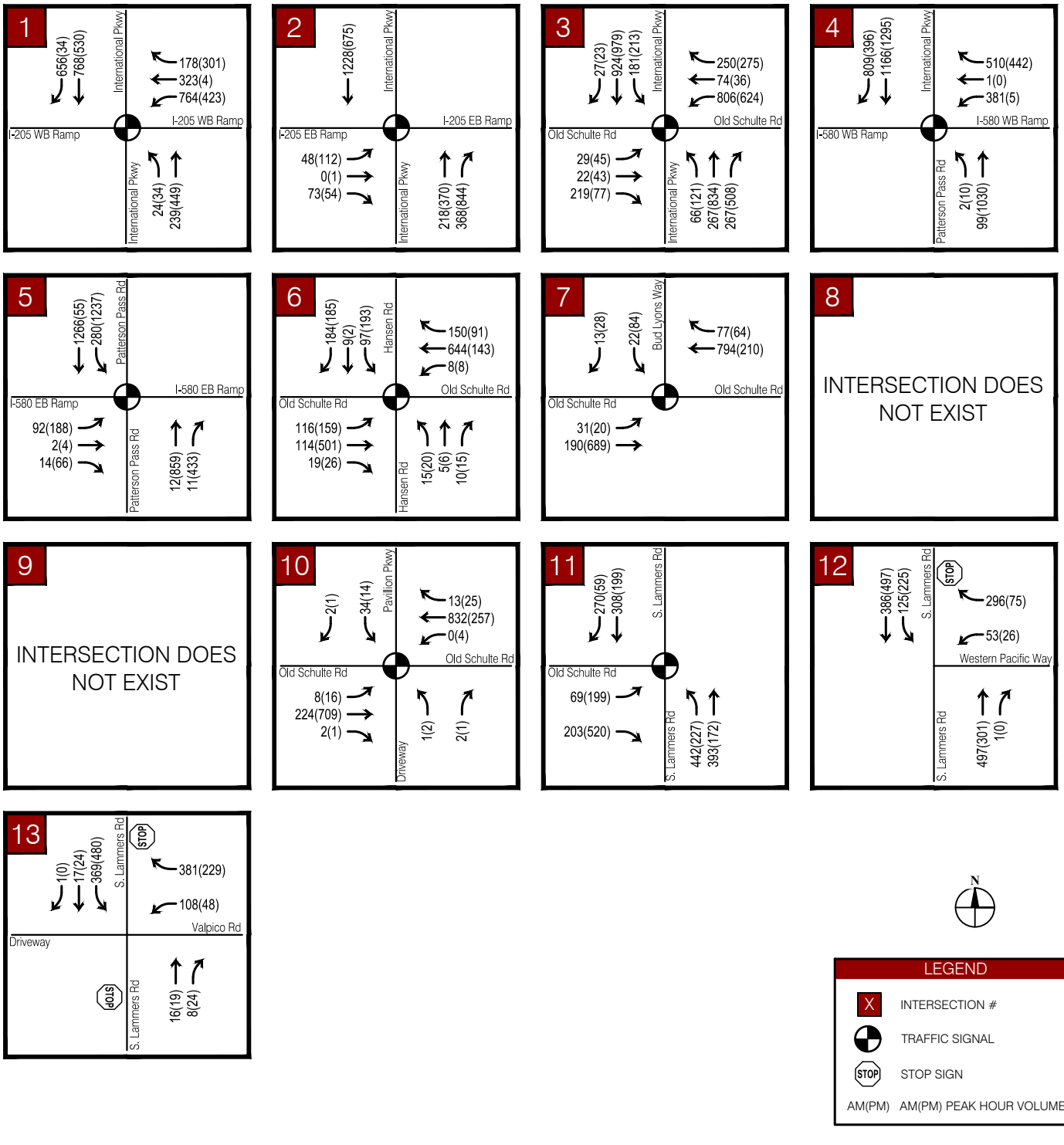
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Figure 4

Background Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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December 2021

Figure 5

Background Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 7 – Background Conditions LOS Summary Results

#	Intersection	Agency	Control	Background Conditions					
				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	**-**	**229.2**	**F**	**-**	13.4	B
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	6.1	A	-	12.5	B
3	International Pkwy & Old Schulte Rd	Tracy	Signal	**-**	**146.9**	**F**	**-**	**150.9**	**F**
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	**-**	**369.7**	**F**	**-**	**427.4**	**F**
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	**-**	**160.8**	**F**	**-**	**424.1**	**F**
6	Hansen Road & Old Schulte Rd	Tracy	Signal	**-**	**58.0**	**E**	-	37.0	D
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	**-**	**91.4**	**F**	-	9.4	A
8	Project Dwy #2 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist					
	Worst Approach								
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exit					
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	19.9	B	-	11.9	B
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	52.9	D	-	32.6	C
12	Western Pacific Wy & Old Schulte Rd	Tracy	TWSC	**-**	**-**	**-**	-	-	-
	Worst Approach			**WB**	**114.6**	**F**	WB	24.1	C
13	Lammers Rd & Valpico Rd	Tracy	TWSC	**-**	**-**	**-**	-	-	-
	Worst Approach			**WB**	**92.3**	**F**	WB	26.8	D

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6. Trip Generation, Distribution, and Assignment

Trip Generation

Trip generation for the proposed Costco development was calculated using the E-Commerce trip generation rates provided by Kittleson's *Tracy Costco Depot Transportation Impact Analysis Report* (August 28, 2017). These rates were then split into passenger car and truck trips based on ITE guidance for high-cube and warehousing facilities. These rates were compared against the City trip rates and ITE trip rates. The e-commerce rates from Costco are higher than the City and ITE trip rates.

The proposed Project is anticipated to generate 401 AM peak hour (377 IN / 24 OUT) and 87 PM peak hour (19 IN / 68 OUT) gross trips.

Table 8 - Trip Generation

Land Uses	Project Size	AM PEAK HOUR				PM PEAK HOUR			
		Total Peak Hour	IN	/	OUT	Total Peak Hour	IN	/	OUT
Trip Generation Rates									
Project Use									
Costco E-commerce Warehouse[1]	- KSF	0.23	94%	/	6%	0.05	21%	/	79%
Trips Generated									
Building 1	**543.326 KSF**	**125**	**118**	**/**	**7**	**27**	**6**	**/**	**21**
Passenger Cars[2]		*86*	*81*	*/*	*5*	*21*	*5*	*/*	*16*
Trucks[2]		*39*	*37*	*/*	*2*	*6*	*1*	*/*	*5*
Building 2	**1,201.727 KSF**	**276**	**259**	**/**	**17**	**60**	**13**	**/**	**47**
Passenger Cars[2]		*190*	*179*	*/*	*11*	*47*	*10*	*/*	*37*
Trucks[2]		*86*	*80*	*/*	*6*	*13*	*3*	*/*	*10*
TOTAL		***401***	***377***	***/***	***24***	***87***	***19***	***/***	***68***
Passenger Cars		***276***	***260***	***/***	***16***	***68***	***15***	***/***	***53***
Trucks		***125***	***117***	***/***	***8***	***19***	***4***	***/***	***15***

NOTES

1. Trip generation provided by Kittleson's *Tracy Costco Depot Transportation Impact Analysis Report* (August 28, 2017).

2. ITE's *High-Cube Warehouse Vehicle Trip Generation Analysis*, 2016. The percentage of passenger car vehicles for Short-Term Storage, Transload, & Cold Storage is the following:
Daily: 67.8%
AM: 69.2%
PM: 78.3%

Trip Distribution and Assignment

Project Background Conditions

Trips were distributed along the roadway network based on the Cordes Ranch EIR. The following provides the passenger car distribution for Project Background Conditions:

- 23% to/from the east along I-580
- 3% to/from the west along I-580
- 2% to/from the west along I-205

- 15% to/from the north along Mountain House Parkway
- 26% to/from the east along I-205
- 6% to/from the north along Lammers Road
- 23% to/from the east along Valpico Road
- 2% to/from the south along Lammers Road

The following provides the assumed truck distribution that was provided by Kittelson:

- 37% to/from the east along I-580
- 19% to/from the west along I-580
- 11% to/from the west along I-205
- 33% to/from the east along I-205

Refer to **Figure 6** and **Figure 7** for the Project Background Conditions passenger car trip distribution and assignment, respectively. Refer to **Figure 8** and **Figure 9** for the Project Background Conditions truck trip distribution and assignment, respectively.

Project Cumulative Conditions

The following provides the passenger car distribution derived from the City's 2035 travel demand model for Project Cumulative Conditions:

- 12% to/from the east along I-580
- 3% to/from the west along I-580
- 2% to/from the west along I-205
- 15% to/from the north along Mountain House Parkway
- 26% to/from the east along I-205
- 10% to/from the north along Lammers Road
- 10% to/from the east along Promontory Parkway
- 9% to/from the east along Valpico Road
- 6% to/from the south along Lammers Road
- 7% to/from the east along Hansen Road

The assumed truck distribution remained the same between Project Background and Project Cumulative Conditions. Refer to **Figure 10** and **Figure 11** for the Project Cumulative Conditions passenger car trip distribution and assignment, respectively. Refer to **Figure 12** and **Figure 13** for the Project Cumulative Conditions truck trip distribution and assignment, respectively. Trips for the Project Cumulative Conditions are based on the trip generation provided in **Table 8**.



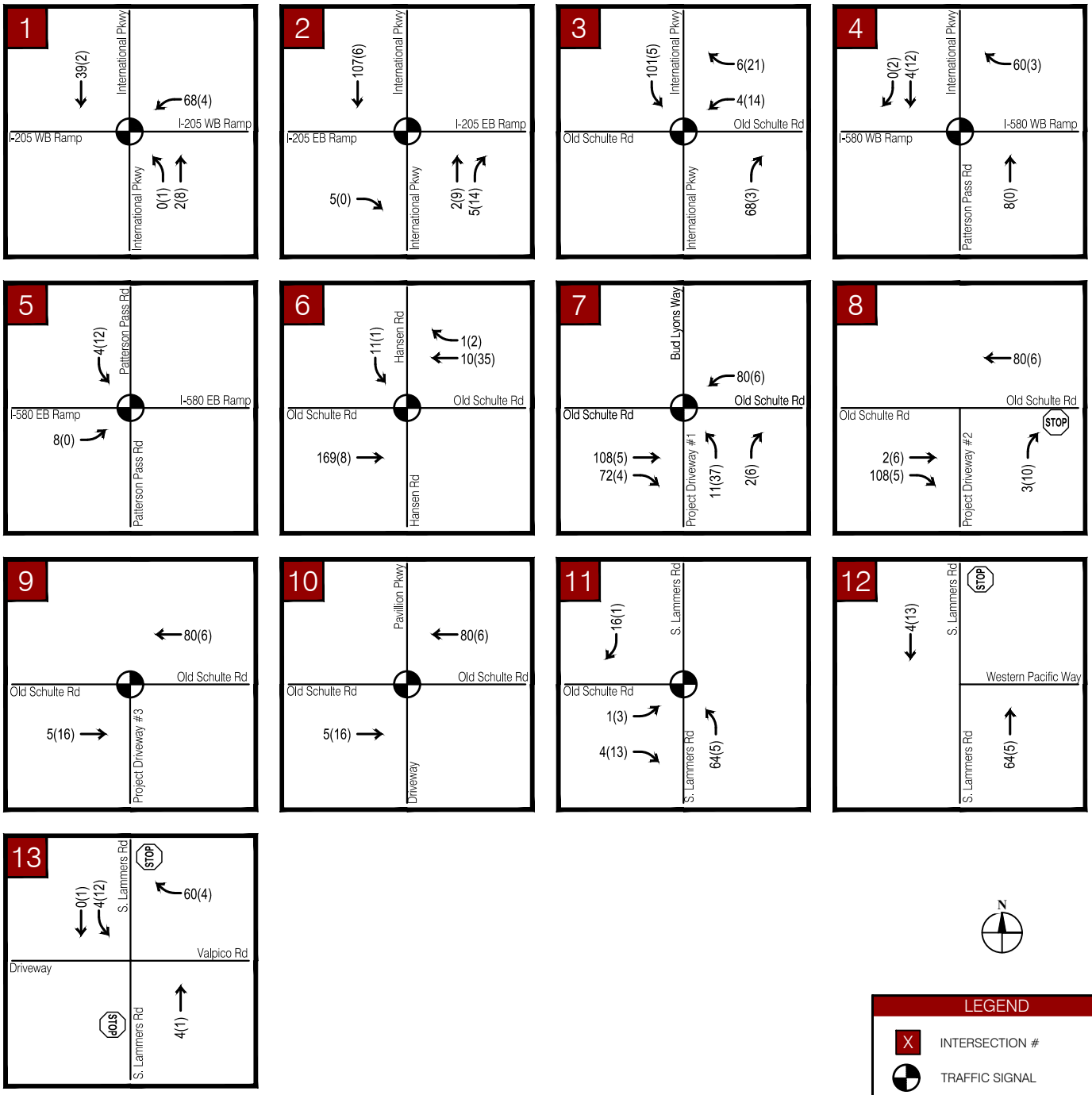
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Figure 6
Passenger Car Project Trip Distribution
Background Plus Project Conditions

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Costco Depot Traffic Analysis



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Figure 7

Passenger Car Background Project Assignment

Background Plus Project Conditions

Tracy Costco Direct Delivery Center

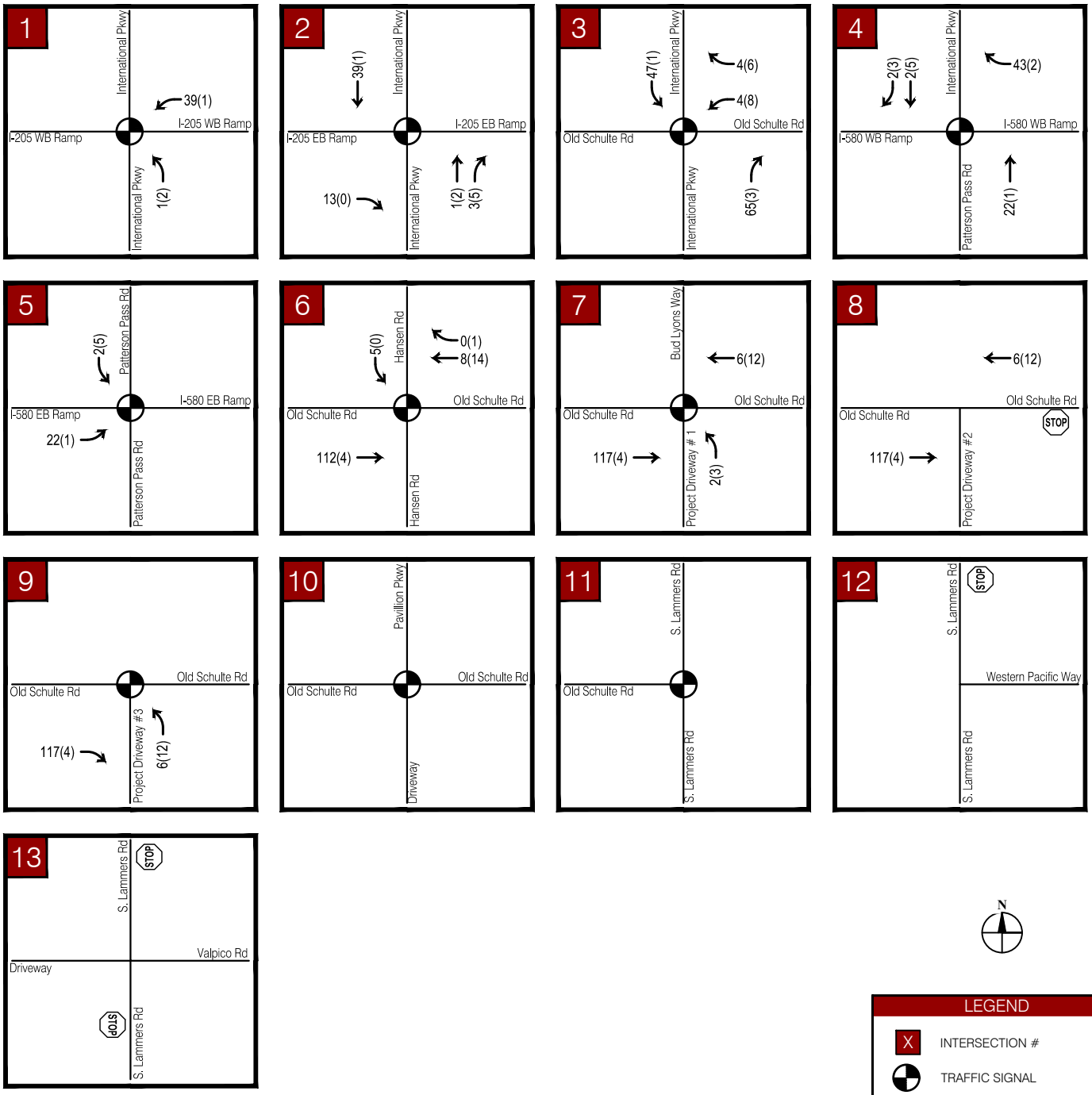


Figure 8
Truck Project Trip Distribution
Background Plus Project Conditions

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Costco Depot Traffic Analysis



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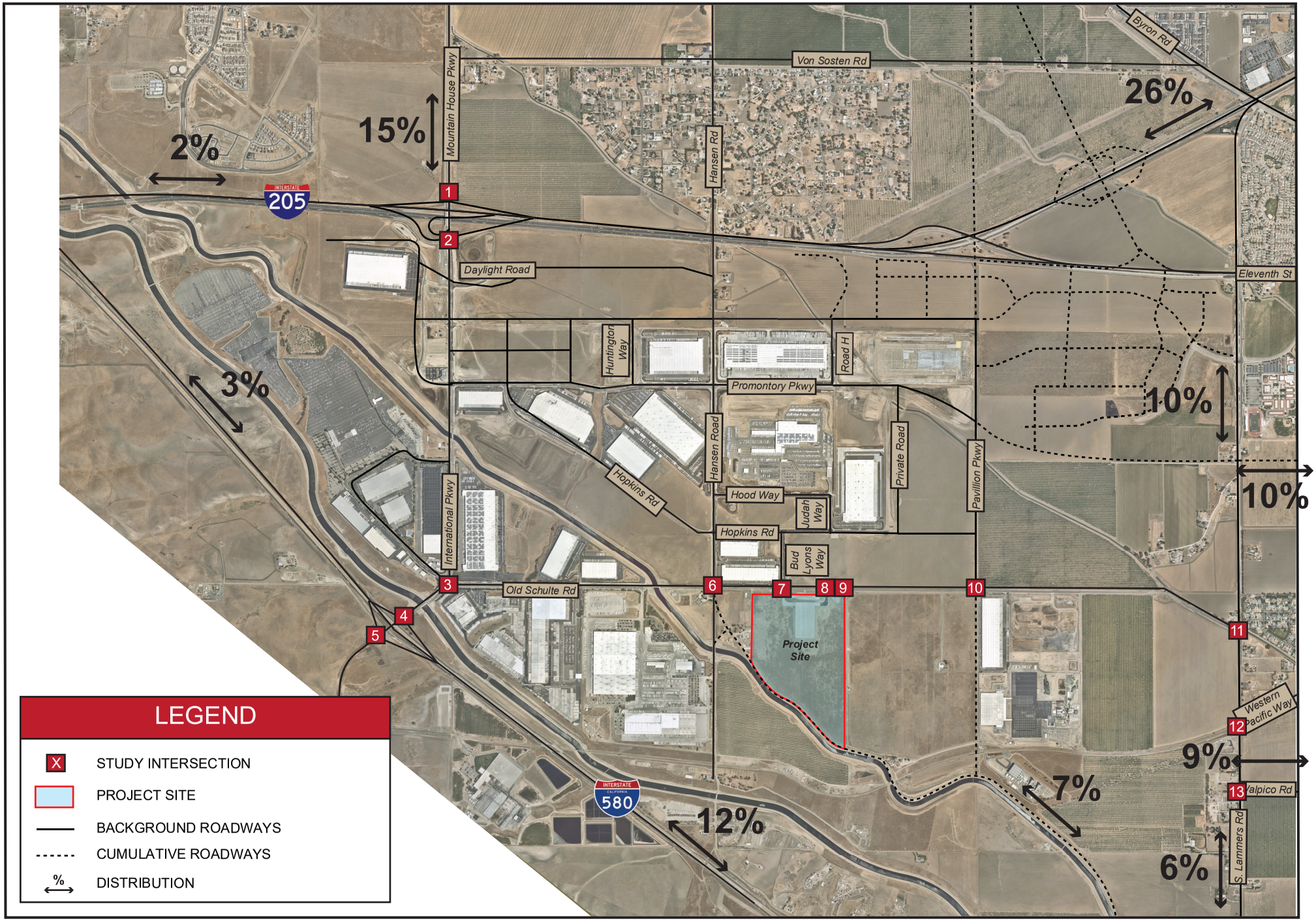
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Figure 9

Truck Background Project Assignment

Background Plus Project Conditions

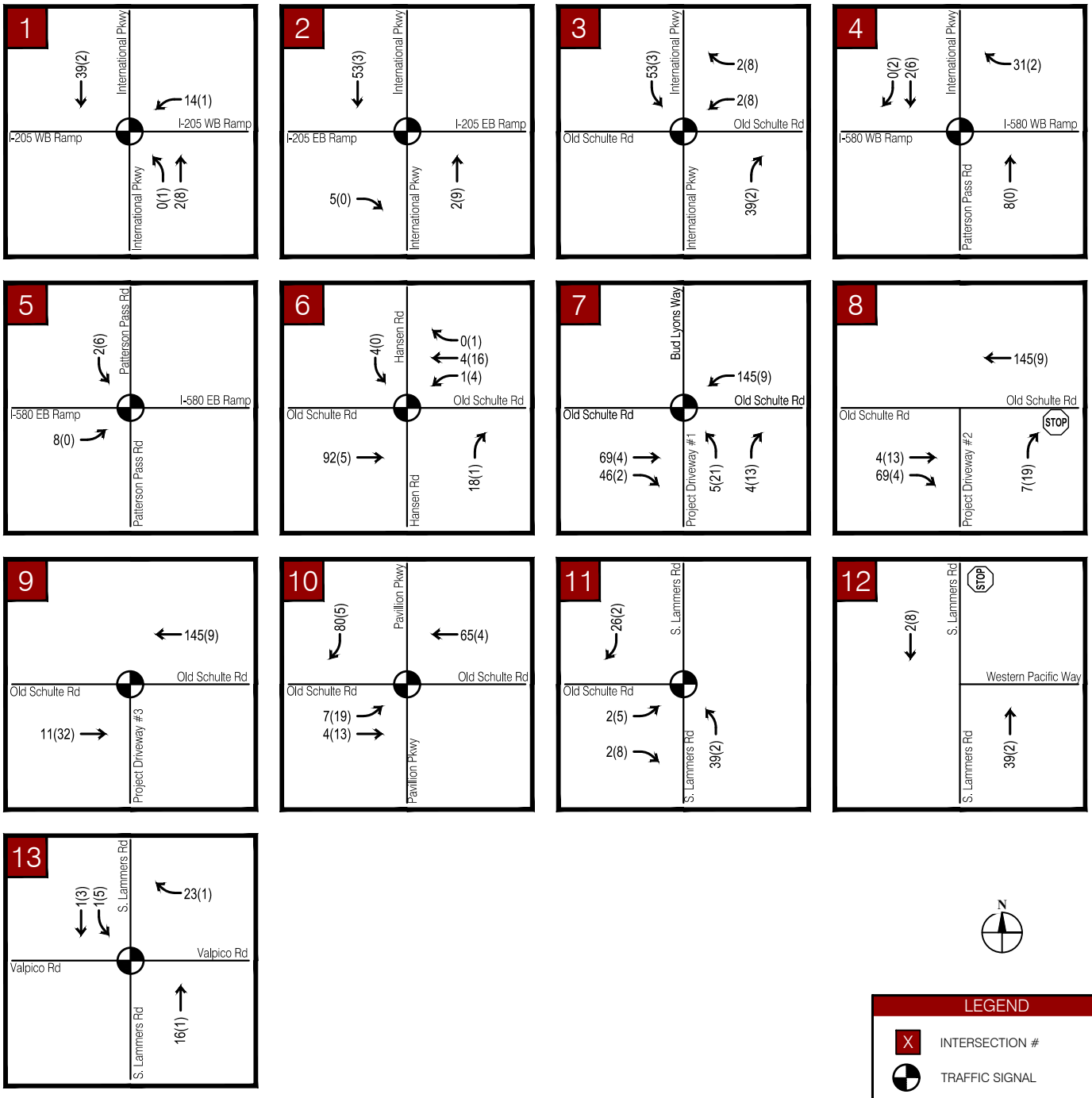
Tracy Costco Direct Delivery Center



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Figure 10
Passenger Car Project Trip Distribution
Cumulative Plus Project Conditions



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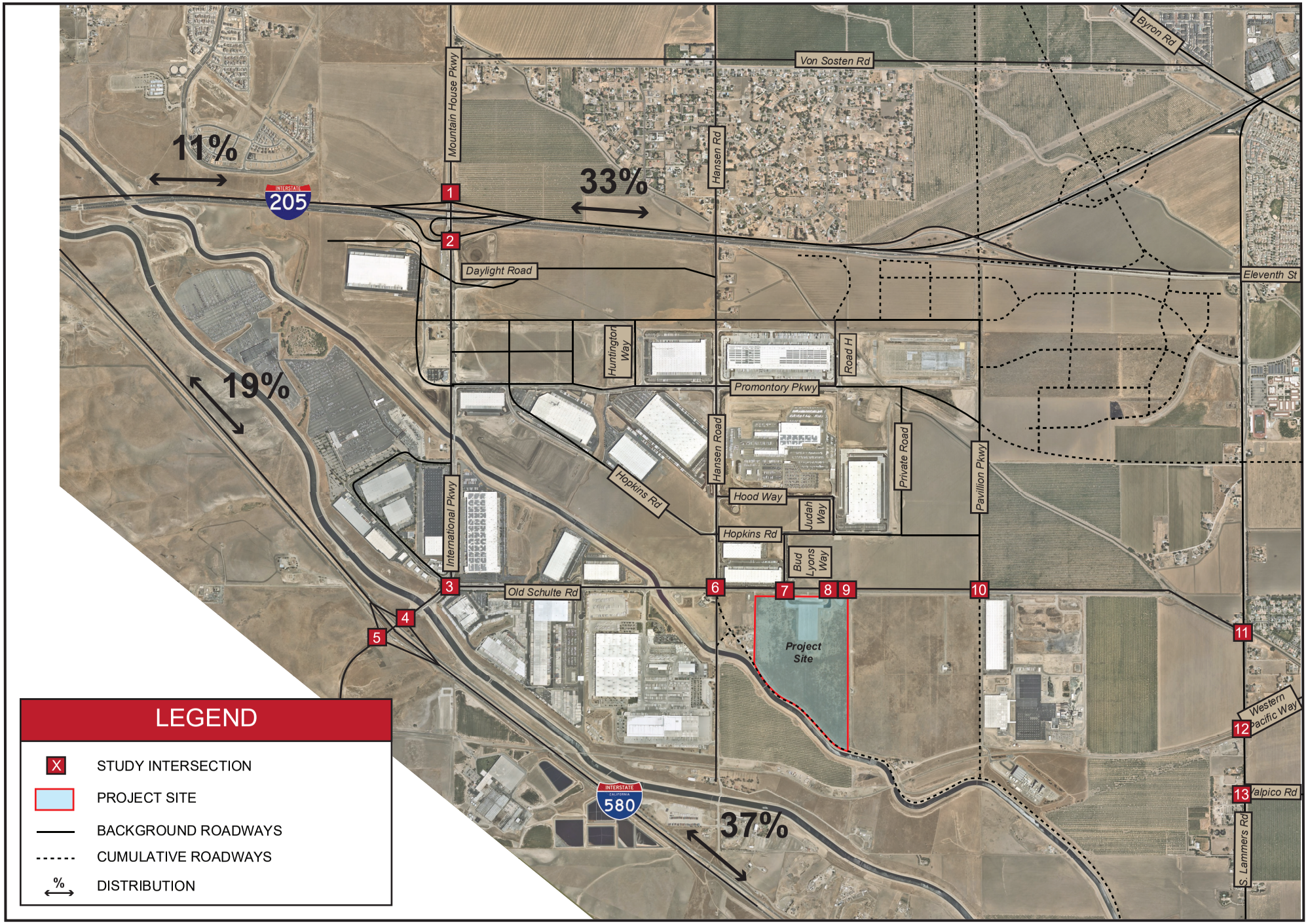
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Figure 11

Passenger Car Cumulative Project Assignment

Cumulative Plus Project Conditions

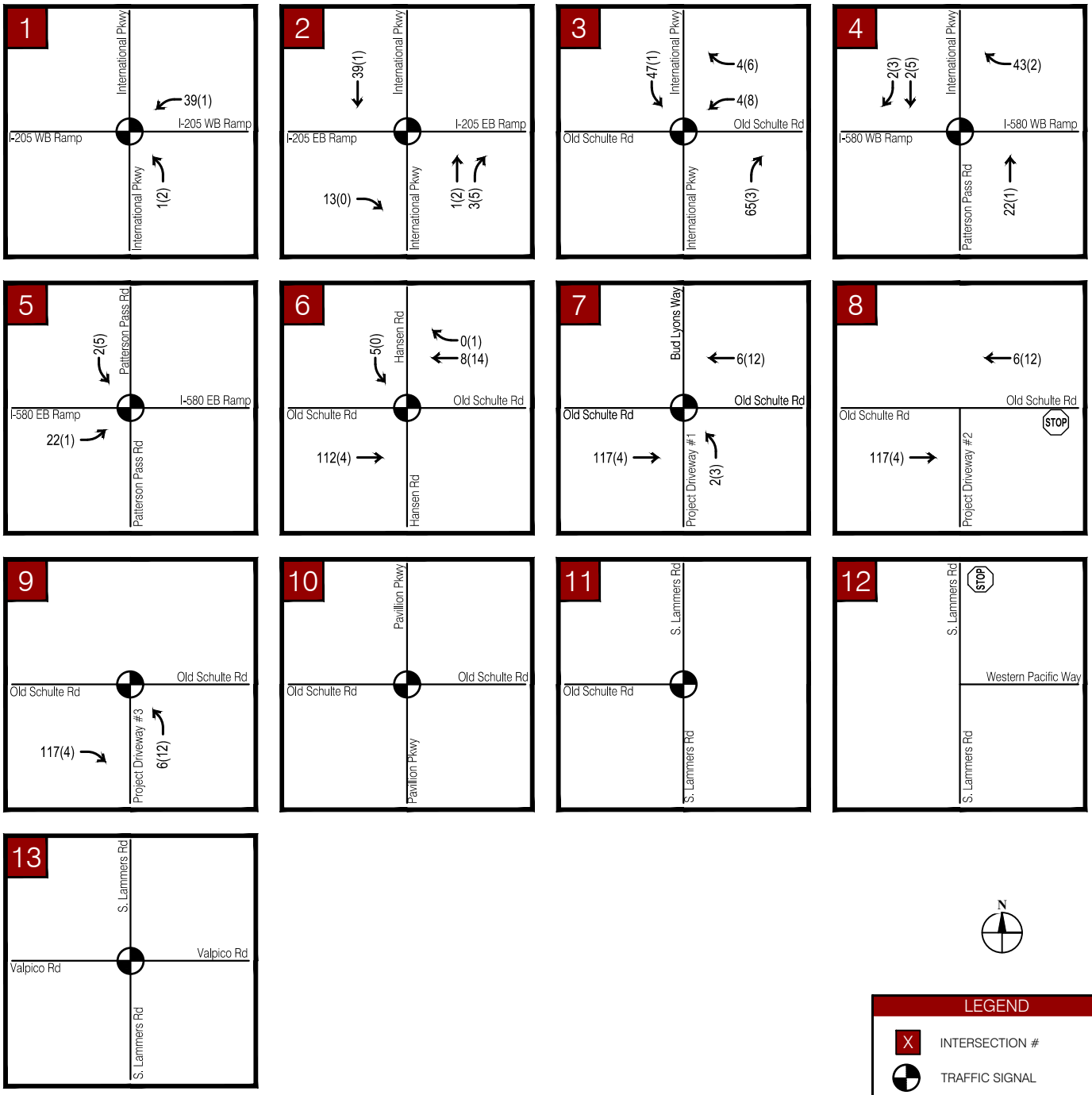
Tracy Costco Direct Delivery Center



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NOT TO SCALE

Figure 12
Truck Project Trip Distribution
Cumulative Plus Project Conditions



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Figure 13

Truck Cumulative Project Assignment

Cumulative Plus Project Conditions

Tracy Costco Direct Delivery Center

7. Background Plus Project Conditions

Background Plus Project Conditions are based on Background Conditions traffic volumes plus traffic generated by the proposed Project. The roadway network is based on Background Conditions plus improvements anticipated to be constructed by the Project:

- Widen Old Schulte Road to four through lanes along the Project's frontage
- Add south leg and eastbound right turn lane and westbound left turn lane at Project Driveway #1
- Add new signalized intersection, eastbound right turn lane and westbound left turn lane at Project Driveway #3

The Background Plus Project Conditions roadway network is shown in **Figure 14** and the volumes are shown in **Figure 15**.

Results of the Background Plus Project Conditions levels of service analysis are presented in **Table 9**. Travel patterns on Old Schulte Road are peak period based (i.e. westbound in the morning and eastbound in the evening). The Project primarily adds traffic in the opposing, non-peak, direction during the peak periods. The following intersections operated at unacceptable levels of service and recommended improvements have been provided:

- Intersection #1 - International Pkwy & I-205 WB Ramps (AM Peak Hour)
    - Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.
- Intersection #3 - International Pkwy & Old Schulte Rd (AM and PM Peak Hours)
    - Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.
- Intersection #4 - International Pkwy & I-580 WB Ramps (AM and PM Peak Hours)
    - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
- Intersection #5 - International Pkwy & I-580 EB Ramps (AM and PM Peak Hours)
    - A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.
- Intersection #6 - Hansen Rd & Old Schulte Rd (AM Peak Hour)
    - Add one additional westbound and eastbound through lane at the intersection to establish a 4-lane facility. Old Schulte Road will remain a 2-lane facility over the Delta-Mendota Canal Bridge.
- Intersection #11 – Lammers Rd & Old Schulte Rd (AM Peak Hour)
    - Provide an overlap phase for the eastbound right turn.

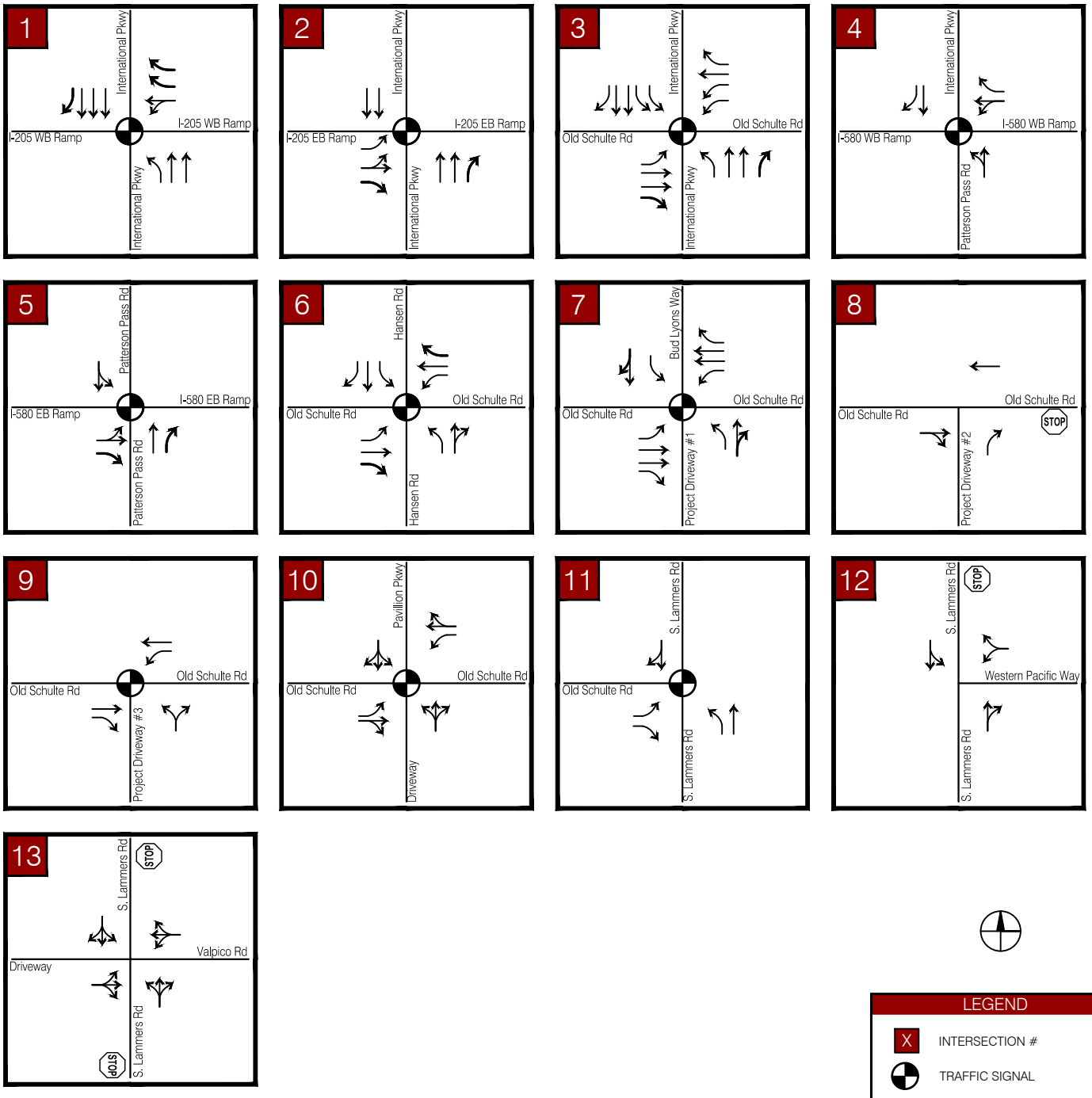
- Intersection #12 - Lammers Rd & Western Pacific Wy (AM Peak Hour)
    - Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.
- Intersection #13 - Lammers Rd & Valpico Rd (AM Peak Hour)
    - Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.
- The project shall, at a minimum, provide emergency access to the future Hansen Road. It is anticipated that the properties west of the Project site may develop in the near future and that Hansen Road will be extended to Old Schulte Road.

All recommended improvements match those from the Cordes Ranch 2nd Consistency Analysis (June, 2020) except at Intersection #11. No improvements were required at Intersection #11 in the Cordes Ranch 2nd Consistency Analysis during Background Conditions; therefore, the improvements provided for Intersection #11 would be an interim solution until the cumulative intersection geometry is constructed.

It should be noted that for some intersections, the reported delay improved with the addition of the project trips. The reason for this occurrence is because the trips were predominately added to the through lane movements, which had a lower movement delay than the average intersection delay, and thereby decreases the overall average delay.

Analysis output sheets for Background Plus Project and Background Plus Project (Improvements) are provided in the **Appendix**.

Table 11 provides Costco project obligations for the Background Plus Project Conditions.



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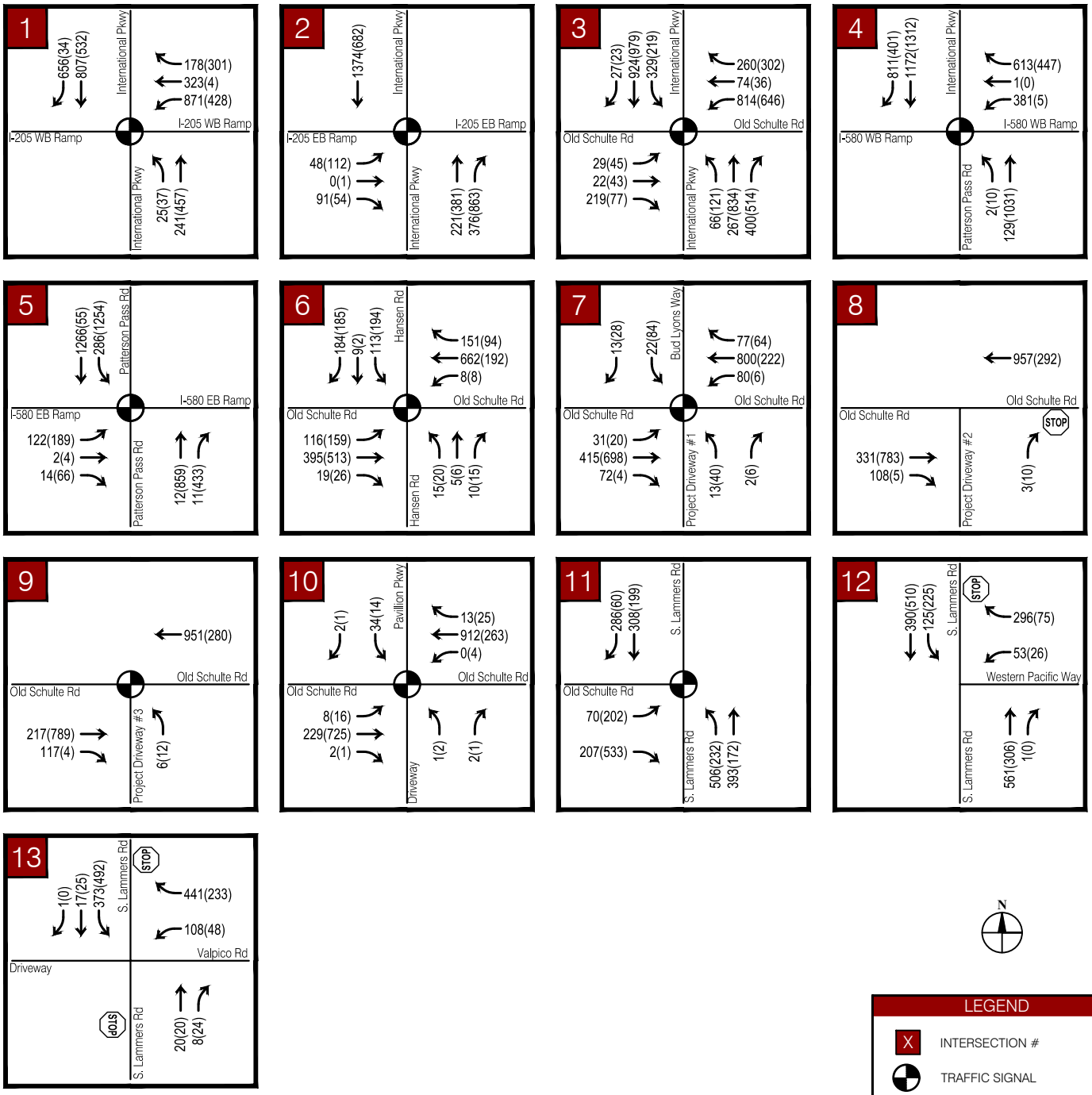
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Figure 14

Background Plus Project

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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Figure 15

Background Plus Project

Peak Hour Volumes

Tracy Costco Direct Delivery Center

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Table 9 – Background Plus Project Conditions LOS Summary

#	Intersection	Agency	Control	Background Conditions						Background Plus Project Conditions						Project Impact? (Y/N)
				AM Peak			PM Peak			AM Peak			PM Peak			
				MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	**229.2**	**F**	-	13.4	B	-	**268.9**	**F**	-	13.7	B	**Y**
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	6.1	A	-	12.5	B	-	6.8	A	-	13.5	B	-
3	International Pkwy & Old Schulte Rd	Tracy	Signal	-	**146.9**	**F**	-	**150.9**	**F**	-	**171.5**	**F**	-	**166.6**	**F**	**Y**
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	-	**369.7**	**F**	-	**427.4**	**F**	-	**369.6**	**F**	-	**437.1**	**F**	**Y**
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	-	**160.8**	**F**	-	**424.1**	**F**	-	**162.6**	**F**	-	**433.4**	**F**	**Y**
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	**58.0**	**E**	-	37.0	D	-	**56.5**	**E**	-	37.7	D	N
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	**91.4**	**F**	-	9.4	A	-	27.2	C	-	25.2	C	N
8	Project Dwy #2 & Old Schulte Rd	Tracy	TWSC	Intersection Does Not Exist						-	-	-	-	-	-	N
	Worst Approach									NB	9.7	A	NB	11.3	B	
9	Project Dwy #3 & Old Schulte Rd	Tracy	Signal	Intersection Does Not Exit						-	6.4	A	-	3.5	A	N
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	19.9	B	-	11.9	B	-	15.9	B	-	12.2	B	
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	52.9	D	-	32.6	C	-	**66.9**	**E**	-	34.7	C	**Y**
12	Western Pacific Wy & Old Schulte Rd	Tracy	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	**Y**
	Worst Approach			**WB**	**114.6**	**F**	WB	24.1	C	**WB**	**162.5**	**F**	WB	25.2	D	
13	Lammers Rd & Valpico Rd	Tracy	TWSC	-	-	-	-	-	-	-	-	-	-	-	-	**Y**
	Worst Approach			**WB**	**92.3**	**F**	WB	26.8	D	**WB**	**122.4**	**F**	WB	29.0	D	

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

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Table 10 – Background Plus Project (Improvements) Conditions LOS Summary

#	Intersection	Agency	Control	Background Plus Project Conditions						Improvement Control	Background Plus Project (Improvements) Conditions					
				AM Peak			PM Peak				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS		MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	**268.9**	**F**	-	13.7	B	Signal	-	9.8	A	-	7.2	A
3	International Pkwy & Old Schulte Rd	Tracy	Signal	-	**171.5**	**F**	-	**166.6**	**F**	-	**Refer to FTOAR for improvements**					
4	International Pkwy & I-580 WB Ramps	Caltrans	Signal	-	**369.6**	**F**	-	**437.1**	**F**							
5	International Pkwy & I-580 EB Ramps	Caltrans	Signal	-	**162.6**	**F**	-	**433.4**	**F**							
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	**56.5**	**E**	-	37.7	D	Signal	-	25.7	C	-	27.7	C
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	**66.9**	**E**	-	34.7	C	Signal	-	48.2	D	-	21.5	C
12	Western Pacific Way & W. Schulte Rd	Tracy	TWSC	-	-	-	-	-	-	Signal	-	24.2	C	-	8.6	A
	Worst Approach			**WB**	**162.5**	**F**	WB	25.2	D							
13	Lammers Rd & Valpico Rd	Tracy	TWSC	-	-	-	-	-	-	Signal	-	32.6	C	-	16.8	B
	Worst Approach			**WB**	**122.4**	**F**	WB	29.0	D							

Notes:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

Table 11 – Costco Obligations (Background Plus Project Conditions)

Costco Intersection #	Intersection /Location	Peak Hour	Background Plus Project Conditions		
			Improvement	Recommended Costco Improvement?	Costco Project Obligation
1	International Pkwy & I-205 WB Ramps	AM	Restripe westbound off-ramp to provide two left-turn lanes and one shared through/right lane and optimize signal timings per Cordes Ranch Specific Plan Final EIR TRANS-1 mitigation measure.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
3	International Pkwy & Old Schulte Rd	AM & PM	Per the *Final Traffic Operations Analysis Report (FTOAR) For the Interstate 580/International Parkway/Patterson Pass Road Interchange in Tracy, CA*, a diverging diamond interchange should be constructed at Intersections #4 & #5. The FTOAR recommended an additional northbound right turn at Intersection #3 and to restripe the existing eastbound outside shared through/right lane to be a dedicated eastbound right turn.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco shall pay a fair share contribution towards improvements.
4	International Pkwy & I-580 WB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
5	International Pkwy & I-580 EB	AM & PM	A diverging diamond interchange is in the PSE design phase. The City of Tracy and Caltrans are going through design approvals to have the new interchange constructed in the near term.	Impact Fees	Pay TIF
6[1]	Hansen Road & Old Schulte Rd	AM	Add one additional westbound and eastbound through lane at the intersection to establish a 4-lane facility. Old Schulte Road will remain a 2-lane facility over the Delta-Mendota Canal Bridge.	Y	Costco to implement
11	Lammers Rd & Old Schulte Rd	AM	Provide an overlap phase for the eastbound right turn.	Y	Costco to implement
12[1]	Lammers Rd & Western Pacific Way	AM	Signalize and construct a northbound right-turn and southbound left-turn lanes plus the median of the future widening.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.
13	Lammers Rd & Valpico Rd	AM	Signalize intersection and construct a southbound left-turn lane. It is anticipated that widening to a four-lane roadway will occur from Old Schulte Road to Valpico Road with subsequent intersection improvements.	Y	Costco will construct improvements if not already implemented by another development and may collect contributions from future benefitting developments. If improvement is already constructed, Costco may pay a fair share contribution towards improvements.

Notes:
1. Costco will construct improvement if not already implemented by another development. This improvement is anticipated to be included in the City of Tracy Transportation Master Plan (TMP) Fee Program Update. If included, Costco could receive reimbursement for improvements within the fee program.
2. Kimley-Horn traffic study identified TIF, this is not reflected in the conditions.

8. Cumulative Conditions

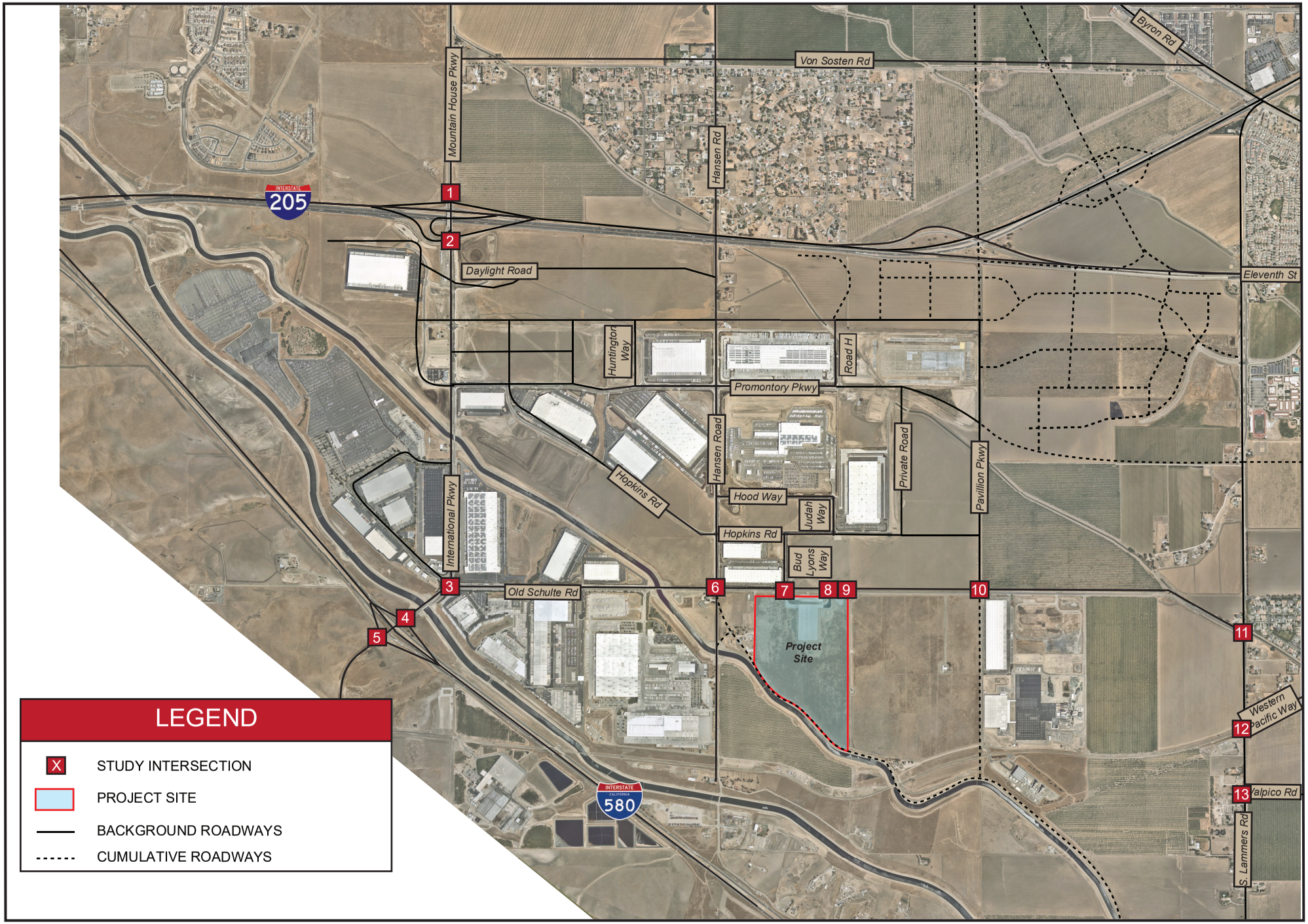
Cumulative Conditions represent 2035 conditions, aligning with the City of Tracy Transportation Master Plan's Horizon Year. The Cumulative Conditions roadway network is shown in **Figure 16**. Cumulative traffic volumes were developed based on recently updated model plots from City of Tracy travel demand forecast model, reflecting the latest development assumptions for the Cordes Ranch and Westside Specific Plan areas, but with the Project volumes removed from the network. Cumulative 2035 link volumes were converted to turning movement volumes using a traffic modeling standard process commonly referred to as the Furness method. The Furness method uses an iterative process to derive future turning movement volumes based on future year roadway link volumes an initial estimate of turning percentage, obtained from existing intersection turning movement counts if available. Intersection lane geometry was based on the Transportation Master Plan and the latest I-205/International Pkwy and I-580/International Pkwy interchange conceptual plans. The Cumulative Conditions lane geometry is shown in **Figure 17** and the volumes are shown in **Figure 18**.

Results of the Cumulative Conditions level of service analysis are presented in **Table 12.** The following intersections operated at unacceptable levels of service:

- Intersection #6 – Hansen Rd & Old Schulte Rd (PM Peak Hour)
- Intersection #10 – Pavilion Pkwy & Old Schulte Rd (PM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (PM Peak Hour)

Analysis output sheets for Cumulative Conditions are provided in the **Appendix**.

It should be noted that Intersections #3, #4 and #5 were not analyzed for Cumulative Conditions due to extensive analysis conducted and summarized in the FTOAR.

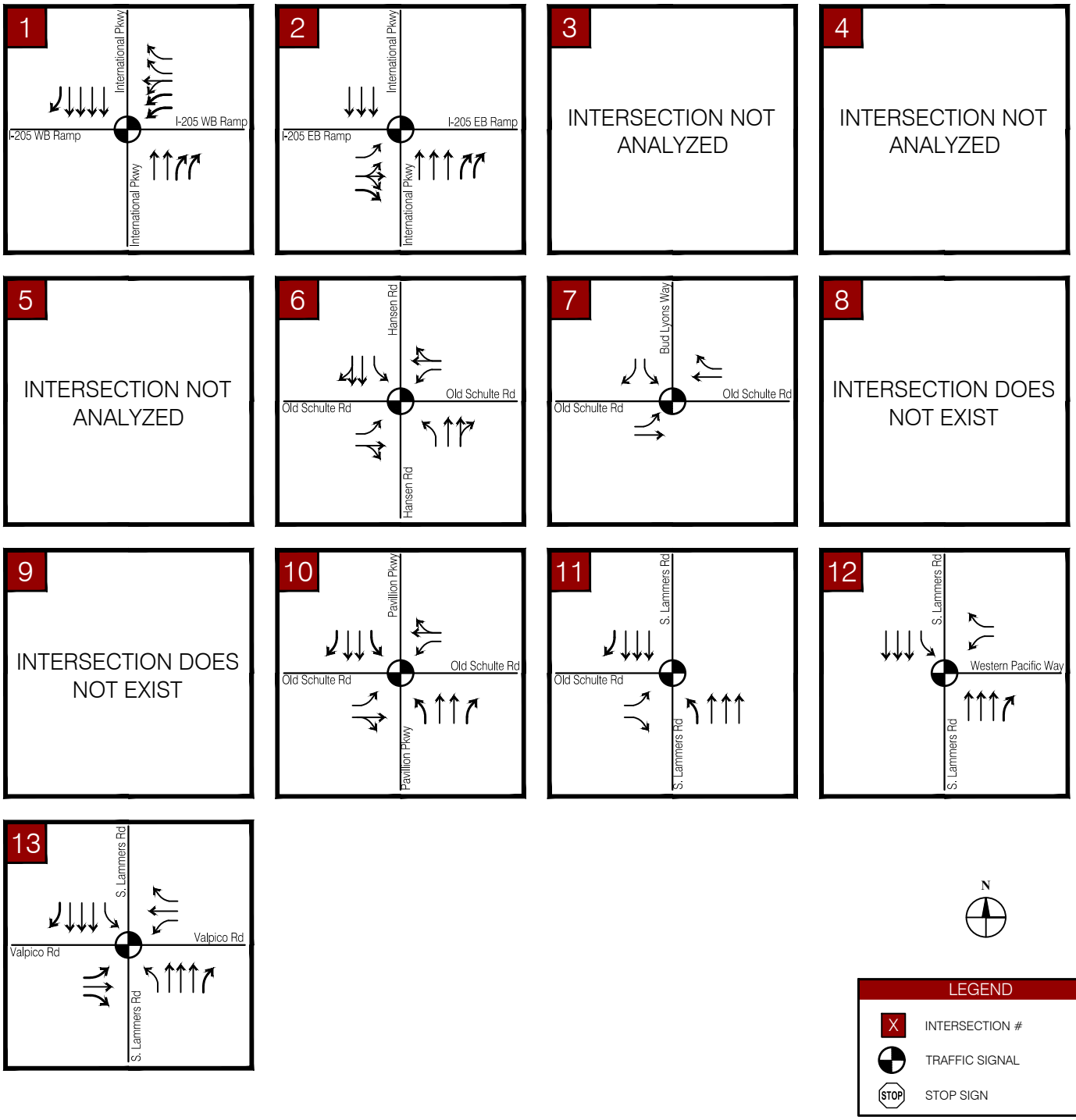


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Figure 16

Cumulative Conditions Overview Map



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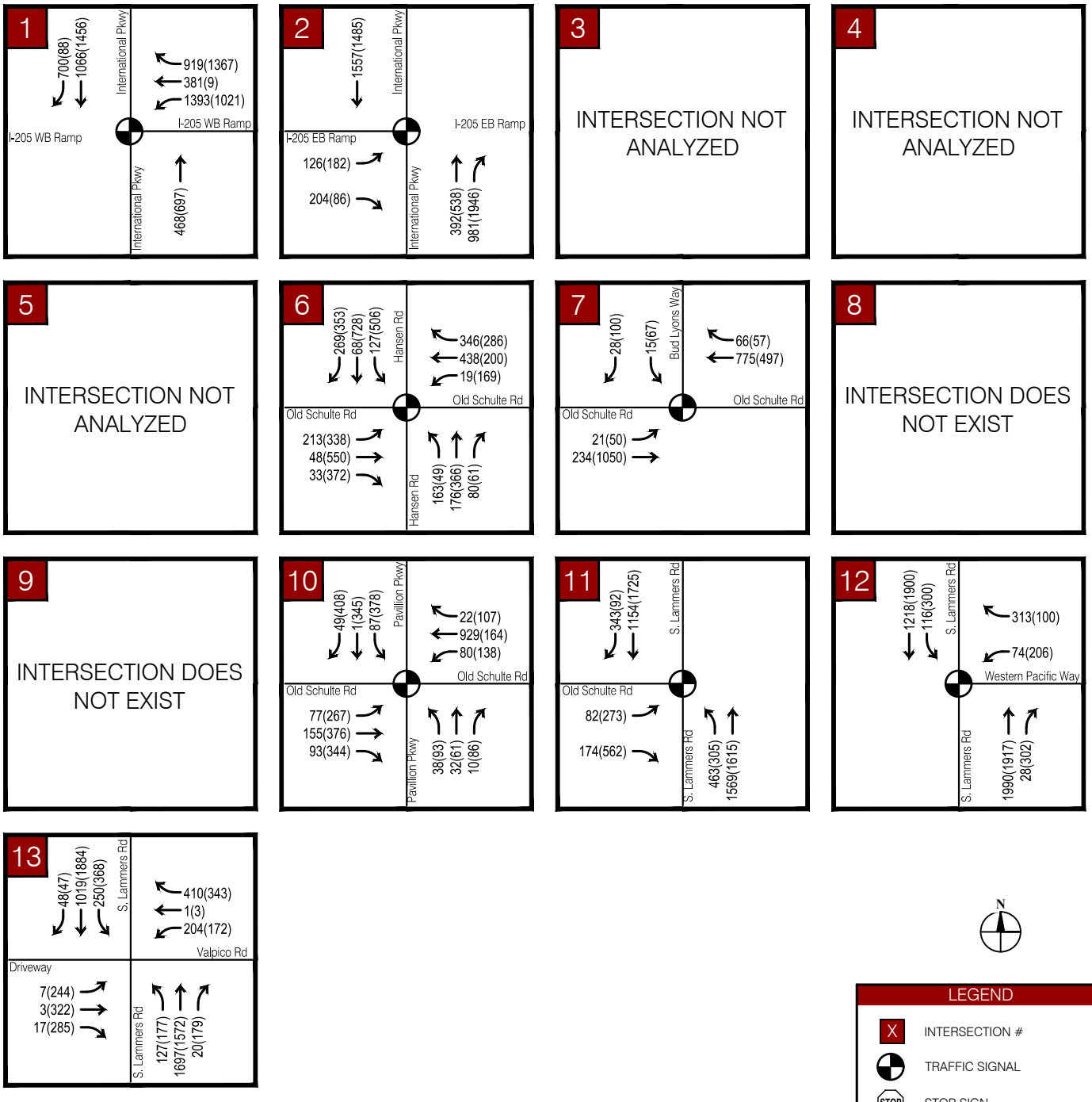
December 2021

Figure 17

Cumulative Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



Kimley»Horn

December 2021

Figure 18

Cumulative Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 12 – Cumulative Conditions LOS Summary

#	Intersection	Agency	Control	Cumulative Conditions					
				AM Peak			PM Peak		
				MVMT	Delay	LOS	MVMT	Delay	LOS
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	13.1	B	-	9.6	A
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	7.1	A	-	21.6	C
3	International Pkwy & Old Schulte Rd	**Refer to FTOAR analysis**							
4	International Pkwy & I-580 WB Ramps								
5	International Pkwy & I-580 EB Ramps								
6	Hansen Road & Old Schulte Rd	Tracy	Signal	-	46.1	D	**-**	**67.0**	**E**
7	Bud Lyons Way/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	22.2	C	-	52.0	D
8	Project Dwy #2 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist					
	Worst Approach								
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist					
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	36.3	D	**-**	**65.7**	**E**
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	15.1	B	-	37.9	D
12	Lammers Rd & Western Pacific Way	Tracy	Signal	-	16.4	B	-	14.4	B
13	Lammers Rd & Valpico Rd	Tracy	Signal	-	41.1	D	**-**	**64.1**	**E**

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

9. Cumulative Plus Project Conditions

Cumulative Plus Project Conditions are based on Cumulative Conditions traffic volumes plus traffic generated by the proposed Project.

Cumulative Plus Project geometries are shown in **Figure 14** and volumes are shown in **Figure 15**.

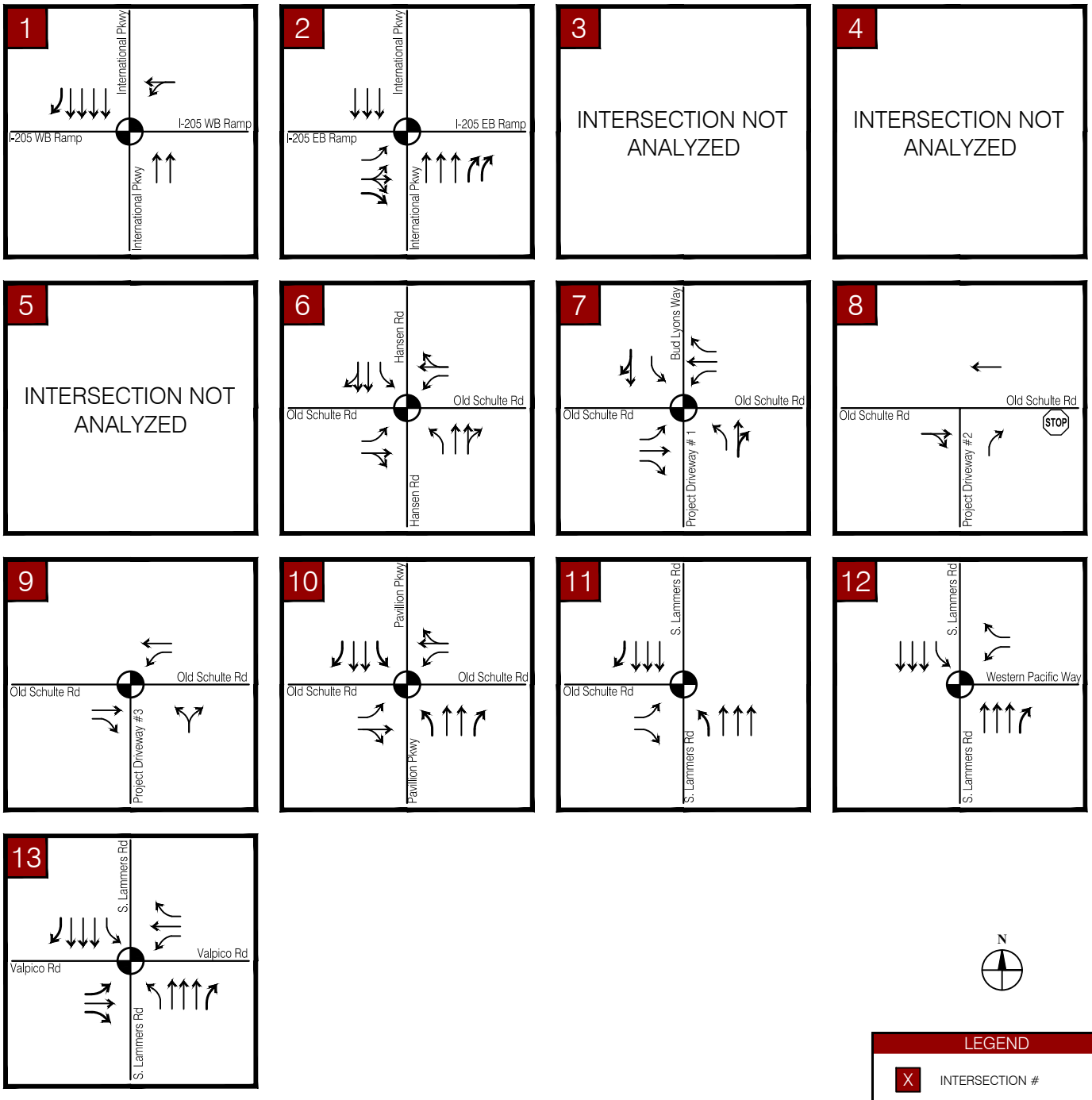
Results of the Cumulative Plus Project Conditions levels of service analysis are presented in **Table 13**. All intersections operated at acceptable levels of service except for the following intersections:

- Intersection #6 – Hansen Rd & Old Schulte Rd (PM Peak Hour)
- Intersection #10 – Pavilion Pkwy & Old Schulte Rd (PM Peak Hour)
- Intersection #13 - Lammers Rd & Valpico Rd (PM Peak Hour)

The Cumulative Conditions analysis does not indicate that the Project deteriorates the LOS or causes delay to increase by more than 5 seconds per the City threshold at any study intersection, and thus, no project improvements are required over and above those identified in Background conditions. The project shall, however, pay the City Traffic Impact Fees to offset cumulative incremental deterioration of operating conditions on the City road network.

Analysis output sheets are provided in the **Appendix**.

It should be noted that Intersections #3, #4 and #5 were not analyzed for Cumulative Conditions due to extensive analysis conducted and summarized in the FTOAR.



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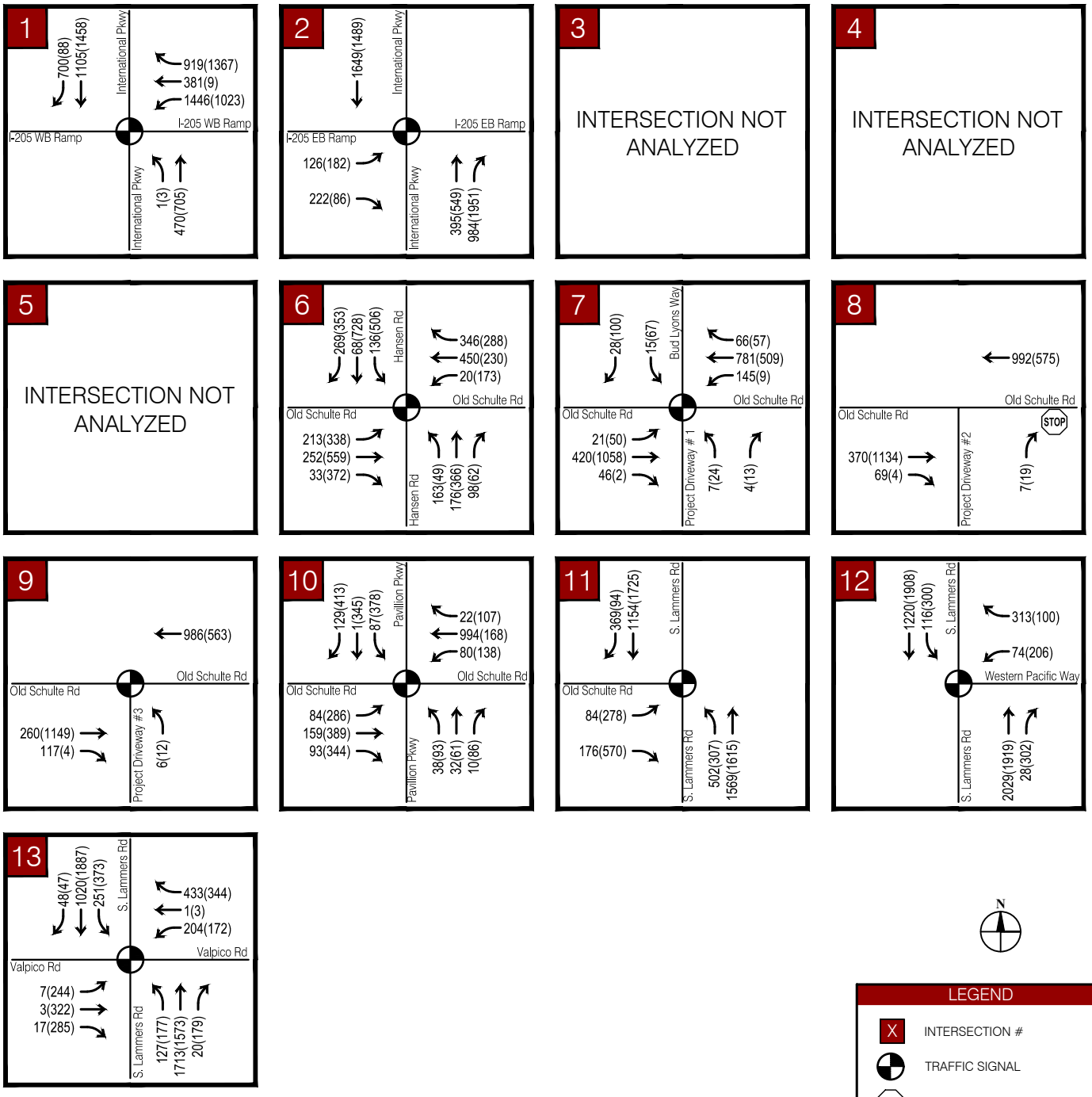
December 2021

Figure 19

Cumulative Plus Project Conditions

Lane Geometry and Traffic Control

Tracy Costco Direct Delivery Center



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December 2021

Figure 20

Cumulative Plus Project Conditions

Peak Hour Volumes

Tracy Costco Direct Delivery Center

Table 13 – Cumulative Plus Project Conditions LOS Summary

#	Intersection	Agency	Control	Cumulative Conditions						Cumulative Plus Project Conditions						Project Impact?
				AM Peak			PM Peak			AM Peak			PM Peak			
				MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	MVMT	Delay	LOS	
1	International Pkwy & I-205 WB Ramps	Caltrans	Signal	-	13.1	B	-	9.6	A	-	13.9	B	-	9.6	A	-
2	International Pkwy & I-205 EB Ramps	Caltrans	Signal	-	7.1	A	-	21.6	C	-	7.4	A	-	21.9	C	-
3	International Pkwy & Old Schulte Rd	**Refer to FTOAR analysis**														
4	International Pkwy & I-580 WB Ramps															
5	International Pkwy & I-580 EB Ramps															
6	Hansen Rd & Old Schulte Rd	Tracy	Signal	-	46.1	D	**-**	**67.0**	**E**	-	46.3	D	**-**	**67.9**	**E**	N
7	Bud Lyons Wy/Project Dwy #1 & Old Schulte Rd	Tracy	Signal	-	22.2	C	-	52.0	D	-	32.2	C	-	17.1	B	-
8	Project Dwy #2 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist						-	-	-	-	-	-	-
	Worst Approach									NB	9.8	A	NB	13.8	B	
9	Project Dwy #3 & Old Schulte Rd	Tracy	-	Intersection Does Not Exist						-	4.7	A	-	3.2	A	-
10	Pavillion Pkwy & Old Schulte Rd	Tracy	Signal	-	36.3	D	**-**	**65.7**	**E**	-	44.6	D	**-**	**67.7**	**E**	N
11	Lammers Rd & Old Schulte Rd	Tracy	Signal	-	15.1	B	-	37.9	D	-	16.9	B	-	38.6	D	-
12	Lammers Rd & Western Pacific Wy	Tracy	Signal	-	16.4	B	-	14.4	B	-	16.7	B	-	14.4	B	-
13	Lammers Rd & Valpico Rd	Tracy	Signal	-	41.1	D	**-**	**64.1**	**E**	-	46.0	D	**-**	**64.6**	**E**	N

Note:

1 Analysis performed using HCM 6 methodologies

2 Delay indicated in seconds/vehicle

3 Caltrans level of service (LOS) standard is C/D. City of Tracy LOS standard is D except that LOS E acceptable within 1/4-mile of freeway interchanges (#3).

4 Intersections that fall below Caltrans or City standards are shaded and shown in **bold**.

5 AWSC = All-Way Stop Control, TWCS = Two-Way Stop Control, Signal = Signal Control

6 An impact is determined if the intersection delay increases by more than 5 seconds

10. Driveway Access Review

The Project proposes three driveways along Old Schulte Road. **Table 14** provides a summary of the recommendations for each driveway.

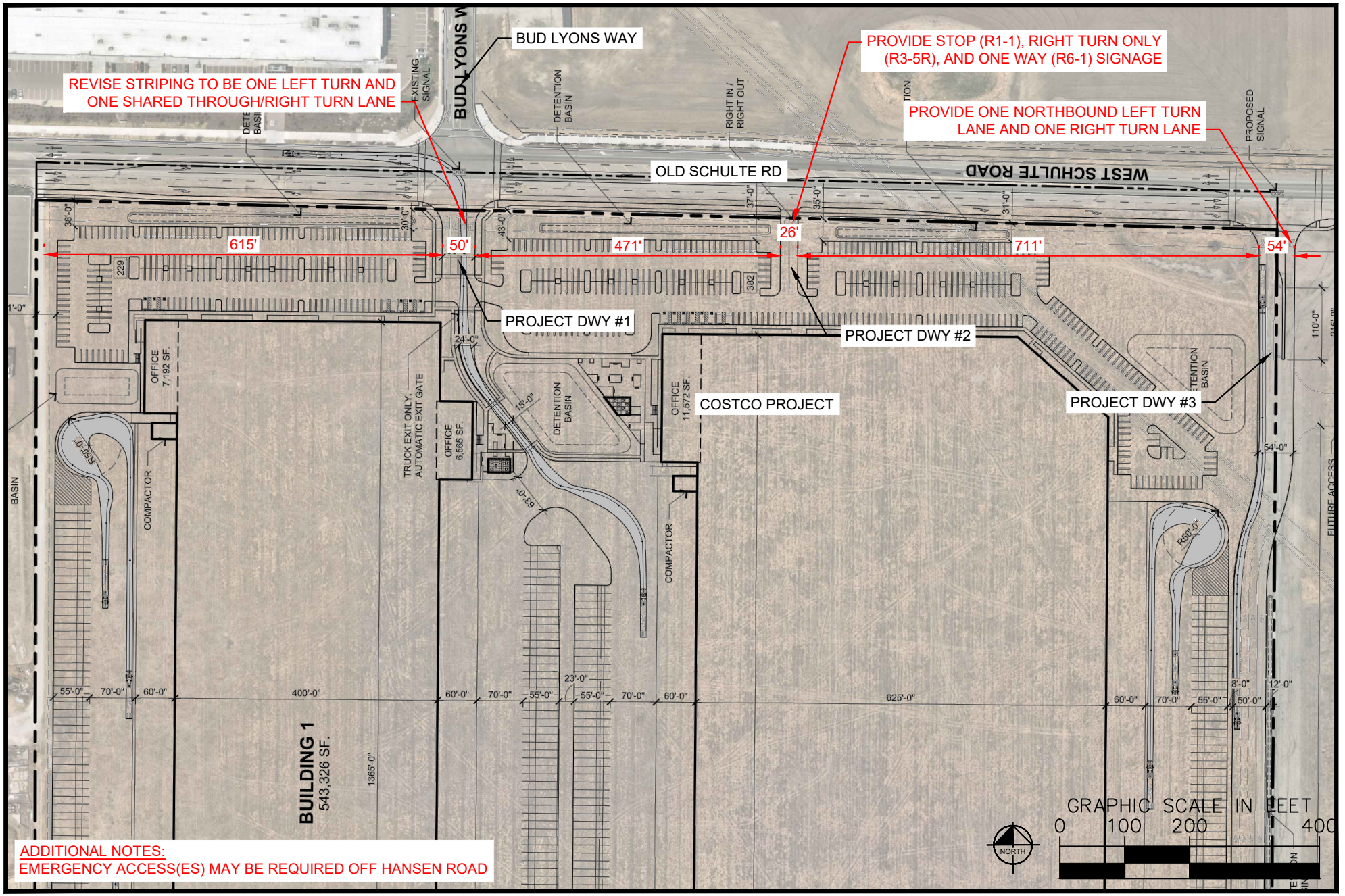
Table 14 – Driveway Access Review

#	Width	Proposed Control	Proposed Access	Proposed Vehicle Type	Recommendations/Comments
1	50’	Signal	Full	Cars & Trucks Out	• Revise striping to the following: 1 left turn and 1 through/right turn lane.
2	26’	SSSC	RIRO	Cars	• Provide Stop (R1-1), Right Turn Only (R3-5R), and One Way (R6-1) signage.
3	54’	Signal	Full	Trucks In & Out	• A left turn lane and a right turn pocket are needed for the signal.
Additional Notes					• Emergency vehicle access(es) may be required off Hansen Road.

Notes:
1. SSSC = Side Street Stop Control
2. RIRO = Right In / Right Out Access; Full = Full Access

Figure 21 illustrates the driveway spacing, widths, and recommendations. **Figure 22** shows the signal spacings along Old Schulte Road between existing and proposed signals. The proposed Project signals provide sufficient spacings.

See the Vehicle Turning Templates section for a review of passenger cars and trucks at the Project driveways and the External Network Review section for a review of the Project frontage and turn lanes required at Project driveways and intersections.

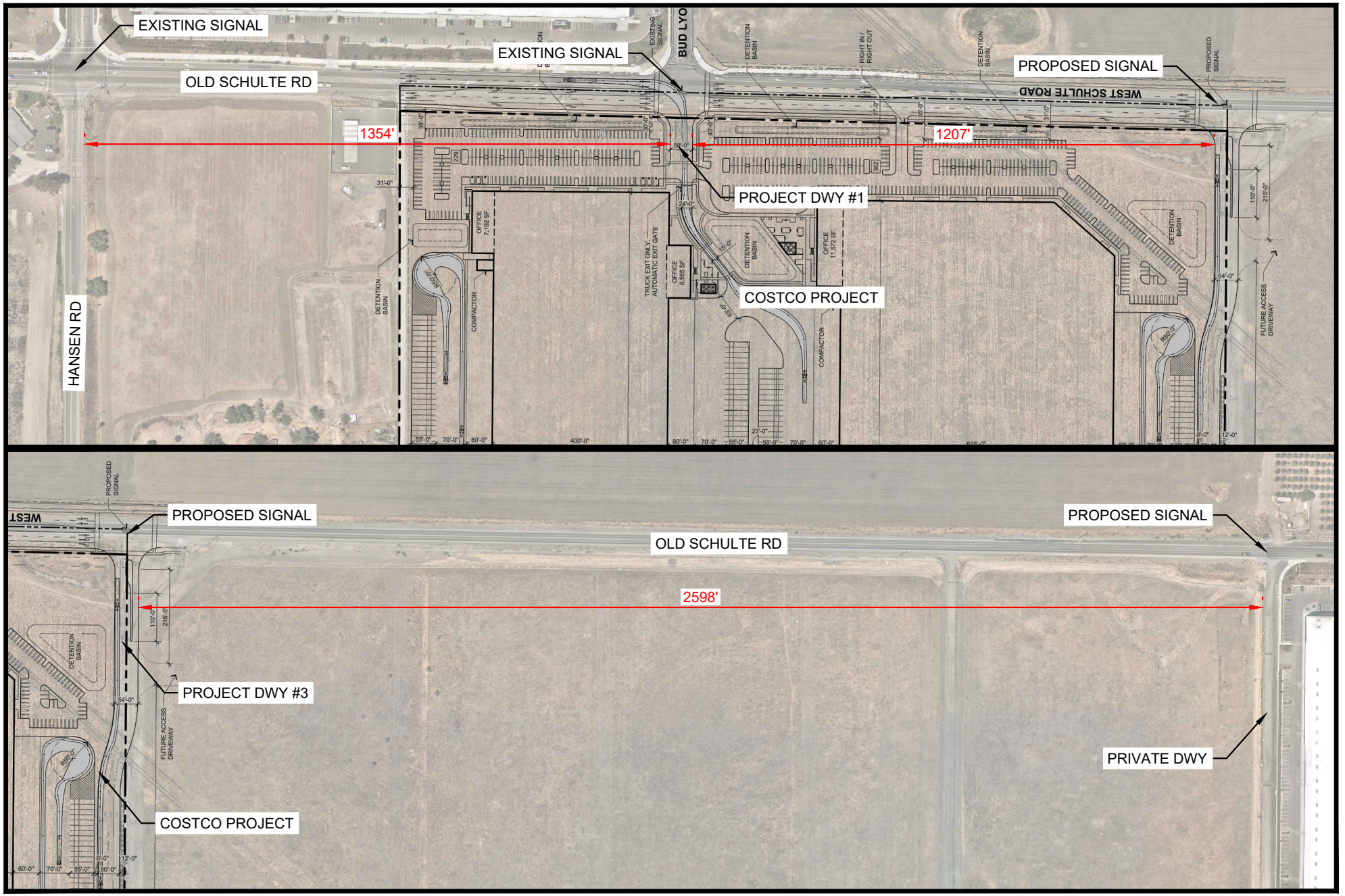


ADDITIONAL NOTES:
EMERGENCY ACCESS(ES) MAY BE REQUIRED OFF HANSEN ROAD

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December 2021

Figure 21
Driveway Access Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center



GRAPHIC SCALE IN FEET
0 150 300 600

Figure 22
Signal Spacing Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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11. Internal Circulation Review

Truck Gate Queuing Review

An internal truck gate queuing analysis was performed to determine if the proposed truck entrance at Project Driveway #3 can adequately accommodate queuing on-site without spilling onto Old Schulte Road. The Project site proposes three entrance lanes and one exit lane. All trucks entering the site will enter at Project Driveway #3.

Two queueing analysis scenarios were analyzed:

1. All three lanes stopping at the security buildings
2. Two lanes stopping at the security buildings and one lane bypassing the security buildings.
    a. The expectation is that Costco Direct Delivery Center will have means of identifying certain trucks that will allow those trucks to avoid stopping at the security buildings when entering.

Operations at the existing Costco distribution warehouse located on Old Schulte Road west of the Project site were observed in November 2020 from 10:35 AM to 11:30 AM. The existing site has one bypass lane and two service lanes. From this observation, it was recorded that each truck was processed at a rate of 170 seconds per truck (approximately 3 minutes per truck). It was also recorded that approximately 50% of entering trucks use the bypass lane.

The following assumptions were used to calculate the truck entrance queuing:

- Uniform arrival rate
- 3-minute service time per truck that stops at a security building
- 2,300 feet per lane of available storage
- To determine an initial queue and off-peak hour queuing, ITE's Time of Day Distribution was utilized to estimate what percentage of the peak hour trips would occur during the off peaks. Trucks entering the site would be distributed as follows during the three peak hours of queue analysis:
    - 30% of the peak hour trips would arrive in the hour just before the peak hour
    - 70% of the peak hour trips would arrive in the hour just after the peak hour
    - 50% of the peak hour trips would arrive in the following hour
- 50% of truck trips will utilize the bypass lane (Scenario 2 only)

See the **Appendix** for queuing calculations. The expected queue per scenario is the following:

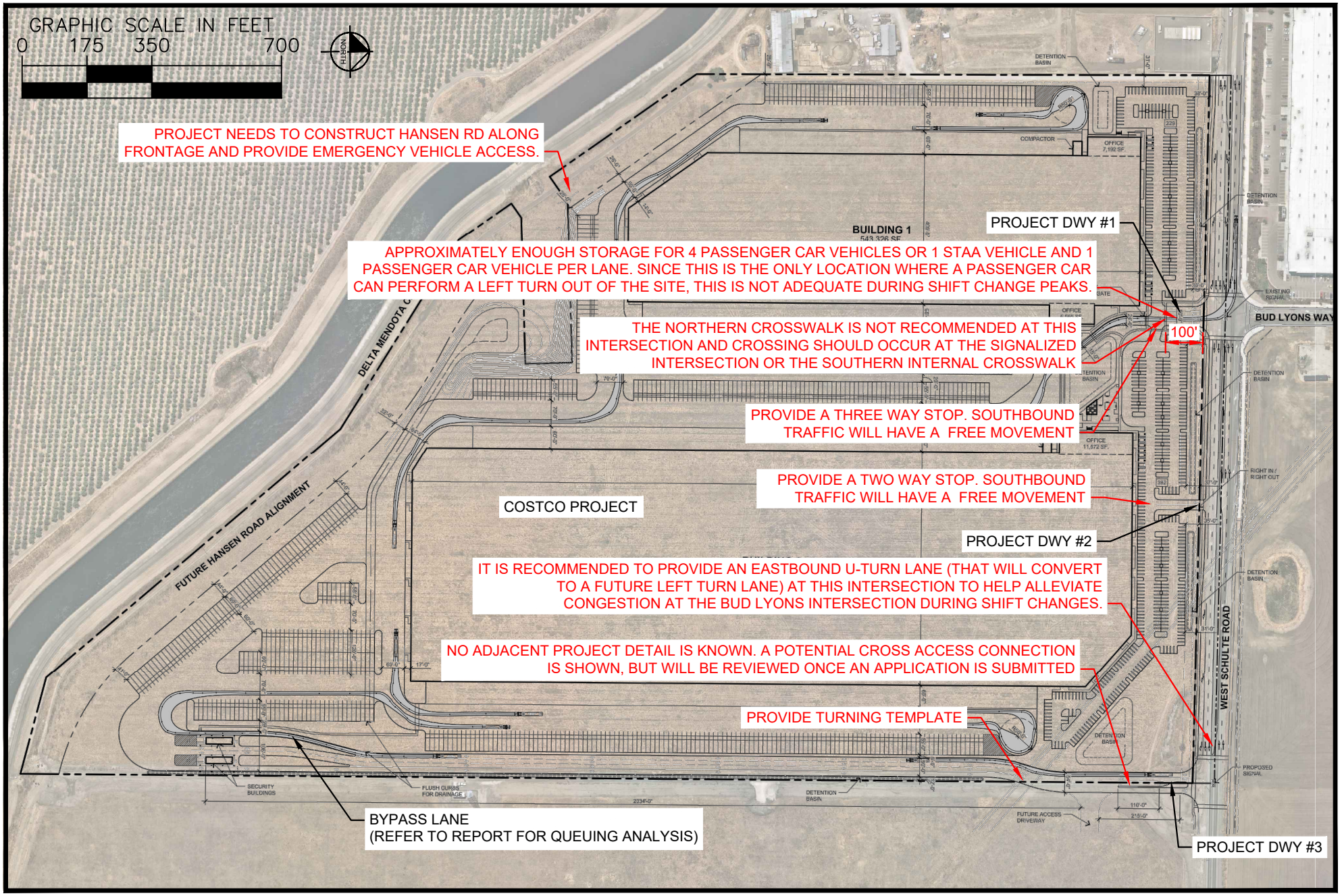
- Scenario 1 (no bypass lane) – 2,100 ft
- Scenario 2 (with bypass lane) – 750 ft

The analysis indicates that the vehicle storage for full gate control, Scenario 1, is marginally sufficient. If one bypass lane is provided, the storage is adequate.

Site Plan Comments

A review of the internal circulation has been provided in **Figure 23**. The following summarizes the comments:

- Approximately 100 feet is provided between Old Schulte Road and the internal drive aisle. This is only enough space for 4 passenger car vehicles or 1 STAA and 1 passenger car vehicle per lane. Since this is the only location where a passenger car can perform a left turn out of the site, this is not adequate during the shift change peaks. To alleviate congestion at this point, it is recommended to provide an eastbound U-turn lane (that could potentially convert to a future left turn lane) at the Old Schulte Road and Project Driveway #3 signalized intersection.
- At Project Driveway #1, the northern internal crosswalk should be removed as this will conflict with vehicles entering and exiting the Project. This crossing should occur at the signal instead or at the southern internal crosswalk.
- Provide a three way stop at the Project Driveway #1 internal intersection with the inbound movement as the free movement.
- No project detail is known for the eastern adjacent parcel that will share Project Driveway #3. The cross access shown will be reviewed in the future, once a development application is submitted for the adjacent parcel.
- Provide clear signage and/or pavement markings for trucks entering Project Driveway #3 that designates security versus bypass lanes.
- Provide truck turning templates at reverse curve within Project Driveway #3.



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Figure 23
Internal Circulation Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

12. Vehicle Turning Templates

The following design vehicles were analyzed at each Project driveway:

1. Passenger Car
2. STAA Truck

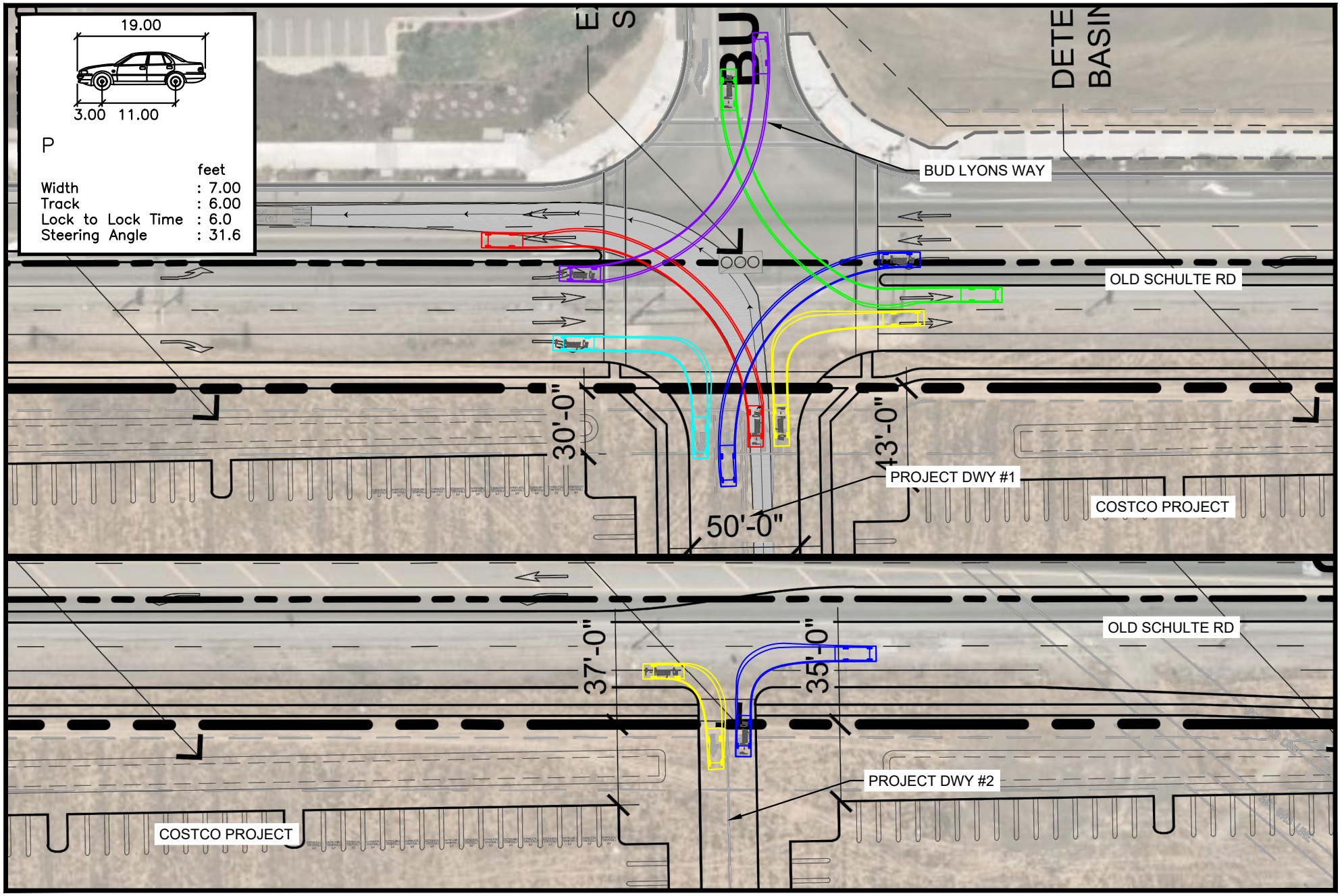
It is anticipated that passenger cars will only access the site from Driveways #1 and #2. It is anticipated that STAA trucks will only exit the site at Driveway #1 but can fully access the site at Driveway #3.

Figure 24 illustrates the passenger car turning templates and **Figure 25** illustrates the STAA truck turning templates.

It was determined that a passenger car can access the site with no turning conflicts.

The following comments have been provided for the STAA turning templates:

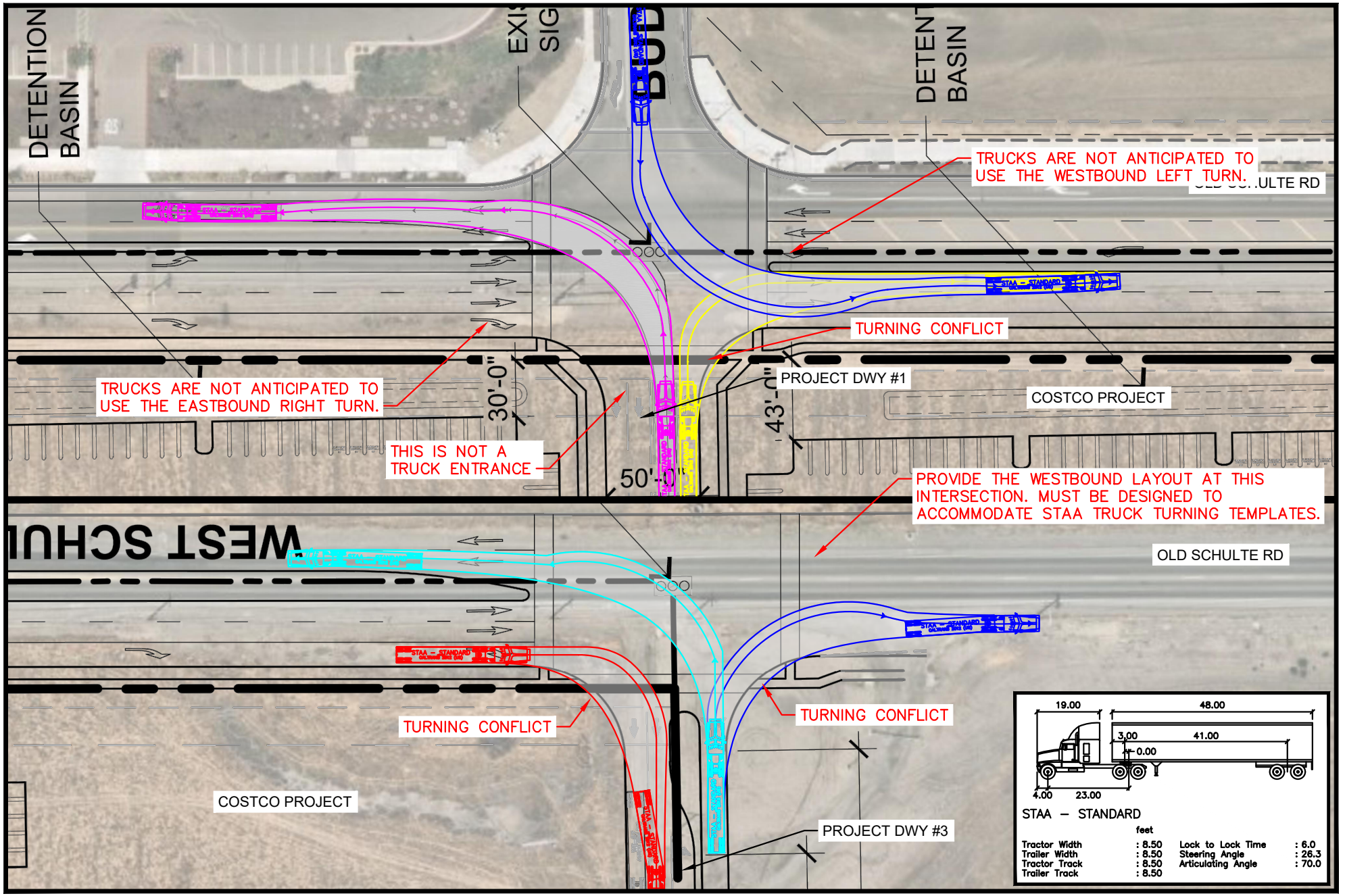
- STAA trucks are unable to perform northbound right turn at Driveway #1. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site.
- STAA trucks are unable to perform eastbound and northbound right turns at Driveway #3. Design modifications to the proposed curb are required to allow STAA trucks to perform necessary movements to access the site.
- A westbound left turn must be provided at Driveway #3 and it must accommodate a STAA truck turning template.



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Figure 24
Passenger Car Turning Templates
Costco Site Plan Review
Tracy Costco Direct Delivery Center

December 2021



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NORTH

GRAPHIC SCALE IN FEET
0 35 70 140

Figure 25
STAA Truck Turning Template
Costco Site Plan Review
Tracy Costco Direct Delivery Center

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13. External Network Review

The Project frontage was reviewed per the City of Tracy TMP 4-Lane Parkway cross section provided in **Figure 26**.

Figure 26 – 4-Lane Parkway TMP Cross Section

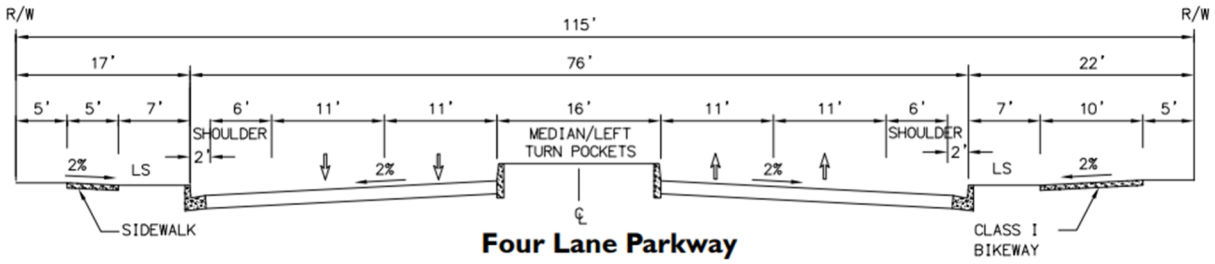
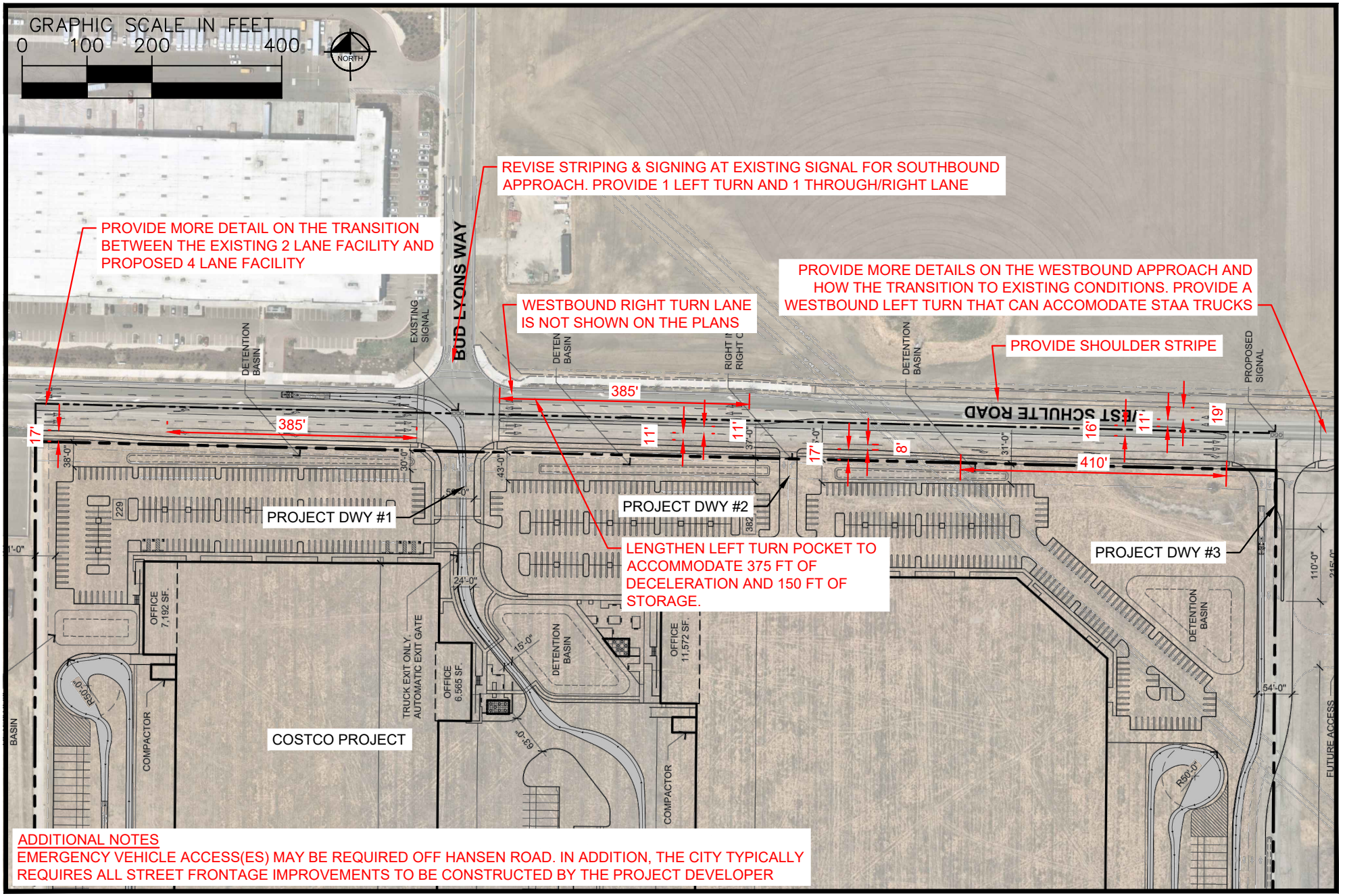


Figure 27 illustrates the external network comments. The following summarizes the comments:

- Provide more detail on the transitions between existing conditions on both the east and west end of the Project limits.
- Provide the striping at the intersection of Old Schulte Road and Project Driveway #3. This approach must include a westbound left turn pocket that can accommodate a CA-STAA truck.
- Revise the signing and striping for the southbound movement at Old Schulte Road and Bud Lyons Way. Provide one left turn and one through/right lane.
- The Westbound right turn lane at the intersection of Old Schulte Road and Bud Lyons is existing and should be shown on the plan set.
- Provide eastbound shoulder stripe.
- Lengthen the westbound left turn lane at Project Driveway #1 to accommodate 375 feet of deceleration and 150 feet of storage.
- Emergency vehicle access(es) may be required off Hansen Road. In addition, the City typically requires all street frontage improvements to be constructed but the Project developer.



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Figure 27
External Network Review
Costco Site Plan Review
Tracy Costco Direct Delivery Center

14. Merge Analysis on Westbound Old Schulte Road East of the Delta-Mendota Canal Bridge

A review of the Old Schulte Road roadway widening at the Delta-Mendota Canal Bridge was conducted to determine if queues from the merge would spill back into the Hansen Road and Old Schulte Road intersection.

Currently, the Delta-Mendota Canal Bridge is a two-lane facility and is located on Old Schulte Road just east of the Costco Development. The purpose of this study is to determine if the Delta-Mendota Canal Bridge widening is required by Phase 1 or the full Costco development.

Queuing Analysis

Queuing analysis was completed using SimTraffic 11 and the average of 5 seedings were utilized, consistent with industry practice. The following conditions were analyzed:

- Background Conditions without bridge widening
- Background Plus Phase 1 Conditions (without bridge widening)
- Background Plus Costco Buildout Conditions (without bridge widening)

For this analysis only the AM peak hour were analyzed because it was determined that the deficiency occurred in the westbound direction during the AM peak hour in the previous study.

For information on volumes utilized for this analysis refer to the Costco Direct Delivery Center Traffic Analysis (June 2022).

The following improvement has been assumed:

- Widening of Old Schulte Road
    - Widen Old Schulte Road to a four-lane facility from 295 feet west of Hansen Road to the eastern boundary of the Costco Project.

The distance from the Delta-Mendota Canal Bridge to the Hansen Road and Old Schulte Road intersection is approximately 900 feet. According to the Caltrans Highway Design Manual (HDM), the necessary lane merge distance for a 45 MPH road (design speed of 55 MPH) with 11-foot wide lanes is equivalent to 605 feet (55 MPH * 11 feet) of merge distance required. Therefore, the lane merge must occur approximately 295 feet west of the intersection of Hansen Road and Old Schulte Road.

Figure 28 provides an illustration of the HDM requirements.

Table 15 provides the 95th percentile queueing analysis for the Project. **Table 16** provides the maximum queueing analysis for the Project.

From the analysis it was determined that the 95th percentile queues for Phase 1 and the full Costco development would not extend into the intersepction. The maximum queues were provided for informational purposes and it was determined that the maximum queues could extend into the intersection; however, standard practice is to utilize the 95th percentile queue for analysis. Small flucations in traffic (increase) would result in the westbound 95th percentile queues extending into the Hansen Road and Old Schulte Road intersection.

Therefore, this analysis shows that the Costco development is not triggering the widening of the Delta-Mendota Canal Bridge for Background Plus Project Conditions. It was concluded from the queuing analysis, that the widening of the Delta-Mendota Canal Bridge is imminent.

Table 15 – 95th Percentile Queueing Analysis

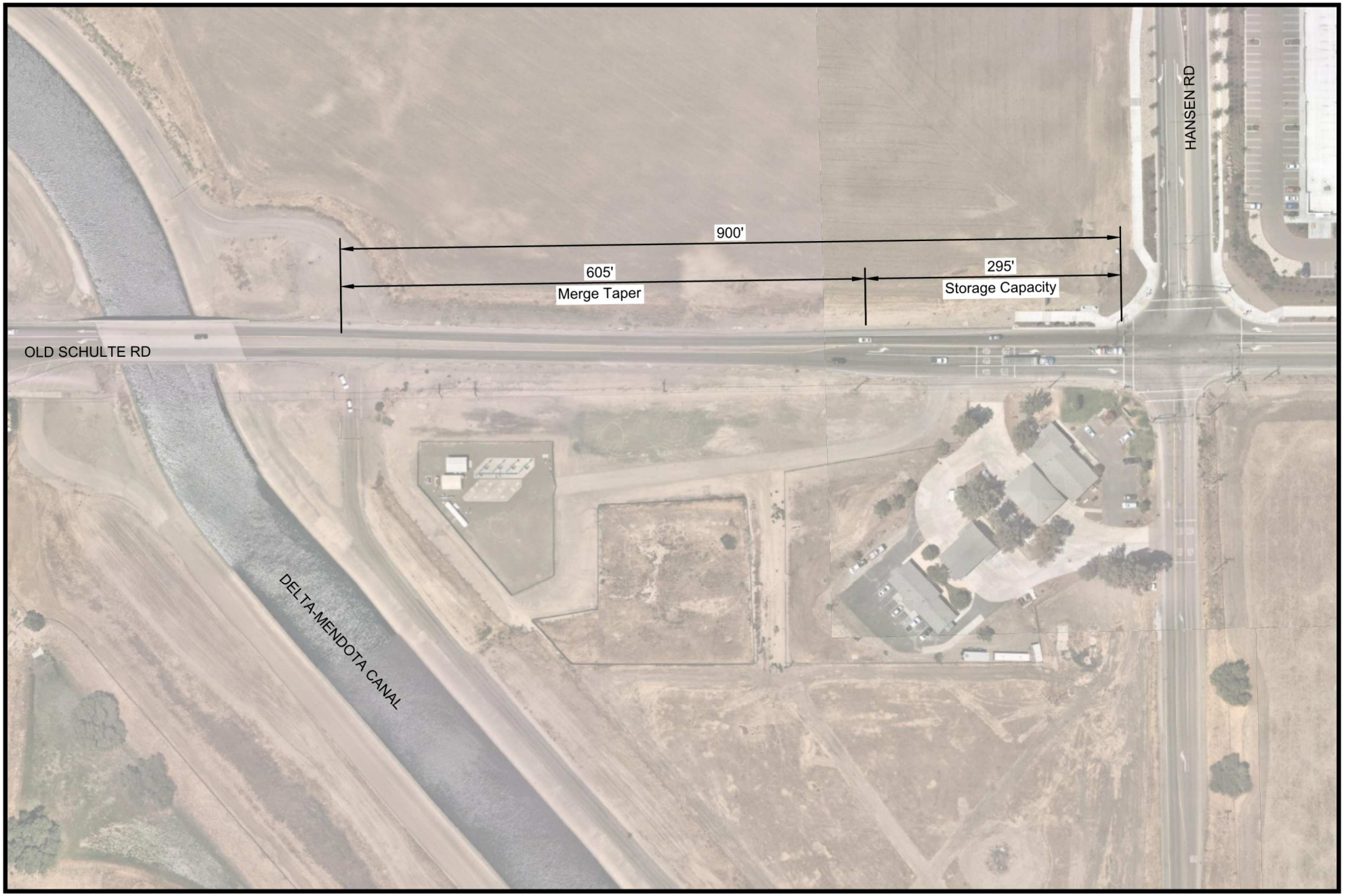
Scenario	Available Queue Capacity	AM Westbound 95th Percentile Queue		95th Percentile Queue Acceptable? (Y/N)
		Lane 1	Lane 2	
Background Conditions	295 ft	148 ft	69 ft	Y
Background Plus Phase 1 Conditions (without bridge widening)		174 ft	71 ft	Y
Background Plus Costco Development Conditions (without bridge widening)		165 ft	100 ft	Y

Notes
1. Simtraffic Simulations results are averaged from 5 simulations

Table 16 – Maximum Queueing Analysis

Scenario	Available Queue Capacity	AM Westbound Maximum Queue		Maximum Queue Acceptable? (Y/N)
		Lane 1	Lane 2	
Background Conditions	295 ft	232 ft	122 ft	Y
Background Plus Phase 1 Conditions (without bridge widening)		**304 ft**	143 ft	**N**
Background Plus Costco Development Conditions (without bridge widening)		**309 ft**	270 ft	**N**

Notes
1. Simtraffic Simulations results are averaged from 5 simulations



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Figure 28

Queue Capacity

Tracy Costco Direct Delivery Center

July 2022

15. Appendix

A. Project Site Plan

B. Traffic Counts

C. Background Conditions Synchro Outputs

D. Background Plus Project Conditions Synchro Outputs

E. Background Plus Project Conditions (Mitigated) Synchro Outputs

F. Cumulative Conditions Synchro Outputs

G. Cumulative Plus Project Conditions Synchro Outputs

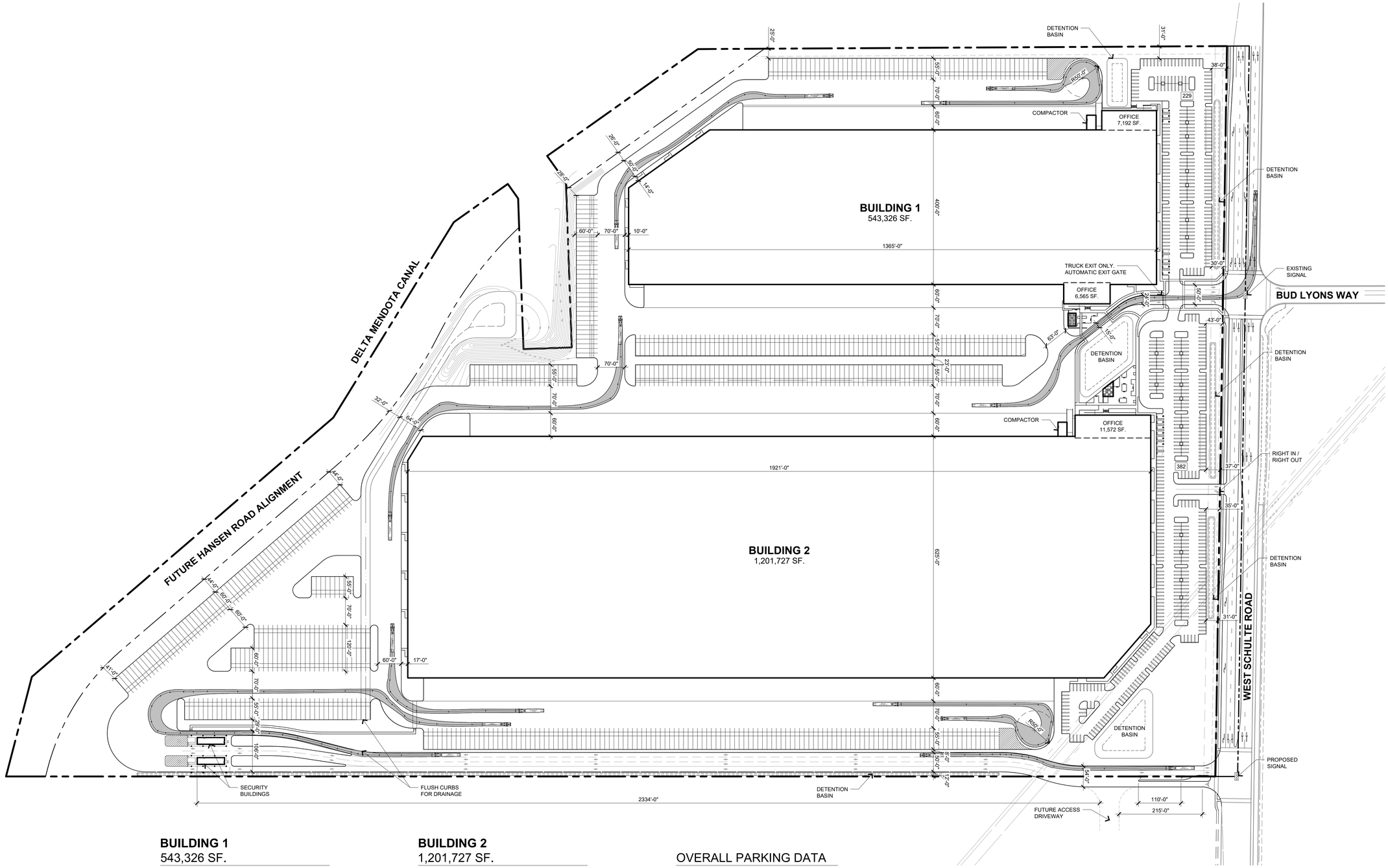
H. Cumulative Plus Project (Mitigated) Conditions Synchro Outputs

I. Truck Queuing Analysis

J. Old Schulte Road Merge Simtraffic Analysis

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A. Project Site Plan



BUILDING 1
543,326 SF.

1/1000 s.f. for First 20,000 s.f. of Building Area:	20 Stalls
1/2000 s.f. for 20,000-40,000 s.f. of Building Area:	+10 Stalls
1/4000 s.f. for Remaining s.f. of Building Area. Remaining Warehouse Building Area (489,569 s.f.)	+123 Stalls
1/250 s.f. for the Office Building Area (13,757 s.f.):	+56 Stalls
Total Required Parking:	**209 Stalls**
Total Proposed Parking:	**229 Stalls**
Total Proposed Truck/Trailer Parking:	**204 Stalls**

BUILDING 2
1,201,727 SF.

1/1000 s.f. for First 20,000 s.f. of Building Area:	20 Stalls
1/2000 s.f. for 20,000-40,000 s.f. of Building Area:	+10 Stalls
1/4000 s.f. for Remaining s.f. of Building Area. Remaining Warehouse Building Area (1,150,155 s.f.):	+288 Stalls
1/250 s.f. for the Office Building Area (11,572 s.f.):	+47 Stalls
Total Required Parking:	**365 Stalls**
Total Proposed Parking:	**382 Stalls**
Total Proposed Truck/Trailer Parking:	**371 Stalls**

OVERALL PARKING DATA

Required 9' Wide Standard Parking Stalls:	517 Stalls
Required Accessible Parking Stalls:	12 Stalls
Required Clean Air / Vanpool / EV Parking Stalls: (Including EV Accessible Parking Stalls)	45 Stalls
Total Required Parking:	**574 Stalls**
Total Proposed Parking:	**611 Stalls**

DBA # P.281

DB+A
DAVID BABCOCK + ASSOCIATES
ARCHITECTURE PLANNING LANDSCAPE
3581 MT. DIABLO BLVD., SUITE 235
LAFAYETTE, CALIFORNIA 94549
T: 925.283.5070

COSTCO FACILITIES
CONCEPT SITE PLAN 13.0

0 30' 60' 120' 240'
SCALE 1"=120'
June 2, 2021

NORTH

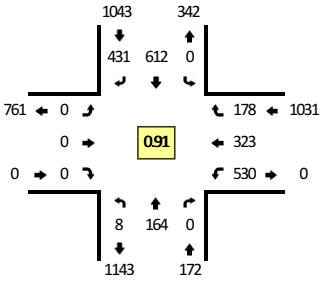
SHEET 1 of 1

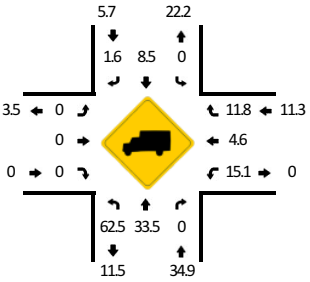
B. Traffic Counts

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

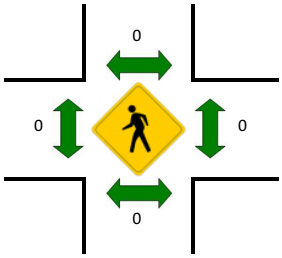
LOCATION: Mountain House Pkwy -- I-205 WB Ramps | **QC JOB #:** 14993001
CITY/STATE: San Joaquin, CA | **DATE:** Thu, May 23 2019

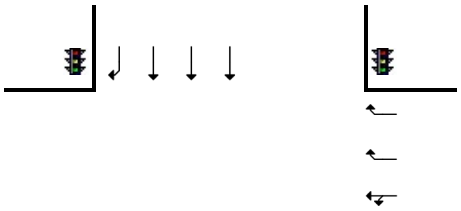
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

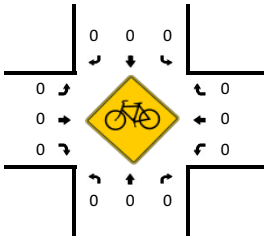


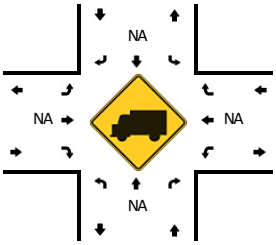


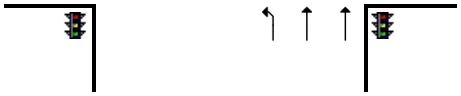
Quality Counts
DATA THAT DRIVES COMMUNITIES

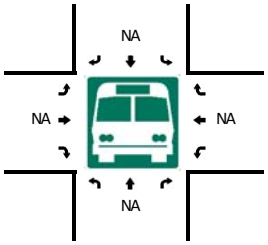












5-Min Count Period Beginning At	Mountain House Pkwy (Northbound)				Mountain House Pkwy (Southbound)				I-205 WB Ramps (Eastbound)				I-205 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	8	0	0	0	63	67	0	0	0	0	0	27	21	13	0	200	
7:05 AM	0	11	0	0	0	51	56	0	0	0	0	0	39	27	13	0	197	
7:10 AM	0	14	0	0	0	60	63	0	0	0	0	0	46	25	13	0	221	
7:15 AM	1	9	0	0	0	68	38	0	0	0	0	0	44	19	9	0	188	
7:20 AM	1	10	0	0	0	36	36	0	0	0	0	0	41	24	13	0	161	
7:25 AM	1	20	0	0	0	45	23	0	0	0	0	0	57	33	12	0	191	
7:30 AM	0	12	0	1	0	60	14	0	0	0	0	0	45	31	20	0	183	
7:35 AM	1	15	0	0	0	34	26	0	0	0	0	0	52	31	10	0	169	
7:40 AM	0	13	0	0	0	57	28	0	0	0	0	0	43	27	11	0	179	
7:45 AM	2	16	0	0	0	53	22	0	0	0	0	0	34	27	20	0	174	
7:50 AM	0	18	0	0	0	43	31	0	0	0	0	0	44	33	32	0	201	
7:55 AM	0	18	0	0	0	42	27	0	0	0	0	0	58	25	12	0	182	2246
8:00 AM	1	10	0	0	0	56	29	0	0	0	0	0	46	19	15	0	176	2222
8:05 AM	1	14	0	0	0	40	25	0	0	0	0	0	45	40	20	0	185	2210
8:10 AM	0	7	0	0	0	46	17	0	0	0	0	0	50	13	23	0	156	2145
8:15 AM	0	14	0	0	0	41	12	0	0	0	0	0	33	6	25	0	131	2088
8:20 AM	0	15	0	0	0	38	18	0	0	0	0	0	29	3	16	0	119	2046
8:25 AM	0	6	0	0	0	28	14	0	0	0	0	0	42	0	13	0	103	1958
8:30 AM	0	11	0	0	0	35	11	0	0	0	0	0	21	0	15	0	93	1868
8:35 AM	1	16	0	0	0	35	13	0	0	0	0	0	21	1	18	0	105	1804
8:40 AM	0	10	0	0	0	34	6	0	0	0	0	0	24	0	21	0	95	1720
8:45 AM	0	13	0	0	0	40	13	0	0	0	0	0	27	1	20	0	114	1660
8:50 AM	0	4	0	0	0	28	5	0	0	0	0	0	19	0	16	0	72	1531
8:55 AM	0	16	0	0	0	53	8	0	0	0	0	0	20	0	16	0	113	1462

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	132	0	0	0	696	744	0	0	0	0	0	448	292	156	0	2472
Heavy Trucks	4	48	0		0	96	4		0	0	0		100	12	20		284
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

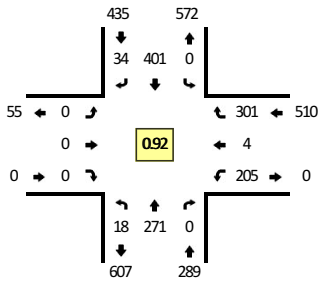
Type of peak hour being reported: Intersection Peak

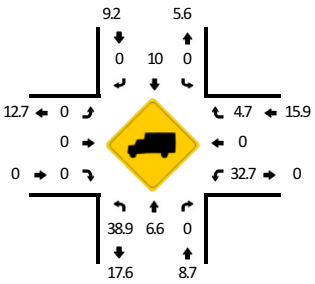
Method for determining peak hour: Total Entering Volume

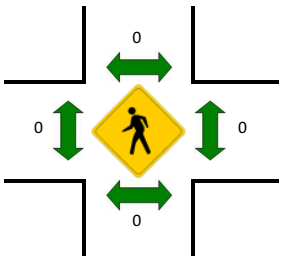
LOCATION: Mountain House Pkwy -- I-205 WB Ramps
CITY/STATE: San Joaquin, CA

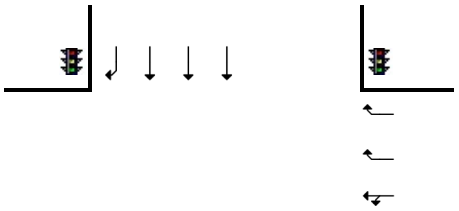
QC JOB #: 14993002
DATE: Thu, May 23 2019

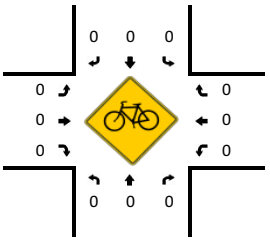
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:25 PM -- 4:40 PM

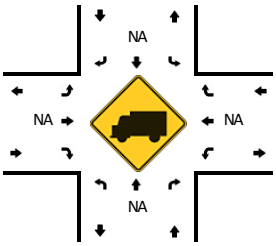




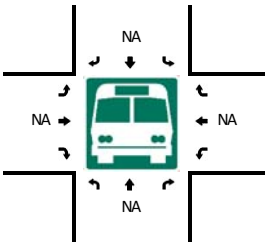












5-Min Count Period Beginning At	Mountain House Pkwy (Northbound)				Mountain House Pkwy (Southbound)				I-205 WB Ramps (Eastbound)				I-205 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	13	0	0	0	27	2	0	0	0	0	0	23	0	33	0	99	
4:05 PM	1	26	0	0	0	46	1	0	0	0	0	0	8	0	18	0	100	
4:10 PM	3	30	0	0	0	43	3	0	0	0	0	0	15	0	23	0	117	
4:15 PM	1	16	0	0	0	38	4	0	0	0	0	0	13	0	23	0	95	
4:20 PM	1	24	0	0	0	23	4	0	0	0	0	0	17	0	26	0	95	
4:25 PM	1	19	0	0	0	37	3	0	0	0	0	0	17	0	32	0	109	
4:30 PM	2	19	0	0	0	38	3	0	0	0	0	0	15	0	25	0	102	
4:35 PM	1	35	0	0	0	41	5	0	0	0	0	0	14	2	25	0	123	
4:40 PM	1	19	0	0	0	26	1	0	0	0	0	0	24	0	24	0	95	
4:45 PM	1	21	0	0	0	30	1	0	0	0	0	0	17	1	32	0	103	
4:50 PM	0	27	0	1	0	24	4	0	0	0	0	0	19	1	27	0	103	
4:55 PM	4	22	0	0	0	28	3	0	0	0	0	0	23	0	13	0	93	1234
5:00 PM	0	13	0	1	0	15	4	0	0	0	0	0	16	0	32	0	81	1216
5:05 PM	2	18	0	0	0	33	3	0	0	0	0	0	11	0	23	0	90	1206
5:10 PM	0	19	0	0	0	35	1	0	0	0	0	0	10	0	26	0	91	1180
5:15 PM	1	17	0	0	0	27	1	0	0	0	0	0	17	0	34	0	97	1182
5:20 PM	2	16	0	1	0	23	1	0	0	0	0	0	15	0	15	0	73	1160
5:25 PM	1	17	0	0	0	32	8	0	0	0	0	0	19	0	31	0	108	1159
5:30 PM	0	31	0	0	0	28	2	0	0	0	0	0	21	0	30	0	112	1169
5:35 PM	1	18	0	0	0	22	4	0	0	0	0	0	15	0	28	0	88	1134
5:40 PM	0	16	0	0	0	28	1	0	0	0	0	0	19	0	33	0	97	1136
5:45 PM	1	11	0	0	0	33	5	0	0	0	0	0	18	0	30	0	98	1131
5:50 PM	0	19	0	0	0	29	2	0	0	0	0	0	19	0	23	0	92	1120
5:55 PM	0	11	0	1	0	30	5	0	0	0	0	0	19	0	17	0	83	1110

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	292	0	0	0	464	44	0	0	0	0	0	184	8	328	0	1336
Heavy Trucks	8	12	0		0	44	0		0	0	0		60	0	20		144
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

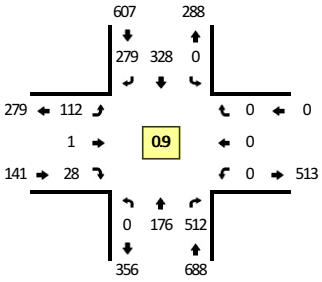
Type of peak hour being reported: Intersection Peak

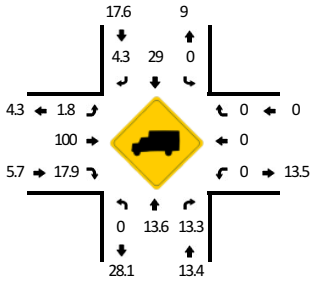
Method for determining peak hour: Total Entering Volume

LOCATION: Mountain House Pkwy -- I-205 EB Ramps
CITY/STATE: San Joaquin, CA

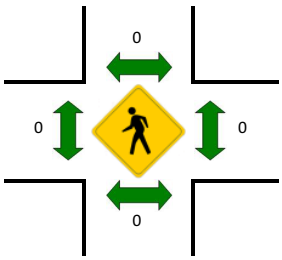
QC JOB #: 14993004
DATE: Thu, May 23 2019

Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:00 PM -- 4:15 PM

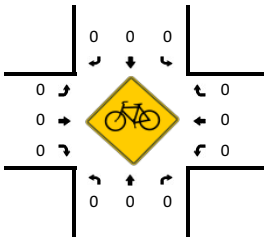


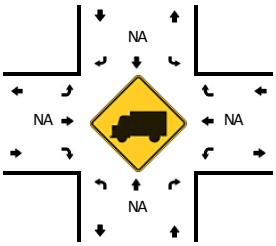


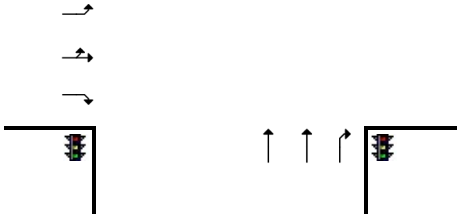
Quality Counts
DATA THAT DRIVES COMMUNITIES

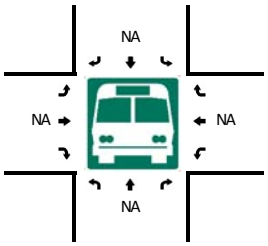












5-Min Count Period Beginning At	Mountain House Pkwy (Northbound)				Mountain House Pkwy (Southbound)				I-205 EB Ramps (Eastbound)				I-205 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	12	49	0	0	33	17	0	3	0	2	0	0	0	0	0	116	
4:05 PM	0	16	55	0	0	22	32	0	11	0	1	0	0	0	0	0	137	
4:10 PM	0	24	55	0	0	31	27	0	8	0	2	0	0	0	0	0	147	
4:15 PM	0	10	42	0	0	16	35	0	7	0	1	0	0	0	0	0	111	
4:20 PM	0	12	49	0	0	26	14	0	11	0	3	0	0	0	0	0	115	
4:25 PM	0	9	33	0	0	23	31	0	9	0	3	0	0	0	0	0	108	
4:30 PM	0	9	53	0	0	33	20	0	15	0	6	0	0	0	0	0	136	
4:35 PM	0	18	38	0	0	27	30	0	13	0	4	0	0	0	0	0	130	
4:40 PM	0	18	39	0	0	32	16	0	5	1	3	0	0	0	0	0	114	
4:45 PM	0	17	27	0	0	25	23	0	8	0	3	0	0	0	0	0	103	
4:50 PM	0	19	49	0	0	28	15	0	14	0	0	0	0	0	0	0	125	
4:55 PM	0	12	23	0	0	32	19	0	8	0	0	0	0	0	0	0	94	1436
5:00 PM	0	12	40	0	0	18	14	0	3	0	1	0	0	0	0	0	88	1408
5:05 PM	0	15	48	0	0	22	22	0	5	0	2	0	0	0	0	0	114	1385
5:10 PM	0	11	46	0	0	26	17	0	8	0	1	0	0	0	0	0	109	1347
5:15 PM	0	14	34	0	1	27	18	0	8	0	1	0	0	0	0	0	103	1339
5:20 PM	0	10	38	0	0	17	22	0	5	0	3	0	0	0	0	0	95	1319
5:25 PM	0	10	32	0	0	30	22	0	9	0	0	0	0	0	0	0	103	1314
5:30 PM	0	16	47	0	0	28	20	0	14	0	0	0	0	0	0	0	125	1303
5:35 PM	0	10	41	0	0	20	17	0	6	0	2	0	0	0	0	0	96	1269
5:40 PM	0	12	65	0	0	30	17	0	9	0	1	0	0	0	0	0	134	1289
5:45 PM	0	7	37	0	0	26	25	0	3	0	0	0	0	0	0	0	98	1284
5:50 PM	0	10	33	0	0	27	21	0	5	0	1	0	0	0	0	0	97	1256
5:55 PM	0	5	35	0	0	30	20	0	9	0	1	0	0	0	0	0	100	1262

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	208	636	0	0	344	304	0	88	0	20	0	0	0	0	0	1600
Heavy Trucks	0	20	72		0	84	12		0	0	4		0	0	0		192
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

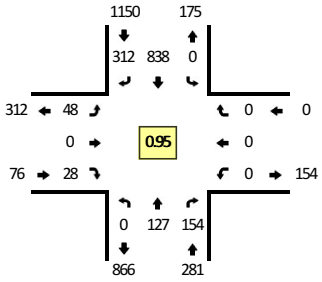
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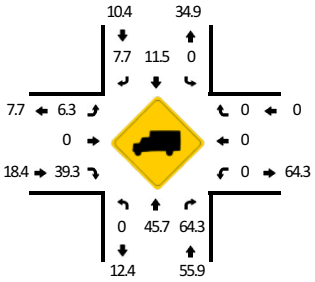
Method for determining peak hour: Total Entering Volume

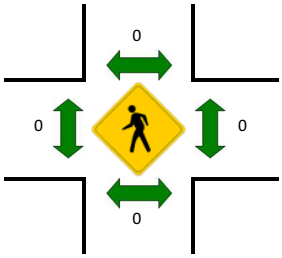
LOCATION: Mountain House Pkwy -- I-205 EB Ramps
CITY/STATE: San Joaquin, CA

QC JOB #: 14993003
DATE: Thu, May 23 2019

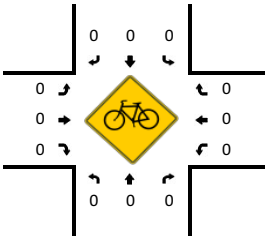
Peak-Hour: 7:10 AM -- 8:10 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

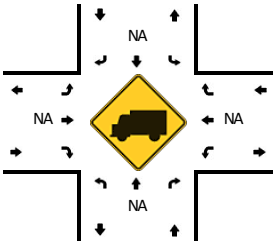


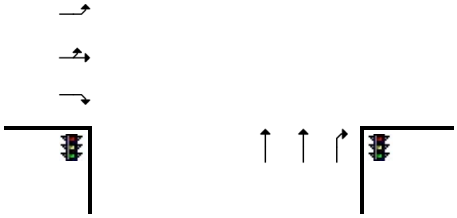


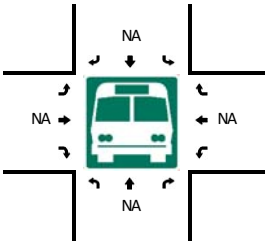












5-Min Count Period Beginning At	Mountain House Pkwy (Northbound)				Mountain House Pkwy (Southbound)				I-205 EB Ramps (Eastbound)				I-205 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	5	12	0	0	69	21	0	3	0	2	0	0	0	0	0	112	
7:05 AM	0	12	9	0	0	79	11	0	1	0	1	0	0	0	0	0	113	
7:10 AM	0	12	8	0	0	78	28	0	2	0	3	0	0	0	0	0	131	
7:15 AM	0	6	11	0	0	95	17	0	5	0	1	0	0	0	0	0	135	
7:20 AM	0	5	11	0	0	67	10	0	6	0	2	0	0	0	0	0	101	
7:25 AM	0	14	9	0	0	90	12	0	6	0	1	0	0	0	0	0	132	
7:30 AM	0	10	7	0	0	69	37	0	4	0	1	0	0	0	0	0	128	
7:35 AM	0	9	11	0	0	58	28	0	6	0	6	0	0	0	0	0	118	
7:40 AM	0	11	14	0	0	68	32	0	0	0	2	0	0	0	0	0	127	
7:45 AM	0	11	7	0	0	45	41	0	7	0	2	0	0	0	0	0	113	
7:50 AM	0	17	16	0	0	59	29	0	2	0	7	0	0	0	0	0	130	
7:55 AM	0	13	15	0	0	78	22	0	5	0	2	0	0	0	0	0	135	1475
8:00 AM	0	6	23	0	0	65	33	0	4	0	1	0	0	0	0	0	132	1495
8:05 AM	0	13	22	0	0	66	23	0	1	0	0	0	0	0	0	0	125	1507
8:10 AM	0	4	22	0	0	70	26	0	3	0	4	0	0	0	0	0	129	1505
8:15 AM	0	12	23	0	1	44	29	0	5	0	4	0	0	0	0	0	118	1488
8:20 AM	0	5	10	0	0	40	27	0	5	0	0	0	0	0	0	0	87	1474
8:25 AM	0	7	24	0	0	53	17	0	2	0	3	0	0	0	0	0	106	1448
8:30 AM	0	3	16	0	0	40	16	0	3	0	0	0	0	0	0	0	78	1398
8:35 AM	0	15	17	0	0	27	28	1	2	1	2	0	0	0	0	0	93	1373
8:40 AM	0	5	28	0	0	32	26	0	6	0	1	0	0	0	0	0	98	1344
8:45 AM	0	8	19	0	0	39	28	0	3	0	0	0	0	0	0	0	97	1328
8:50 AM	0	8	15	0	0	27	20	0	2	0	2	0	0	0	0	0	74	1272
8:55 AM	0	7	15	0	0	34	39	0	3	0	3	0	0	0	0	0	101	1238

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	144	216	0	0	808	336	0	44	0	40	0	0	0	0	0	1588
Heavy Trucks	0	60	152		0	108	12		4	0	12		0	0	0		348
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

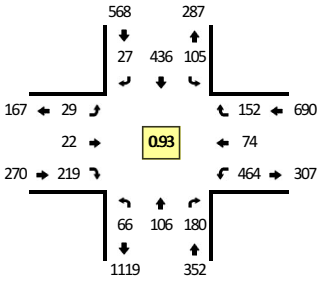
Type of peak hour being reported: Intersection Peak

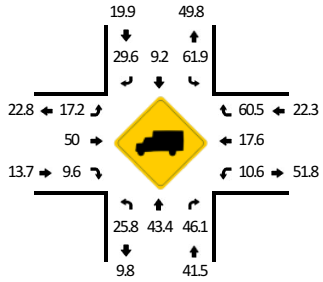
Method for determining peak hour: Total Entering Volume

LOCATION: International Pkwy -- W Schulte Rd
CITY/STATE: San Joaquin, CA

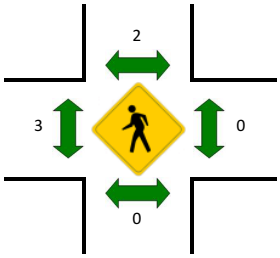
QC JOB #: 14993011
DATE: Thu, May 23 2019

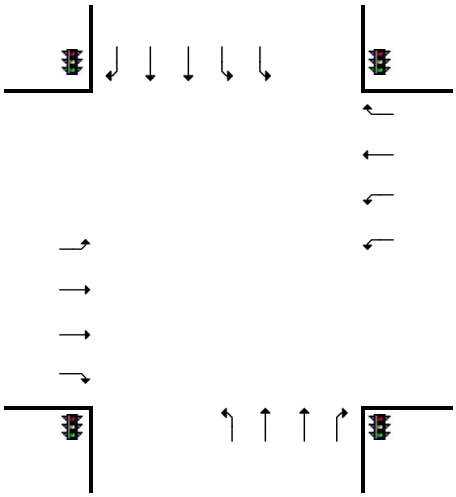
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

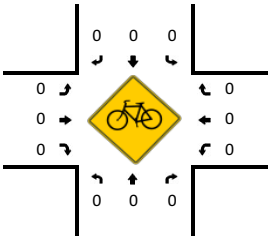


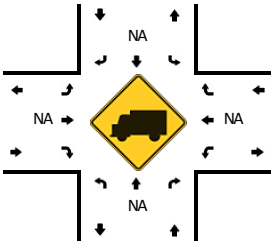


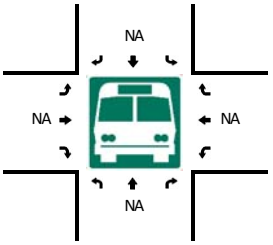
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	International Pkwy (Northbound)				International Pkwy (Southbound)				W Schulte Rd (Eastbound)				W Schulte Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	7	12	1	8	33	4	0	1	2	27	0	42	9	2	0	158	
7:05 AM	5	13	18	0	13	53	4	0	3	0	24	0	28	4	11	0	176	
7:10 AM	3	7	21	0	3	20	2	0	2	2	16	0	64	3	7	0	150	
7:15 AM	4	5	9	0	3	28	0	0	2	1	22	0	44	5	11	0	134	
7:20 AM	8	6	17	0	10	24	3	0	1	1	22	0	58	11	13	0	174	
7:25 AM	6	8	15	0	13	54	3	0	2	5	27	0	27	8	8	0	176	
7:30 AM	10	13	13	0	10	32	2	0	0	2	24	0	36	4	9	0	155	
7:35 AM	5	7	9	0	1	31	1	0	2	0	16	0	40	9	11	0	132	
7:40 AM	8	13	14	0	18	56	4	0	2	2	17	0	42	12	21	0	209	
7:45 AM	3	13	18	0	5	28	3	0	5	3	16	0	42	6	12	0	154	
7:50 AM	5	7	22	0	7	31	3	0	6	1	11	0	32	3	17	0	145	
7:55 AM	2	6	12	0	6	38	0	0	1	3	13	0	18	5	9	0	113	1876
8:00 AM	7	8	12	0	16	41	2	0	3	2	11	0	33	4	23	0	162	1880
8:05 AM	4	11	10	1	8	56	4	0	0	4	8	0	29	0	23	0	158	1862
8:10 AM	5	6	8	0	10	30	1	0	1	3	6	0	43	4	20	0	137	1849
8:15 AM	7	9	13	0	14	36	1	0	1	3	3	0	33	7	13	0	140	1855
8:20 AM	3	5	13	0	11	21	0	0	0	2	8	0	13	5	20	0	101	1782
8:25 AM	3	8	9	0	12	11	1	0	3	0	3	0	37	8	11	0	106	1712
8:30 AM	9	10	5	0	11	17	1	0	2	1	5	0	23	3	9	0	96	1653
8:35 AM	4	14	13	0	10	19	2	0	2	0	5	0	24	9	17	0	119	1640
8:40 AM	7	3	9	0	10	13	3	0	1	2	6	0	23	2	18	0	97	1528
8:45 AM	3	7	12	0	15	10	0	0	1	2	6	0	30	3	12	0	101	1475
8:50 AM	4	7	13	0	8	12	1	0	1	0	4	0	25	5	17	0	97	1427
8:55 AM	3	10	11	0	9	9	3	0	4	0	6	0	16	3	15	0	89	1403

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	64	132	216	0	120	460	40	0	52	24	176	0	464	84	200	0	2032
Heavy Trucks	0	76	100		64	32	8		8	16	8		56	20	132		520
Pedestrians		0				0				8				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

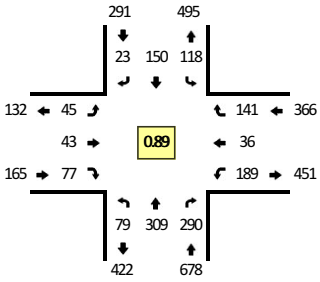
Type of peak hour being reported: Intersection Peak

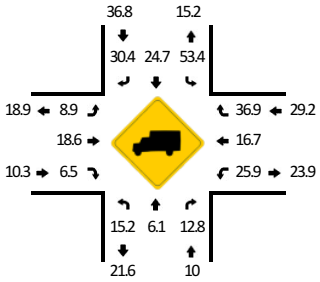
Method for determining peak hour: Total Entering Volume

LOCATION: International Pkwy -- W Schulte Rd
CITY/STATE: San Joaquin, CA

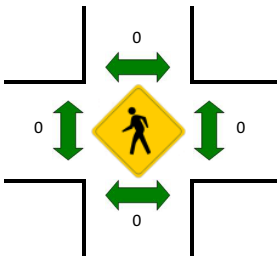
QC JOB #: 14993012
DATE: Thu, May 23 2019

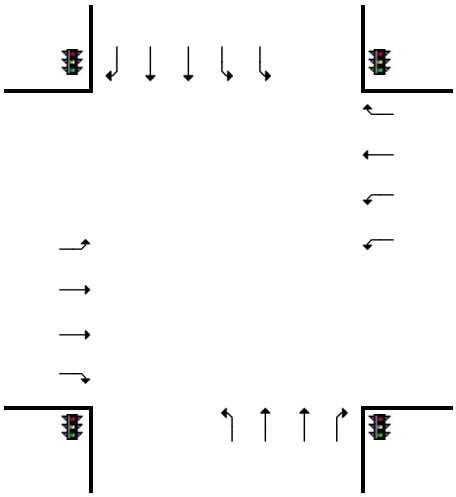
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

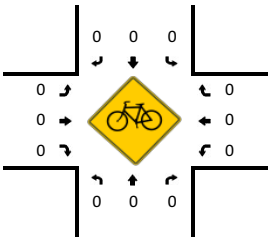


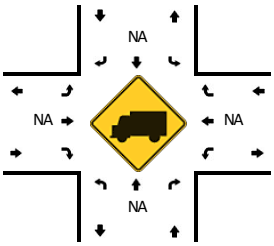


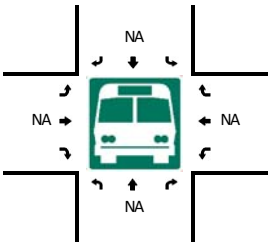
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	International Pkwy (Northbound)				International Pkwy (Southbound)				W Schulte Rd (Eastbound)				W Schulte Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	5	30	24	0	13	22	2	0	2	0	11	0	16	3	13	0	141	
4:05 PM	5	27	13	1	9	10	1	0	9	7	7	0	23	2	14	0	128	
4:10 PM	6	33	23	0	12	19	3	0	1	4	7	0	18	6	11	0	143	
4:15 PM	12	28	18	2	8	11	1	0	2	6	5	0	10	2	16	0	121	
4:20 PM	3	21	17	0	9	10	1	0	2	3	8	0	14	5	9	0	102	
4:25 PM	6	25	29	1	7	4	1	0	3	1	6	0	17	2	11	0	113	
4:30 PM	9	21	35	0	2	9	3	0	5	6	5	0	12	3	13	0	123	
4:35 PM	4	26	31	0	10	20	3	0	5	3	4	0	21	3	22	0	152	
4:40 PM	7	29	17	0	16	8	3	0	1	3	5	0	26	6	12	0	133	
4:45 PM	7	36	19	2	11	18	2	0	5	6	6	0	12	2	8	0	134	
4:50 PM	7	22	38	0	8	11	1	0	4	2	8	0	9	2	6	0	118	
4:55 PM	2	11	26	0	13	8	2	0	6	2	5	0	11	0	6	0	92	1500
5:00 PM	5	38	17	0	11	11	1	0	6	2	8	0	19	4	12	0	134	1493
5:05 PM	4	35	23	1	12	7	2	0	4	1	7	0	11	4	16	0	127	1492
5:10 PM	6	26	24	2	7	7	1	0	0	3	7	0	10	5	10	0	108	1457
5:15 PM	6	29	32	0	11	9	1	0	7	4	7	0	8	0	6	0	120	1456
5:20 PM	3	18	25	0	11	7	0	0	4	3	7	0	11	1	9	0	99	1453
5:25 PM	9	25	29	0	18	5	1	0	7	1	3	0	6	4	4	0	112	1452
5:30 PM	10	31	27	0	11	13	0	0	7	3	5	0	13	5	11	0	136	1465
5:35 PM	8	31	25	1	13	6	2	0	3	3	6	0	12	2	15	0	127	1440
5:40 PM	4	26	29	1	13	7	3	0	3	2	7	0	11	9	8	0	123	1430
5:45 PM	3	38	27	0	11	7	1	0	6	5	6	0	13	12	8	0	137	1433
5:50 PM	4	21	31	0	12	3	1	0	3	5	7	0	9	8	7	0	111	1426
5:55 PM	3	18	35	2	9	5	3	0	5	11	10	0	9	8	12	0	130	1464

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	72	364	268	8	148	184	32	0	44	48	60	0	236	44	168	0	1676
Heavy Trucks	4	24	36		68	64	12		4	12	0		56	8	52		340
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

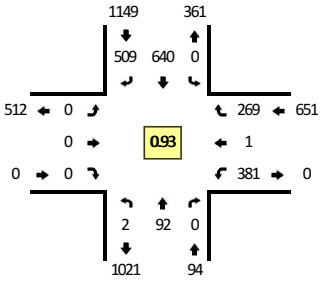
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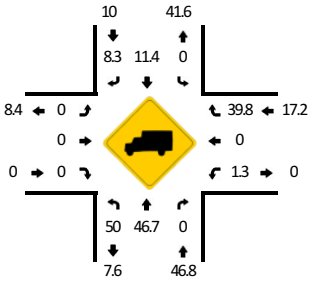
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

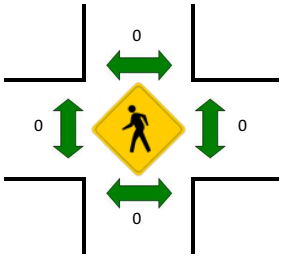
LOCATION: Patterson Pass Rd -- I-580 WB Ramps | **QC JOB #:** 14993013
CITY/STATE: San Joaquin, CA | **DATE:** Thu, May 23 2019

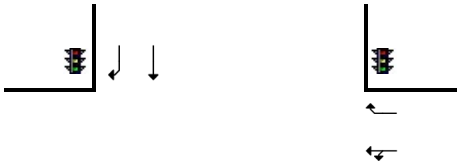
Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:00 AM -- 7:15 AM

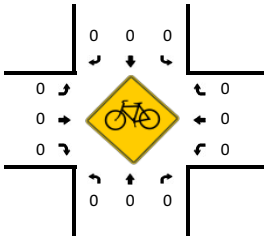


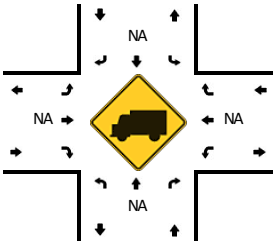


Quality Counts
DATA THAT DRIVES COMMUNITIES

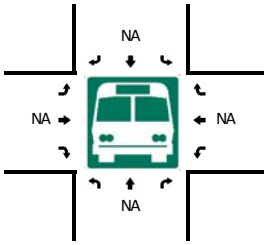












5-Min Count Period Beginning At	Patterson Pass Rd (Northbound)				Patterson Pass Rd (Southbound)				I-580 WB Ramps (Eastbound)				I-580 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	2	0	0	0	67	50	0	0	0	0	0	30	0	27	0	176	
7:05 AM	0	7	0	0	0	67	35	0	0	0	0	0	22	0	25	0	156	
7:10 AM	1	9	0	0	0	45	48	0	0	0	0	0	48	0	27	0	178	
7:15 AM	0	10	0	0	0	41	46	0	0	0	0	0	45	0	17	0	159	
7:20 AM	0	3	0	0	0	49	55	0	0	0	0	0	39	0	16	0	162	
7:25 AM	0	11	0	0	0	60	59	0	0	0	0	0	28	1	22	0	181	
7:30 AM	0	11	0	0	0	49	34	0	0	0	0	0	29	0	25	0	148	
7:35 AM	0	7	0	0	0	51	39	0	0	0	0	0	43	0	16	0	156	
7:40 AM	0	5	0	0	0	57	39	0	0	0	0	0	42	0	32	0	175	
7:45 AM	0	10	0	0	0	64	45	0	0	0	0	0	19	0	22	0	160	
7:50 AM	0	10	0	0	0	55	34	0	0	0	0	0	15	0	20	0	134	
7:55 AM	1	7	0	0	0	35	25	0	0	0	0	0	21	0	20	0	109	1894
8:00 AM	1	9	0	0	0	53	36	0	0	0	0	0	14	0	19	0	132	1850
8:05 AM	0	3	0	0	0	58	37	0	0	0	0	0	16	0	16	0	130	1824
8:10 AM	1	5	0	0	0	45	43	0	0	0	0	0	17	0	18	0	129	1775
8:15 AM	0	7	0	0	0	30	26	0	0	0	0	0	16	0	24	0	103	1719
8:20 AM	0	4	0	0	0	37	25	0	0	0	0	0	12	0	16	0	94	1651
8:25 AM	0	8	0	0	0	19	14	0	0	0	0	0	11	0	17	0	69	1539
8:30 AM	2	14	0	0	0	27	37	0	0	0	0	0	9	0	20	0	109	1500
8:35 AM	1	4	0	0	0	31	15	0	0	0	0	0	9	0	15	0	75	1419
8:40 AM	1	9	0	0	0	21	25	0	0	0	0	0	6	0	15	0	77	1321
8:45 AM	0	3	0	0	0	22	22	0	0	0	0	0	7	0	14	0	68	1229
8:50 AM	3	8	0	0	0	21	19	0	0	0	0	0	9	0	20	0	80	1175
8:55 AM	2	7	0	0	0	16	12	0	0	0	0	0	6	0	14	0	57	1123

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	72	0	0	0	716	532	0	0	0	0	0	400	0	316	0	2040
Heavy Trucks	0	40	0		0	84	28		0	0	0		0	0	108		260
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

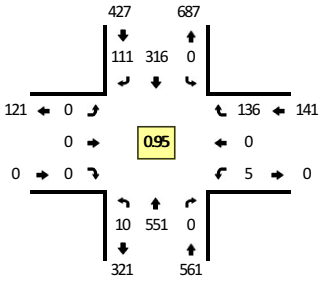
Type of peak hour being reported: Intersection Peak

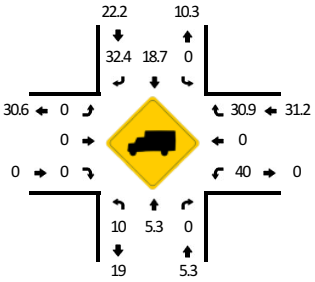
Method for determining peak hour: Total Entering Volume

LOCATION: Patterson Pass Rd -- I-580 WB Ramps
CITY/STATE: San Joaquin, CA

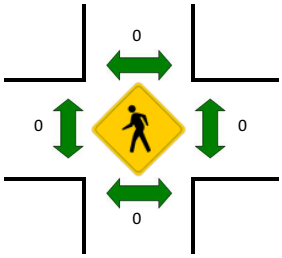
QC JOB #: 14993014
DATE: Thu, May 23 2019

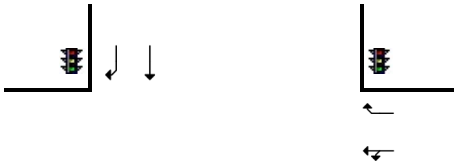
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

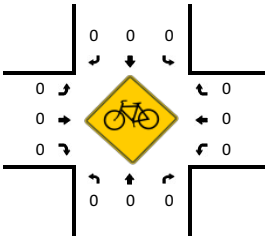


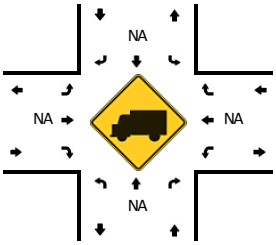


Quality Counts
DATA THAT DRIVES COMMUNITIES

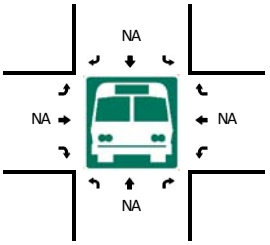












5-Min Count Period Beginning At	Patterson Pass Rd (Northbound)				Patterson Pass Rd (Southbound)				I-580 WB Ramps (Eastbound)				I-580 WB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	42	0	0	0	29	8	0	0	0	0	0	0	0	11	0	90	
4:05 PM	0	32	0	0	0	32	15	0	0	0	0	0	1	0	12	0	92	
4:10 PM	0	47	0	0	0	27	6	0	0	0	0	0	1	0	14	0	95	
4:15 PM	0	44	0	0	0	31	11	0	0	0	0	0	0	0	13	0	99	
4:20 PM	2	40	0	0	0	19	11	0	0	0	0	0	1	0	11	0	84	
4:25 PM	0	48	0	0	0	32	10	0	0	0	0	0	0	0	9	0	99	
4:30 PM	0	58	0	0	0	16	7	0	0	0	0	0	0	0	13	0	94	
4:35 PM	0	50	0	0	0	20	8	0	0	0	0	0	0	0	10	0	88	
4:40 PM	2	36	0	0	0	34	7	0	0	0	0	0	1	0	14	0	94	
4:45 PM	0	44	0	0	0	30	7	0	0	0	0	0	1	0	9	0	91	
4:50 PM	5	59	0	0	0	25	11	0	0	0	0	0	0	0	11	0	111	
4:55 PM	1	51	0	0	0	21	10	0	0	0	0	0	0	0	9	0	92	1129
5:00 PM	1	45	0	0	0	20	4	0	0	0	0	0	0	0	9	0	79	1118
5:05 PM	0	44	0	0	0	22	19	0	0	0	0	0	0	0	12	0	97	1123
5:10 PM	1	43	0	0	0	17	11	0	0	0	0	0	0	0	8	0	80	1108
5:15 PM	0	57	0	0	0	11	7	0	0	0	0	0	2	0	13	0	90	1099
5:20 PM	1	44	0	0	0	17	6	0	0	0	0	0	0	0	10	0	78	1093
5:25 PM	0	58	0	0	0	16	4	0	0	0	0	0	1	0	15	0	94	1088
5:30 PM	1	44	0	0	0	26	7	0	0	0	0	0	0	0	11	0	89	1083
5:35 PM	1	59	0	0	0	19	1	0	0	0	0	0	1	0	13	0	94	1089
5:40 PM	2	48	0	0	0	16	12	0	0	0	0	0	0	0	10	0	88	1083
5:45 PM	0	56	0	0	0	14	7	0	0	0	0	0	0	0	12	0	89	1081
5:50 PM	0	38	0	0	0	17	10	0	0	0	0	0	1	0	17	0	83	1053
5:55 PM	0	55	0	0	0	17	11	0	0	0	0	0	0	0	14	0	97	1058

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	556	0	0	0	356	100	0	0	0	0	0	8	0	136	0	1184
Heavy Trucks	4	40	0		0	92	24		0	0	0		0	0	24		184
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

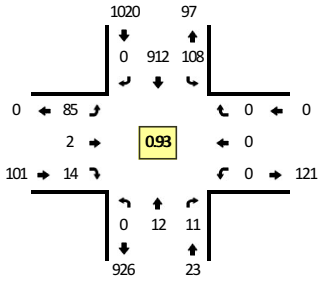
Type of peak hour being reported: Intersection Peak

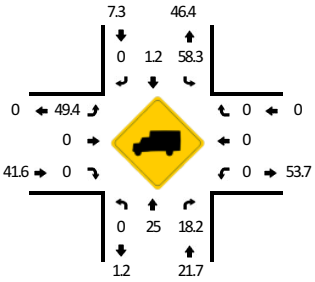
Method for determining peak hour: Total Entering Volume

LOCATION: Patterson Pass Rd -- I-580 EB Ramps
CITY/STATE: San Joaquin, CA

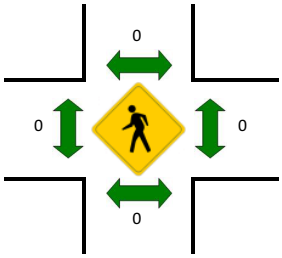
QC JOB #: 14993015
DATE: Thu, May 23 2019

Peak-Hour: 7:00 AM -- 8:00 AM
Peak 15-Min: 7:30 AM -- 7:45 AM

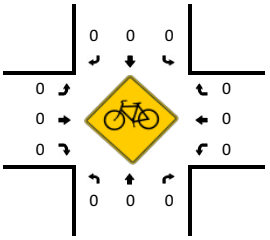


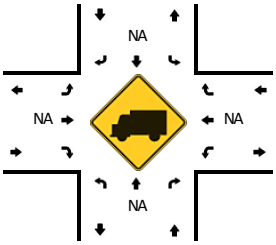


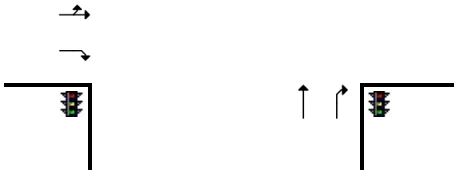
Quality Counts
DATA THAT DRIVES COMMUNITIES

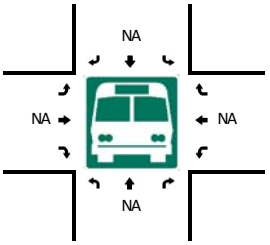












5-Min Count Period Beginning At	Patterson Pass Rd (Northbound)				Patterson Pass Rd (Southbound)				I-580 EB Ramps (Eastbound)				I-580 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	0	0	12	92	0	0	2	0	3	0	0	0	0	0	110	
7:05 AM	0	0	4	0	13	66	0	0	6	0	1	0	0	0	0	0	90	
7:10 AM	0	2	0	0	4	89	0	0	8	1	1	0	0	0	0	0	105	
7:15 AM	0	2	0	0	11	83	0	0	8	0	1	0	0	0	0	0	105	
7:20 AM	0	0	0	0	10	81	0	0	3	0	1	0	0	0	0	0	95	
7:25 AM	0	0	2	0	8	70	0	0	11	0	1	0	0	0	0	0	92	
7:30 AM	0	1	0	0	8	71	0	0	10	0	2	0	0	0	0	0	92	
7:35 AM	0	2	1	0	5	89	0	0	5	0	0	0	0	0	0	0	102	
7:40 AM	0	0	0	0	9	100	0	0	4	0	0	0	0	0	0	0	113	
7:45 AM	0	1	1	0	9	69	0	0	10	0	1	0	0	0	0	0	91	
7:50 AM	0	1	1	0	10	52	0	0	9	0	1	0	0	0	0	0	74	
7:55 AM	0	2	2	0	9	50	0	0	9	1	2	0	0	0	0	0	75	1144
8:00 AM	0	0	0	0	10	57	0	0	7	0	2	0	0	0	0	0	76	1110
8:05 AM	0	1	0	0	13	67	0	0	3	0	0	0	0	0	0	0	84	1104
8:10 AM	0	1	0	0	15	43	0	0	4	0	0	0	0	0	0	0	63	1062
8:15 AM	0	1	0	0	19	31	0	0	6	0	2	0	0	0	0	0	59	1016
8:20 AM	0	0	1	0	7	41	0	0	4	0	3	0	0	0	0	0	56	977
8:25 AM	0	2	1	0	10	27	0	0	6	0	1	0	0	0	0	0	47	932
8:30 AM	0	4	2	0	8	28	0	0	12	0	1	0	0	0	0	0	55	895
8:35 AM	0	1	1	0	20	19	0	0	4	0	2	0	0	0	0	0	47	840
8:40 AM	0	1	2	0	10	17	0	0	9	0	2	0	0	0	0	0	41	768
8:45 AM	0	1	2	0	19	13	0	0	3	0	1	0	0	0	0	0	39	716
8:50 AM	0	4	0	0	9	18	0	0	6	0	1	0	0	0	0	0	38	680
8:55 AM	0	3	3	0	13	10	0	0	6	1	1	0	0	0	0	0	37	642

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	12	4	0	88	1040	0	0	76	0	8	0	0	0	0	0	1228
Heavy Trucks	0	0	4		56	16	0		48	0	0		0	0	0		124
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

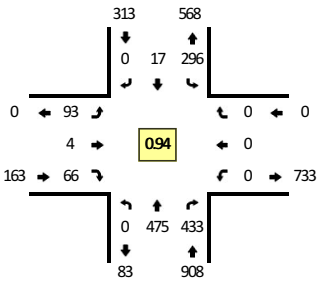
Type of peak hour being reported: Intersection Peak

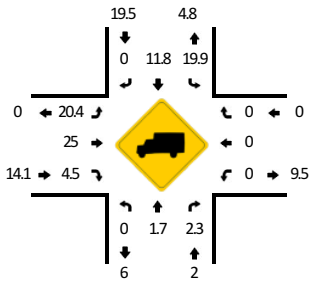
Method for determining peak hour: Total Entering Volume

LOCATION: Patterson Pass Rd -- I-580 EB Ramps
CITY/STATE: San Joaquin, CA

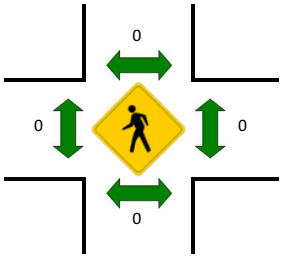
QC JOB #: 14993016
DATE: Thu, May 23 2019

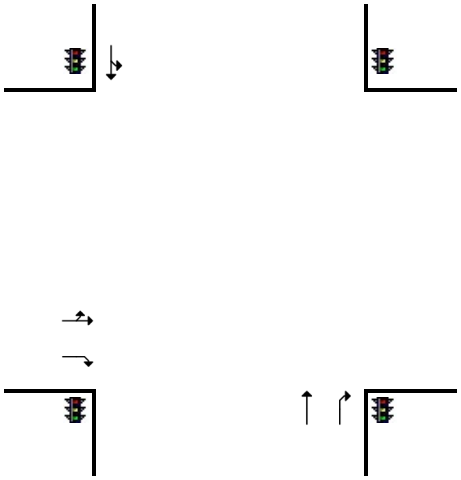
Peak-Hour: 4:10 PM -- 5:10 PM
Peak 15-Min: 4:10 PM -- 4:25 PM

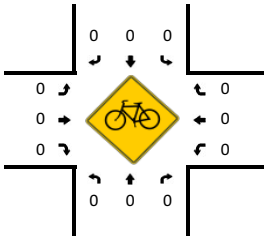


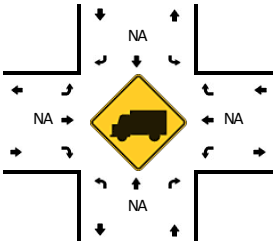


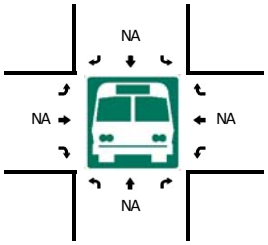
Quality Counts
DATA THAT DRIVES COMMUNITIES











5-Min Count Period Beginning At	Patterson Pass Rd (Northbound)				Patterson Pass Rd (Southbound)				I-580 EB Ramps (Eastbound)				I-580 EB Ramps (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	42	36	0	22	3	0	0	3	0	2	0	0	0	0	0	108	
4:05 PM	0	30	28	0	24	1	0	0	4	1	2	0	0	0	0	0	90	
4:10 PM	0	38	37	0	32	2	0	0	8	0	7	0	0	0	0	0	124	
4:15 PM	0	33	35	0	33	1	0	0	9	0	14	0	0	0	0	0	125	
4:20 PM	0	36	53	0	21	0	0	0	3	0	5	0	0	0	0	0	118	
4:25 PM	0	41	33	0	21	1	0	0	5	0	3	0	0	0	0	0	104	
4:30 PM	0	47	37	0	22	1	0	0	13	0	6	0	0	0	0	0	126	
4:35 PM	0	34	28	0	18	2	0	0	10	0	4	0	0	0	0	0	96	
4:40 PM	0	27	38	0	36	2	0	0	10	1	5	0	0	0	0	0	119	
4:45 PM	0	47	37	0	22	3	0	0	4	1	3	0	0	0	0	0	117	
4:50 PM	0	53	25	0	21	2	0	0	12	1	6	0	0	0	0	0	120	
4:55 PM	0	39	44	0	27	2	0	0	4	0	6	0	0	0	0	0	122	1369
5:00 PM	0	37	28	0	17	1	0	0	9	0	5	0	0	0	0	0	97	1358
5:05 PM	0	43	38	0	26	0	0	0	6	1	2	0	0	0	0	0	116	1384
5:10 PM	0	43	32	0	10	0	0	0	5	0	1	0	0	0	0	0	91	1351
5:15 PM	0	42	36	0	18	2	0	0	10	0	8	0	0	0	0	0	116	1342
5:20 PM	0	35	39	0	12	0	0	0	9	0	5	0	0	0	0	0	100	1324
5:25 PM	0	49	38	0	20	2	0	0	7	0	9	0	0	0	0	0	125	1345
5:30 PM	0	45	35	0	17	0	0	0	7	0	4	0	0	0	0	0	108	1327
5:35 PM	0	49	28	0	23	2	0	0	10	0	8	0	0	0	0	0	120	1351
5:40 PM	0	37	37	0	19	1	0	0	11	0	8	0	0	0	0	0	113	1345
5:45 PM	0	53	39	0	14	0	0	0	1	0	6	0	0	0	0	0	113	1341
5:50 PM	0	35	39	0	17	0	0	0	5	0	8	0	0	0	0	0	104	1325
5:55 PM	0	41	48	0	8	2	0	0	17	0	3	0	0	0	0	0	119	1322

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	428	500	0	344	12	0	0	80	0	104	0	0	0	0	0	1468
Heavy Trucks	0	4	4		60	0	0		20	0	4		0	0	0		92
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

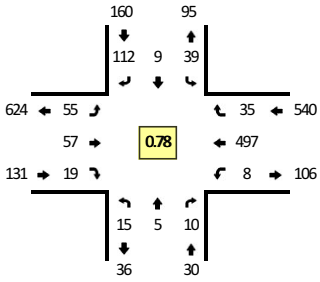
Type of peak hour being reported: Intersection Peak

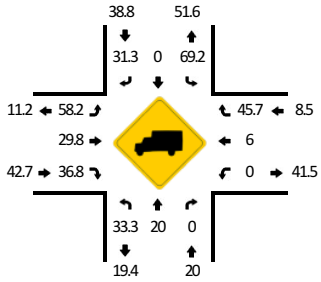
Method for determining peak hour: Total Entering Volume

LOCATION: Hansen Rd -- W Schulte Rd
CITY/STATE: San Joaquin, CA

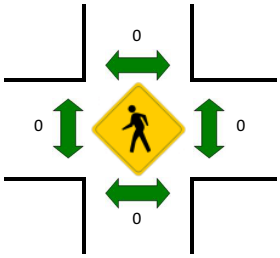
QC JOB #: 14993017
DATE: Thu, May 23 2019

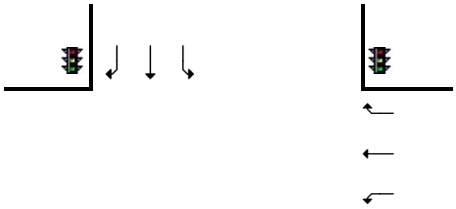
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:05 AM -- 7:20 AM

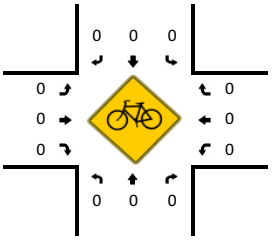


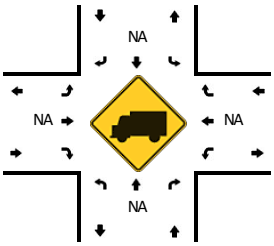


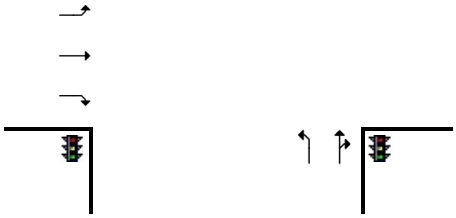
Quality Counts
DATA THAT DRIVES COMMUNITIES

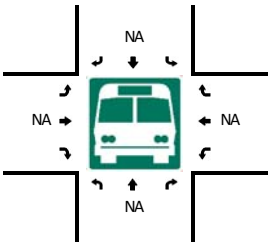












5-Min Count Period Beginning At	Hansen Rd (Northbound)				Hansen Rd (Southbound)				W Schulte Rd (Eastbound)				W Schulte Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	0	0	0	3	1	11	0	3	2	2	0	1	43	2	0	69	
7:05 AM	1	1	4	0	4	0	9	0	3	5	3	0	1	45	4	0	80	
7:10 AM	4	0	1	0	4	1	14	0	6	7	2	0	1	56	3	0	99	
7:15 AM	0	0	0	0	3	0	10	0	6	5	1	0	1	70	2	0	98	
7:20 AM	1	0	0	0	1	1	8	0	2	5	0	0	1	58	2	0	79	
7:25 AM	0	0	2	0	2	1	5	0	4	9	0	0	0	39	4	0	66	
7:30 AM	0	0	0	0	6	1	3	0	5	4	2	0	2	36	1	0	60	
7:35 AM	3	1	1	0	3	0	9	0	3	3	1	0	0	53	3	0	80	
7:40 AM	3	0	0	0	5	2	9	0	4	3	1	0	0	30	4	0	61	
7:45 AM	2	0	0	0	1	0	7	0	8	2	1	0	0	24	3	0	48	
7:50 AM	0	1	0	0	2	2	7	0	4	6	2	0	1	28	4	0	57	
7:55 AM	0	2	2	0	4	0	11	0	4	3	2	0	1	32	2	0	63	860
8:00 AM	1	0	0	0	4	1	20	0	6	5	4	0	0	26	3	0	70	861
8:05 AM	2	0	0	0	3	0	13	0	5	6	1	0	1	38	3	0	72	853
8:10 AM	10	0	2	0	2	0	15	0	4	4	0	0	1	23	2	0	63	817
8:15 AM	1	0	2	0	3	0	7	0	2	4	4	0	2	29	3	0	57	776
8:20 AM	2	0	0	0	2	2	13	0	4	2	2	0	0	24	8	0	59	756
8:25 AM	0	0	0	0	0	1	13	0	3	2	2	0	1	38	6	0	66	756
8:30 AM	0	0	0	0	3	1	8	0	7	1	3	0	1	37	2	0	63	759
8:35 AM	0	0	0	0	5	0	12	0	4	2	2	0	0	14	1	0	40	719
8:40 AM	3	0	1	0	6	0	12	0	4	6	4	0	2	25	9	0	72	730
8:45 AM	3	0	1	0	4	0	11	0	4	2	2	0	1	18	4	0	50	732
8:50 AM	5	0	0	0	1	0	8	0	6	9	3	0	0	16	4	0	52	727
8:55 AM	0	0	0	0	4	0	6	0	5	5	6	0	0	24	2	0	52	716

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	4	20	0	44	4	132	0	60	68	24	0	12	684	36	0	1108
Heavy Trucks	4	4	0		36	0	28		36	28	12		0	20	12		180
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

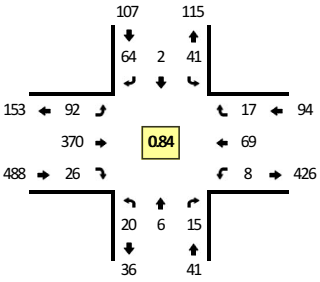
Type of peak hour being reported: Intersection Peak

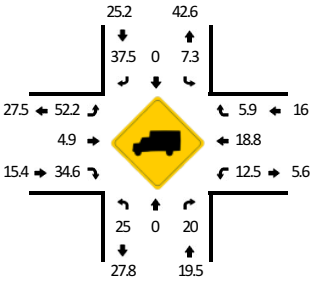
Method for determining peak hour: Total Entering Volume

LOCATION: Hansen Rd -- W Schulte Rd
CITY/STATE: San Joaquin, CA

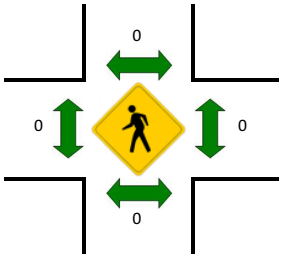
QC JOB #: 14993018
DATE: Thu, May 23 2019

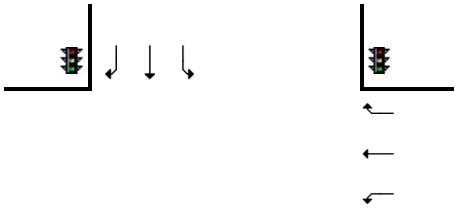
Peak-Hour: 4:00 PM -- 5:00 PM
Peak 15-Min: 4:30 PM -- 4:45 PM

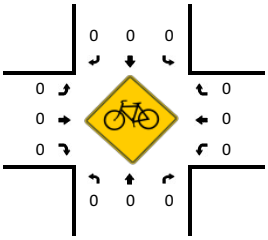


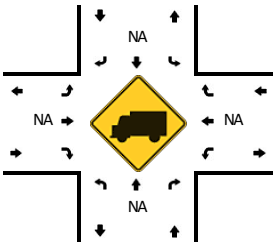


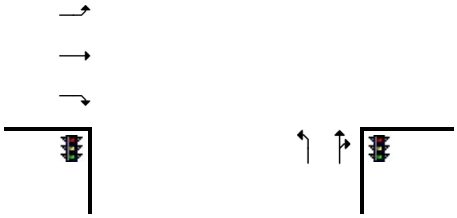
Quality Counts
DATA THAT DRIVES COMMUNITIES

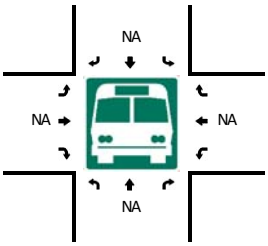












5-Min Count Period Beginning At	Hansen Rd (Northbound)				Hansen Rd (Southbound)				W Schulte Rd (Eastbound)				W Schulte Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	0	0	5	0	8	0	11	36	0	0	1	5	2	0	69	
4:05 PM	4	0	0	0	3	0	7	0	10	30	0	0	1	2	0	0	57	
4:10 PM	1	2	1	0	3	0	7	0	3	25	6	0	0	6	2	0	56	
4:15 PM	3	0	1	0	4	0	5	0	6	24	3	0	0	5	2	0	53	
4:20 PM	4	0	1	0	4	1	7	0	5	14	0	0	1	8	3	0	48	
4:25 PM	1	0	0	0	3	0	8	0	4	28	0	0	1	3	2	0	50	
4:30 PM	3	1	4	0	1	0	4	0	9	32	1	0	1	11	1	0	68	
4:35 PM	0	0	1	0	4	0	6	0	10	41	3	0	0	5	1	0	71	
4:40 PM	1	1	0	0	3	1	2	0	15	43	2	0	2	6	1	0	77	
4:45 PM	1	1	3	0	7	0	3	0	8	26	7	0	0	8	1	0	65	
4:50 PM	1	0	2	0	1	0	5	0	5	41	2	0	0	6	0	0	63	
4:55 PM	1	0	2	0	3	0	2	0	6	30	2	0	1	4	2	0	53	730
5:00 PM	1	0	2	0	0	0	9	0	12	22	2	0	1	6	1	0	56	717
5:05 PM	4	1	1	0	0	0	4	0	8	23	0	0	3	7	1	0	52	712
5:10 PM	5	0	1	0	1	0	7	0	6	20	2	0	0	2	3	0	47	703
5:15 PM	1	1	1	0	1	0	1	0	4	32	2	0	1	4	1	0	49	699
5:20 PM	2	0	0	0	1	0	3	0	4	29	1	0	0	6	1	0	47	698
5:25 PM	0	2	1	0	1	0	3	0	4	25	2	0	0	9	0	0	47	695
5:30 PM	1	0	1	0	0	0	11	0	6	34	1	0	0	3	0	0	57	684
5:35 PM	0	1	1	0	5	0	6	0	7	23	3	0	2	5	1	0	54	667
5:40 PM	1	0	1	0	3	0	13	0	5	26	2	0	5	6	2	0	64	654
5:45 PM	1	0	1	0	1	1	15	0	8	29	6	0	0	9	3	0	74	663
5:50 PM	2	1	0	0	2	0	15	0	8	17	1	0	1	6	5	0	58	658
5:55 PM	2	0	2	0	1	0	8	0	14	35	2	0	0	3	0	0	67	672

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	8	20	0	32	4	48	0	136	464	24	0	12	88	12	0	864
Heavy Trucks	4	0	4		0	0	24		56	20	4		4	12	0		128
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

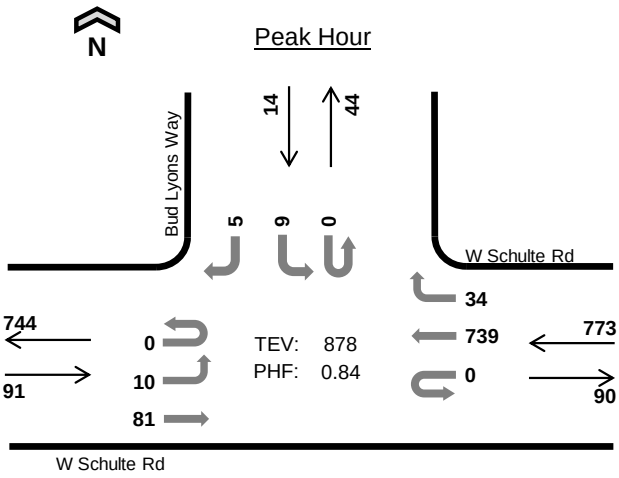
Comments:

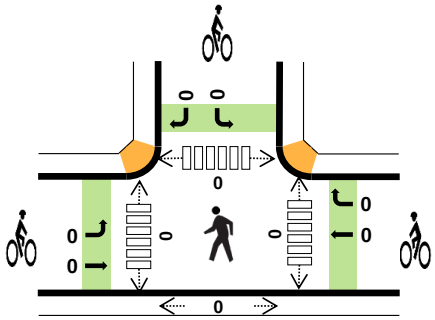
Report generated on 6/4/2019 3:33 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Bud Lyons Way
W Schulte Rd

Date: 11-19-2020
Count Period: 5:00 AM to 8:00 AM
Peak Hour: 5:15 AM to 6:15 AM





	HV %:	PHF
EB	14.3%	0.78
WB	2.5%	0.85
NB	-	-
SB	21.4%	0.70
TOTAL	4.0%	0.84

Three-Hour Count Summaries

Interval Start		W Schulte Rd Eastbound				W Schulte Rd Westbound				n/a Northbound				Bud Lyons Way Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:15 AM		0	1	15	0	0	0	184	6	0	0	0	0	0	0	0	4	210	0
5:30 AM		0	0	18	0	0	0	182	8	0	0	0	0	0	0	0	1	209	0
5:45 AM		0	5	24	0	0	0	217	11	0	0	0	0	0	4	0	0	261	0
6:00 AM		0	4	24	0	0	0	156	9	0	0	0	0	0	5	0	0	198	878
Peak Hour	All	0	10	81	0	0	0	739	34	0	0	0	0	0	9	0	5	878	0
	HV	0	3	10	0	0	0	13	6	0	0	0	0	0	1	0	2	35	0
	HV%	-	30%	12%	-	-	-	2%	18%	-	-	-	-	-	11%	-	40%	4%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
5:15 AM	1	5	0	2	*8*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 AM	2	5	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
5:45 AM	4	3	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
6:00 AM	6	6	0	1	*13*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hour	13	19	0	3	*35*	0	0	0	0	*0*	0	0	0	0	*0*

Three-Hour Count Summaries

Interval Start	W Schulte Rd Eastbound				W Schulte Rd Westbound				n/a Northbound				Bud Lyons Way Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 AM	0	2	1	0	0	0	120	3	0	0	0	0	0	0	0	4	130	0
5:15 AM	**0**	**1**	**15**	**0**	**0**	**0**	**184**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**210**	0
5:30 AM	**0**	**0**	**18**	**0**	**0**	**0**	**182**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**209**	0
5:45 AM	**0**	**5**	**24**	**0**	**0**	**0**	**217**	**11**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**261**	810
6:00 AM	**0**	**4**	**24**	**0**	**0**	**0**	**156**	**9**	**0**	**0**	**0**	**0**	**0**	**5**	**0**	**0**	**198**	**878**
6:15 AM	0	2	13	0	0	0	156	12	0	0	0	0	0	2	0	4	189	857
6:30 AM	0	1	17	0	0	0	128	13	0	0	0	0	0	4	0	1	164	812
6:45 AM	0	2	16	0	0	0	129	16	0	0	0	0	0	1	0	3	167	718
7:00 AM	0	3	14	0	0	0	87	8	0	0	0	0	0	3	0	3	118	638
7:15 AM	0	3	17	0	0	0	78	19	0	0	0	0	0	0	0	2	119	568
7:30 AM	0	0	10	0	0	0	77	5	0	0	0	0	0	2	0	3	97	501
7:45 AM	0	2	19	0	0	0	70	11	0	0	0	0	0	2	0	3	107	441
Count Total	0	25	188	0	0	0	1,584	121	0	0	0	0	0	23	0	28	1,969	0
Peak Hour All	**0**	**10**	**81**	**0**	**0**	**0**	**739**	**34**	**0**	**0**	**0**	**0**	**0**	**9**	**0**	**5**	**878**	**0**
Peak Hour HV	**0**	**3**	**10**	**0**	**0**	**0**	**13**	**6**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**35**	**0**
Peak Hour HV%	**-**	**30%**	**12%**	**-**	**-**	**-**	**2%**	**18%**	**-**	**-**	**-**	**-**	**-**	**11%**	**-**	**40%**	**4%**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
5:00 AM	3	2	0	4	*9*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 AM	**1**	**5**	**0**	**2**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 AM	**2**	**5**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:45 AM	**4**	**3**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
6:00 AM	**6**	**6**	**0**	**1**	***13***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
6:15 AM	5	4	0	2	*11*	0	0	0	0	*0*	0	0	0	0	*0*
6:30 AM	1	9	0	2	*12*	0	0	0	0	*0*	0	0	0	0	*0*
6:45 AM	1	9	0	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
7:00 AM	3	4	0	4	*11*	0	0	0	0	*0*	0	0	0	0	*0*
7:15 AM	6	6	0	2	*14*	0	0	0	0	*0*	0	0	0	0	*0*
7:30 AM	2	2	0	5	*9*	0	0	0	0	*0*	0	0	0	0	*0*
7:45 AM	5	5	0	3	*13*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	39	60	0	28	*127*	0	0	0	0	*0*	0	0	0	0	*0*
Peak Hr	**13**	**19**	**0**	**3**	***35***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	W Schulte Rd				W Schulte Rd				n/a				Bud Lyons Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
5:00 AM	0	2	1	0	0	0	2	0	0	0	0	0	0	0	0	4	9	0
5:15 AM	**0**	**0**	**1**	**0**	**0**	**0**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	0
5:30 AM	**0**	**0**	**2**	**0**	**0**	**0**	**4**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	0
5:45 AM	**0**	**0**	**4**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	31
6:00 AM	**0**	**3**	**3**	**0**	**0**	**0**	**2**	**4**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**13**	**35**
6:15 AM	0	2	3	0	0	0	1	3	0	0	0	0	0	0	0	2	11	38
6:30 AM	0	0	1	0	0	0	1	8	0	0	0	0	0	1	0	1	12	43
6:45 AM	0	1	0	0	0	0	5	4	0	0	0	0	0	0	0	3	13	49
7:00 AM	0	2	1	0	0	0	2	2	0	0	0	0	0	1	0	3	11	47
7:15 AM	0	1	5	0	0	0	2	4	0	0	0	0	0	0	0	2	14	50
7:30 AM	0	0	2	0	0	0	2	0	0	0	0	0	0	2	0	3	9	47
7:45 AM	0	1	4	0	0	0	4	1	0	0	0	0	0	1	0	2	13	47
Count Total	0	12	27	0	0	0	32	28	0	0	0	0	0	6	0	22	127	0
Peak Hour	**0**	**3**	**10**	**0**	**0**	**0**	**13**	**6**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**2**	**35**	**0**

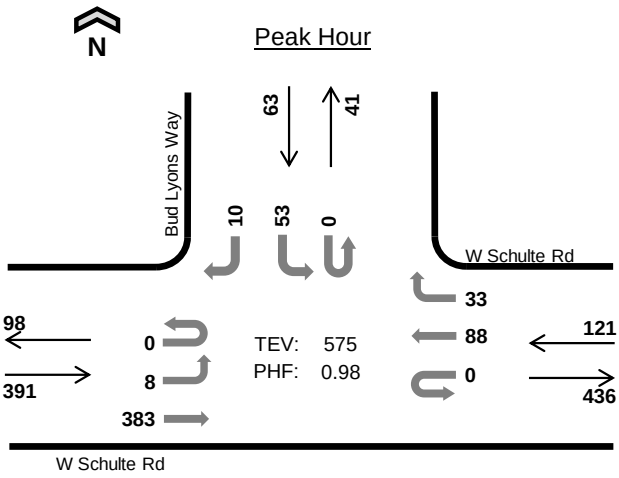
Three-Hour Count Summaries - Bikes

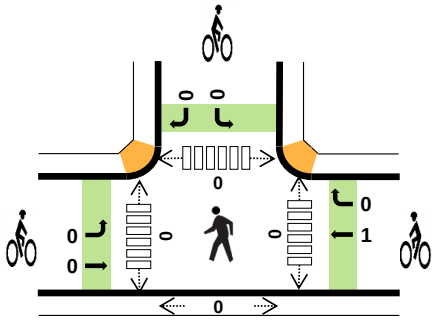
Interval Start	W Schulte Rd			W Schulte Rd			n/a			Bud Lyons Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
5:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:30 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
5:45 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	0
6:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 AM	0	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	0
7:30 AM	0	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	0
Count Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Peak Hour	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

Bud Lyons Way
W Schulte Rd

Date: 11-19-2020
Count Period: 3:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM





	HV %:	PHF
EB	3.8%	0.88
WB	10.7%	0.82
NB	-	-
SB	9.5%	0.56
TOTAL	5.9%	0.98

Three-Hour Count Summaries

Interval Start		W Schulte Rd Eastbound				W Schulte Rd Westbound				n/a Northbound				Bud Lyons Way Southbound				15-min Total	Rolling One Hour
		UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
4:45 PM		0	1	84	0	0	0	20	7	0	0	0	0	0	26	0	2	140	0
5:00 PM		0	2	93	0	0	0	26	11	0	0	0	0	0	10	0	1	143	0
5:15 PM		0	2	98	0	0	0	23	11	0	0	0	0	0	11	0	2	147	0
5:30 PM		0	3	108	0	0	0	19	4	0	0	0	0	0	6	0	5	145	575
Peak Hour	All	0	8	383	0	0	0	88	33	0	0	0	0	0	53	0	10	575	0
	HV	0	7	8	0	0	0	8	5	0	0	0	0	0	0	0	6	34	0
	HV%	-	88%	2%	-	-	-	9%	15%	-	-	-	-	-	0%	-	60%	6%	0

Note: For all three-hour count summary, see next page.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
4:45 PM	3	4	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
5:00 PM	3	4	0	0	*7*	0	0	0	0	*0*	0	0	0	0	*0*
5:15 PM	4	2	0	2	*8*	0	0	0	0	*0*	0	0	0	0	*0*
5:30 PM	5	3	0	4	*12*	0	1	0	0	*1*	0	0	0	0	*0*
Peak Hour	15	13	0	6	*34*	0	1	0	0	*1*	0	0	0	0	*0*

Three-Hour Count Summaries

Interval Start	W Schulte Rd Eastbound				W Schulte Rd Westbound				n/a Northbound				Bud Lyons Way Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	2	87	0	0	0	23	1	0	0	0	0	0	4	0	8	125	0
3:15 PM	0	3	86	0	0	0	26	7	0	0	0	0	0	6	0	5	133	0
3:30 PM	0	2	119	0	0	0	15	3	0	0	0	0	0	6	0	2	147	0
3:45 PM	0	3	91	0	0	0	17	3	0	0	0	0	0	10	0	5	129	534
4:00 PM	0	2	82	0	0	0	15	1	0	0	0	0	0	3	0	2	105	514
4:15 PM	0	2	93	0	0	0	14	3	0	0	0	0	0	6	0	1	119	500
4:30 PM	0	1	93	0	0	0	13	4	0	0	0	0	0	19	0	3	133	486
4:45 PM	**0**	**1**	**84**	**0**	**0**	**0**	**20**	**7**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**2**	**140**	497
5:00 PM	**0**	**2**	**93**	**0**	**0**	**0**	**26**	**11**	**0**	**0**	**0**	**0**	**0**	**10**	**0**	**1**	**143**	535
5:15 PM	**0**	**2**	**98**	**0**	**0**	**0**	**23**	**11**	**0**	**0**	**0**	**0**	**0**	**11**	**0**	**2**	**147**	563
5:30 PM	**0**	**3**	**108**	**0**	**0**	**0**	**19**	**4**	**0**	**0**	**0**	**0**	**0**	**6**	**0**	**5**	**145**	**575**
5:45 PM	0	1	107	0	0	0	16	4	0	0	0	0	0	4	0	2	134	569
Count Total	0	24	1,141	0	0	0	227	59	0	0	0	0	0	111	0	38	1,600	0
Peak Hour All	**0**	**8**	**383**	**0**	**0**	**0**	**88**	**33**	**0**	**0**	**0**	**0**	**0**	**53**	**0**	**10**	**575**	**0**
Peak Hour HV	**0**	**7**	**8**	**0**	**0**	**0**	**8**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**34**	**0**
Peak Hour HV%	**-**	**88%**	**2%**	**-**	**-**	**-**	**9%**	**15%**	**-**	**-**	**-**	**-**	**-**	**0%**	**-**	**60%**	**6%**	**0**

Note: Three-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
3:00 PM	6	2	0	5	*13*	0	1	0	0	*1*	0	0	0	0	*0*
3:15 PM	3	6	0	1	*10*	0	0	0	0	*0*	0	0	0	0	*0*
3:30 PM	4	4	0	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
3:45 PM	6	3	0	3	*12*	0	0	0	0	*0*	0	0	0	0	*0*
4:00 PM	4	3	0	1	*8*	0	0	0	0	*0*	0	0	0	0	*0*
4:15 PM	6	2	0	0	*8*	0	0	0	0	*0*	0	0	0	0	*0*
4:30 PM	0	2	0	4	*6*	0	0	0	0	*0*	0	0	0	0	*0*
4:45 PM	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**3**	**4**	**0**	**0**	***7***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:15 PM	**4**	**2**	**0**	**2**	***8***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:30 PM	**5**	**3**	**0**	**4**	***12***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***
5:45 PM	1	3	0	1	*5*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	45	38	0	21	*104*	0	2	0	0	*2*	0	0	0	0	*0*
Peak Hr	**15**	**13**	**0**	**6**	***34***	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***

Three-Hour Count Summaries - Heavy Vehicles

Interval Start	W Schulte Rd				W Schulte Rd				n/a				Bud Lyons Way				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
3:00 PM	0	2	4	0	0	0	2	0	0	0	0	0	0	0	0	5	13	0
3:15 PM	0	1	2	0	0	0	4	2	0	0	0	0	0	0	0	1	10	0
3:30 PM	0	2	2	0	0	0	3	1	0	0	0	0	0	0	0	0	8	0
3:45 PM	0	3	3	0	0	0	2	1	0	0	0	0	0	0	0	3	12	43
4:00 PM	0	1	3	0	0	0	2	1	0	0	0	0	0	0	0	1	8	38
4:15 PM	0	2	4	0	0	0	1	1	0	0	0	0	0	0	0	0	8	36
4:30 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	0	3	6	34
4:45 PM	**0**	**1**	**2**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	29
5:00 PM	**0**	**1**	**2**	**0**	**0**	**0**	**2**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**7**	28
5:15 PM	**0**	**2**	**2**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**8**	28
5:30 PM	**0**	**3**	**2**	**0**	**0**	**0**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**12**	**34**
5:45 PM	0	1	0	0	0	0	1	2	0	0	0	0	0	0	0	1	5	32
Count Total	0	19	26	0	0	0	24	14	0	0	0	0	0	1	0	20	104	0
Peak Hour	**0**	**7**	**8**	**0**	**0**	**0**	**8**	**5**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**6**	**34**	**0**

Three-Hour Count Summaries - Bikes

Interval Start	W Schulte Rd			W Schulte Rd			n/a			Bud Lyons Way			15-min Total	Rolling One Hour
	Eastbound			Westbound			Northbound			Southbound				
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT		
3:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:00 PM	0	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	0
4:30 PM	0	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**	0
5:00 PM	**0**	**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**	**0**	**0**	0
5:30 PM	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Count Total	0	0	0	0	2	0	0	0	0	0	0	0	2	0
Peak Hour	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**

Note: U-Turn volumes for bikes are included in Left-Turn, if any.

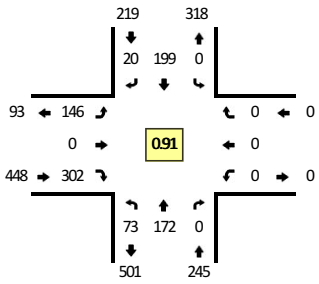
Type of peak hour being reported: Intersection Peak

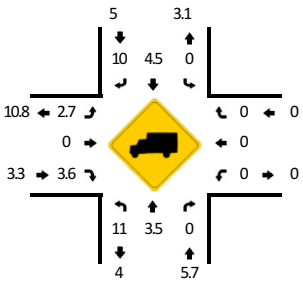
Method for determining peak hour: Total Entering Volume

LOCATION: S Lammers Rd -- W Schulte Rd (N)
CITY/STATE: San Joaquin, CA

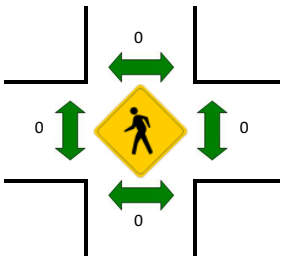
QC JOB #: 14993032
DATE: Thu, May 23 2019

Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

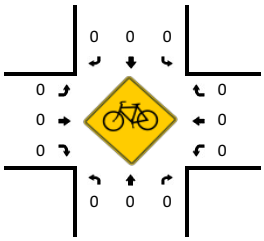


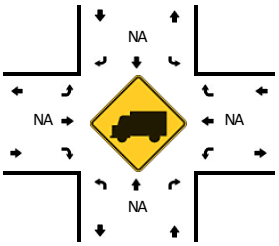


Quality Counts
DATA THAT DRIVES COMMUNITIES

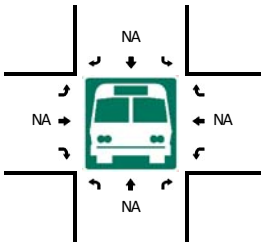












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				W Schulte Rd (N) (Eastbound)				W Schulte Rd (N) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	2	7	0	0	0	23	2	0	21	0	19	0	0	0	0	0	74	
4:05 PM	3	18	0	0	0	15	1	0	21	0	22	0	0	0	0	0	80	
4:10 PM	7	17	0	0	0	17	1	0	15	0	18	0	0	0	0	0	75	
4:15 PM	5	10	0	0	0	23	1	0	11	0	22	0	0	0	0	0	72	
4:20 PM	4	17	0	0	0	23	2	0	7	0	25	0	0	0	0	0	78	
4:25 PM	6	12	0	0	0	17	5	0	8	0	14	0	0	0	0	0	62	
4:30 PM	7	10	0	0	0	12	1	0	11	0	21	0	0	0	0	0	62	
4:35 PM	8	16	0	0	0	18	2	0	14	0	36	0	0	0	0	0	94	
4:40 PM	6	18	0	0	0	11	0	0	9	0	32	0	0	0	0	0	76	
4:45 PM	5	17	0	0	0	13	0	0	14	0	31	0	0	0	0	0	80	
4:50 PM	5	14	0	0	0	14	3	0	12	0	23	0	0	0	0	0	71	
4:55 PM	8	12	0	0	0	22	0	0	13	0	32	0	0	0	0	0	87	911
5:00 PM	9	11	0	0	0	14	4	0	11	0	26	0	0	0	0	0	75	912
5:05 PM	3	8	0	0	0	16	1	0	9	0	23	0	0	0	0	0	60	892
5:10 PM	4	13	0	0	0	19	3	0	11	0	12	0	0	0	0	0	62	879
5:15 PM	3	10	0	0	0	23	2	0	12	0	17	0	0	0	0	0	67	874
5:20 PM	6	15	0	0	0	14	3	0	12	0	22	0	0	0	0	0	72	868
5:25 PM	4	16	0	0	0	17	3	0	11	0	18	0	0	0	0	0	69	875
5:30 PM	6	13	0	0	0	26	3	0	8	0	26	0	0	0	0	0	82	895
5:35 PM	6	12	0	0	0	9	2	1	14	0	25	0	0	0	0	0	69	870
5:40 PM	3	17	0	0	0	17	5	0	15	0	22	0	0	0	0	0	79	873
5:45 PM	9	13	0	0	0	19	6	0	14	0	17	0	0	0	0	0	78	871
5:50 PM	3	14	0	0	0	21	3	0	17	0	15	0	0	0	0	0	73	873
5:55 PM	2	17	0	0	0	23	4	0	11	0	20	0	0	0	0	0	77	863

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	76	204	0	0	0	168	8	0	148	0	396	0	0	0	0	0	1000
Heavy Trucks	12	0	0		0	8	4		4	0	8		0	0	0		36
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

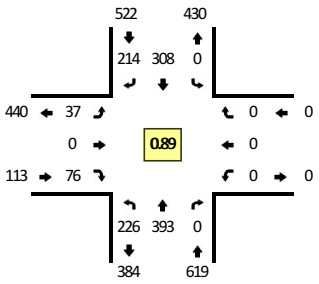
Type of peak hour being reported: Intersection Peak

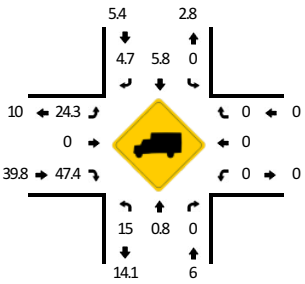
Method for determining peak hour: Total Entering Volume

LOCATION: S Lammers Rd -- W Schulte Rd (N)
CITY/STATE: San Joaquin, CA

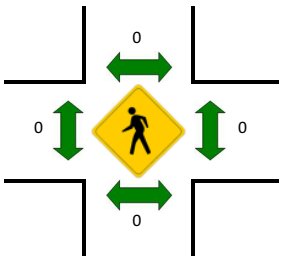
QC JOB #: 14993031
DATE: Thu, May 23 2019

Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

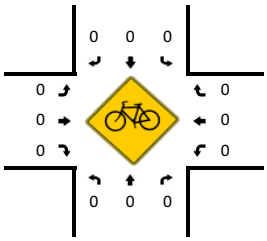


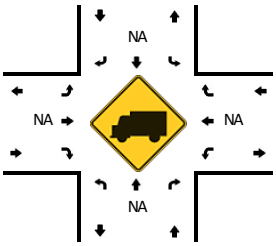


Quality Counts
DATA THAT DRIVES COMMUNITIES

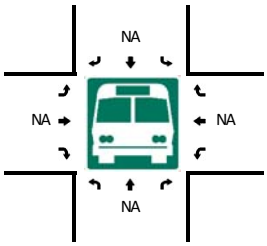












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				W Schulte Rd (N) (Eastbound)				W Schulte Rd (N) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	32	4	0	0	0	4	30	0	5	0	3	0	0	0	0	0	78	
7:05 AM	26	6	0	0	0	7	34	0	15	0	4	0	0	0	0	0	92	
7:10 AM	39	9	0	0	0	11	28	0	17	0	4	0	0	0	0	0	108	
7:15 AM	40	8	0	0	0	6	32	0	3	0	4	0	0	0	0	0	93	
7:20 AM	23	9	0	0	0	10	23	0	2	0	6	0	0	0	0	0	73	
7:25 AM	26	20	0	0	0	17	22	0	4	0	5	0	0	0	0	0	94	
7:30 AM	24	16	0	0	0	8	30	0	1	0	10	0	0	0	0	0	89	
7:35 AM	13	31	0	0	0	17	23	0	4	0	5	0	0	0	0	0	93	
7:40 AM	14	23	0	0	0	27	20	0	8	0	7	0	0	0	0	0	99	
7:45 AM	20	36	0	0	0	31	23	0	1	0	4	0	0	0	0	0	115	
7:50 AM	9	52	0	0	0	30	15	0	1	0	4	0	0	0	0	0	111	
7:55 AM	15	38	0	0	0	34	19	0	3	0	7	0	0	0	0	0	116	1161
8:00 AM	17	44	0	0	0	30	14	0	2	0	6	0	0	0	0	0	113	1196
8:05 AM	19	41	0	0	0	28	18	0	6	0	10	0	0	0	0	0	122	1226
8:10 AM	18	49	0	0	0	25	12	0	0	0	7	0	0	0	0	0	111	1229
8:15 AM	24	29	0	0	0	27	7	0	5	0	5	0	0	0	0	0	97	1233
8:20 AM	27	14	0	0	0	34	11	0	2	0	6	0	0	0	0	0	94	1254
8:25 AM	30	15	0	0	0	14	15	0	0	0	4	0	0	0	0	0	78	1238
8:30 AM	18	11	0	0	0	6	7	0	0	0	3	0	0	0	0	0	45	1194
8:35 AM	17	3	0	0	0	14	2	0	0	0	6	0	0	0	0	0	42	1143
8:40 AM	26	10	0	0	0	11	12	0	3	0	6	0	0	0	0	0	68	1112
8:45 AM	16	7	0	0	0	8	7	0	2	0	8	0	0	0	0	0	48	1045
8:50 AM	17	12	0	0	0	8	6	0	3	0	8	0	0	0	0	0	54	988
8:55 AM	10	8	0	0	0	15	6	0	4	0	6	0	0	0	0	0	49	921

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	204	492	0	0	0	368	204	0	44	0	92	0	0	0	0	0	1404
Heavy Trucks	28	0	0		0	12	8		4	0	44		0	0	0		96
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

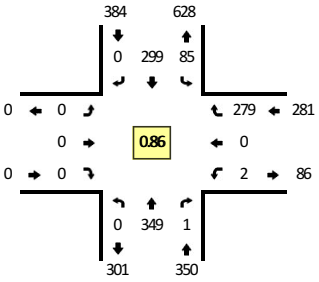
Type of peak hour being reported: Intersection Peak

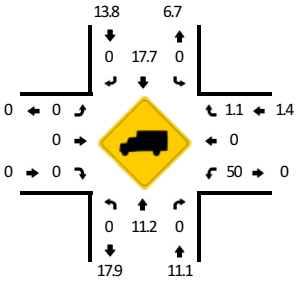
Method for determining peak hour: Total Entering Volume

LOCATION: S Lammers Rd -- W Schulte Rd (S)
CITY/STATE: San Joaquin, CA

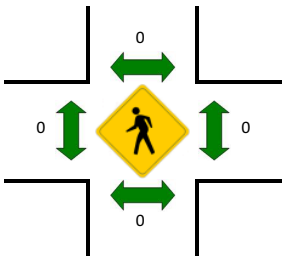
QC JOB #: 14993033
DATE: Thu, May 23 2019

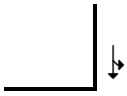
Peak-Hour: 7:25 AM -- 8:25 AM
Peak 15-Min: 7:45 AM -- 8:00 AM

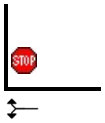


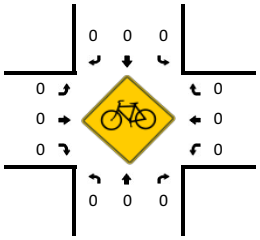


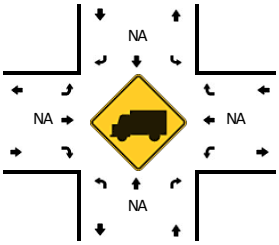
Quality Counts
DATA THAT DRIVES COMMUNITIES

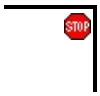


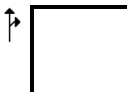


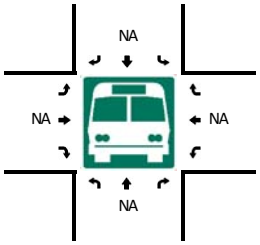












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				W Schulte Rd (S) (Eastbound)				W Schulte Rd (S) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	16	0	0	0	8	0	0	0	0	0	0	1	0	18	0	43	
7:05 AM	0	14	0	0	5	8	0	0	0	0	0	0	0	0	19	0	46	
7:10 AM	0	29	0	0	0	13	0	0	0	0	0	0	0	0	23	0	65	
7:15 AM	0	26	0	0	1	10	0	0	0	0	0	0	0	0	25	0	62	
7:20 AM	0	19	0	0	1	16	0	0	0	0	0	0	0	0	13	0	49	
7:25 AM	0	22	0	0	2	17	0	0	0	0	0	0	0	0	24	0	65	
7:30 AM	0	25	0	0	1	16	0	0	0	0	0	0	0	0	13	0	55	
7:35 AM	0	34	0	0	5	20	0	0	0	0	0	0	0	0	21	0	80	
7:40 AM	0	27	0	0	2	30	0	0	0	0	0	0	0	0	26	0	85	
7:45 AM	0	37	0	0	9	29	0	0	0	0	0	0	0	0	27	0	102	
7:50 AM	0	27	0	0	6	27	0	0	0	0	0	0	0	0	34	0	94	
7:55 AM	0	32	0	0	9	30	0	0	0	0	0	0	0	0	28	0	99	845
8:00 AM	0	29	1	0	7	29	0	0	0	0	0	0	0	0	28	0	94	896
8:05 AM	0	31	0	0	12	24	0	0	0	0	0	0	0	0	29	0	96	946
8:10 AM	0	37	0	0	12	26	0	0	0	0	0	0	0	0	25	0	100	981
8:15 AM	0	26	0	0	10	16	0	0	0	0	0	0	2	0	12	0	66	985
8:20 AM	0	22	0	0	10	35	0	0	0	0	0	0	0	0	12	0	79	1015
8:25 AM	0	21	0	0	3	16	0	0	0	0	0	0	0	0	11	0	51	1001
8:30 AM	0	18	0	0	0	10	0	0	0	0	0	0	0	0	7	0	35	981
8:35 AM	0	27	0	0	3	14	0	0	0	0	0	0	0	0	8	0	52	953
8:40 AM	0	24	0	0	2	18	0	0	0	0	0	0	0	0	3	0	47	915
8:45 AM	0	17	0	0	3	14	0	0	0	0	0	0	0	0	4	0	38	851
8:50 AM	0	22	0	0	4	12	0	0	0	0	0	0	0	0	5	0	43	800
8:55 AM	0	15	0	0	2	20	0	0	0	0	0	0	0	0	6	0	43	744

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	384	0	0	96	344	0	0	0	0	0	0	0	0	356	0	1180
Heavy Trucks	0	28	0		0	28	0		0	0	0		0	0	4		60
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:34 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

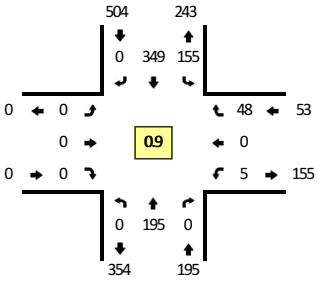
Type of peak hour being reported: Intersection Peak

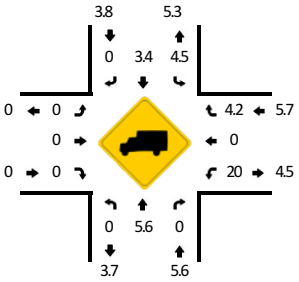
Method for determining peak hour: Total Entering Volume

LOCATION: S Lammers Rd -- W Schulte Rd (S)
CITY/STATE: San Joaquin, CA

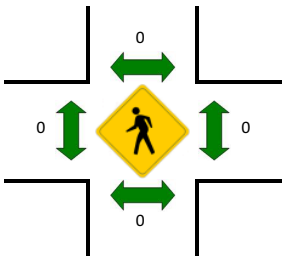
QC JOB #: 14993034
DATE: Thu, May 23 2019

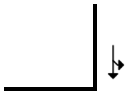
Peak-Hour: 4:05 PM -- 5:05 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

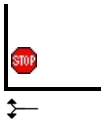


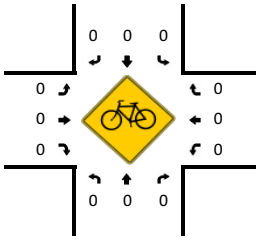


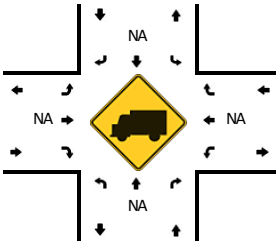
Quality Counts
DATA THAT DRIVES COMMUNITIES

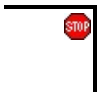


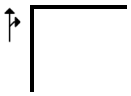


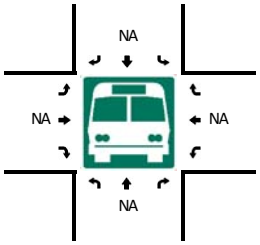












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				W Schulte Rd (S) (Eastbound)				W Schulte Rd (S) (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	6	0	0	15	23	0	0	0	0	0	0	0	0	4	0	48	
4:05 PM	0	20	0	0	13	29	0	0	0	0	0	0	0	0	3	0	65	
4:10 PM	0	18	0	0	12	22	0	0	0	0	0	0	0	0	2	0	54	
4:15 PM	0	12	0	0	12	31	0	0	0	0	0	0	1	0	5	0	61	
4:20 PM	0	17	0	0	18	29	0	0	0	0	0	0	1	0	3	0	68	
4:25 PM	0	12	0	0	10	27	0	0	0	0	0	0	0	0	4	0	53	
4:30 PM	0	16	0	0	12	21	0	0	0	0	0	0	1	0	3	0	53	
4:35 PM	0	20	0	0	7	44	0	0	0	0	0	0	1	0	5	0	77	
4:40 PM	0	22	0	0	17	29	0	0	0	0	0	0	0	0	4	0	72	
4:45 PM	0	17	0	0	14	27	0	0	0	0	0	0	0	0	3	0	61	
4:50 PM	0	17	0	0	11	29	0	0	0	0	0	0	1	0	6	0	64	
4:55 PM	0	9	0	0	17	33	0	0	0	0	0	0	0	0	5	0	64	740
5:00 PM	0	15	0	0	12	28	0	0	0	0	0	0	0	0	5	0	60	752
5:05 PM	0	9	2	0	13	28	0	0	0	0	0	0	0	0	3	0	55	742
5:10 PM	0	14	0	0	12	20	0	0	0	0	0	0	0	0	3	0	49	737
5:15 PM	0	13	0	0	10	31	0	0	0	0	0	0	0	0	1	0	55	731
5:20 PM	0	17	0	0	12	20	0	0	0	0	0	0	0	0	3	0	52	715
5:25 PM	0	16	0	0	11	27	0	0	0	0	0	0	1	0	0	0	55	717
5:30 PM	0	16	0	0	12	39	0	0	0	0	0	0	0	0	3	0	70	734
5:35 PM	0	19	0	0	12	22	0	0	0	0	0	0	0	0	3	0	56	713
5:40 PM	0	16	0	0	18	23	0	0	0	0	0	0	0	0	3	0	60	701
5:45 PM	0	20	0	0	8	29	0	0	0	0	0	0	0	0	2	0	59	699
5:50 PM	0	13	0	0	11	24	0	0	0	0	0	0	0	0	2	0	50	685
5:55 PM	0	17	0	0	14	28	0	0	0	0	0	0	0	0	1	0	60	681

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	236	0	0	152	400	0	0	0	0	0	0	4	0	48	0	840
Heavy Trucks	0	12	0		12	4	0		0	0	0		0	0	0		28
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

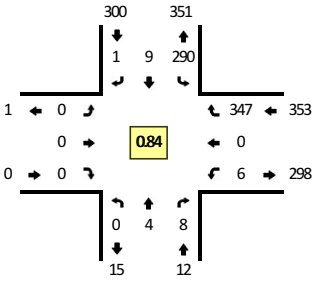
Report generated on 6/4/2019 3:34 PM

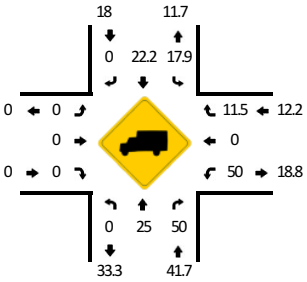
SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

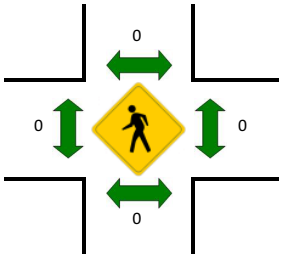
LOCATION: S Lammers Rd -- Valpico Rd | **QC JOB #:** 14993035
CITY/STATE: San Joaquin, CA | **DATE:** Thu, May 23 2019

Peak-Hour: 7:30 AM -- 8:30 AM
Peak 15-Min: 7:55 AM -- 8:10 AM

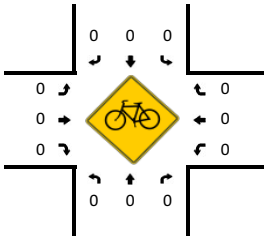


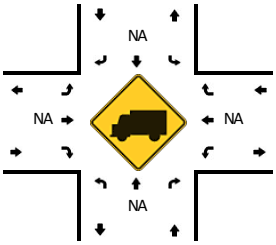


Quality Counts
DATA THAT DRIVES COMMUNITIES

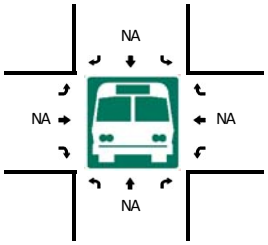












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				Valpico Rd (Eastbound)				Valpico Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	8	2	0	0	0	0	0	0	2	0	15	0	27	
7:05 AM	0	0	0	0	7	0	0	0	0	0	0	0	2	0	15	0	24	
7:10 AM	0	1	1	0	13	0	0	0	0	0	0	0	0	0	27	0	42	
7:15 AM	0	3	1	0	10	0	0	0	1	0	0	0	0	0	13	0	28	
7:20 AM	0	0	0	0	17	0	0	0	0	0	0	0	0	0	20	0	37	
7:25 AM	0	0	1	0	14	1	0	0	0	0	0	0	1	0	22	0	39	
7:30 AM	0	0	0	0	17	0	0	0	0	0	0	0	1	0	25	0	43	
7:35 AM	0	1	2	0	21	0	0	0	0	0	0	0	0	0	32	0	56	
7:40 AM	0	0	1	0	26	0	0	0	0	0	0	0	0	0	27	0	54	
7:45 AM	0	0	1	0	30	2	0	0	0	0	0	0	0	0	40	0	73	
7:50 AM	0	0	1	0	27	0	0	0	0	0	0	0	0	0	28	0	56	
7:55 AM	0	1	0	0	26	1	0	0	0	0	0	0	1	0	38	0	67	546
8:00 AM	0	0	0	0	28	1	1	0	0	0	0	0	0	0	34	0	64	583
8:05 AM	0	0	1	0	22	3	0	0	0	0	0	0	0	0	42	0	68	627
8:10 AM	0	0	2	0	28	0	0	0	0	0	0	0	0	0	15	0	45	630
8:15 AM	0	0	0	0	15	2	0	0	0	0	0	0	0	0	25	0	42	644
8:20 AM	0	1	0	0	32	0	0	0	0	0	0	0	3	0	21	0	57	664
8:25 AM	0	1	0	0	18	0	0	0	0	0	0	0	1	0	20	0	40	665
8:30 AM	0	1	1	0	12	0	0	0	0	0	0	0	0	0	16	0	30	652
8:35 AM	0	1	2	0	12	2	0	0	0	0	0	0	1	0	25	0	43	639
8:40 AM	0	2	1	0	16	2	0	0	0	0	0	0	0	0	23	0	44	629
8:45 AM	0	0	1	0	11	2	0	0	0	0	0	0	0	0	19	0	33	589
8:50 AM	0	0	1	0	13	0	0	0	0	0	0	0	1	0	20	0	35	568
8:55 AM	0	2	2	0	18	1	0	0	0	0	0	0	4	0	13	0	40	541

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	4	4	0	304	20	4	0	0	0	0	0	4	0	456	0	796
Heavy Trucks	0	4	0		44	4	0		0	0	0		0	0	20		72
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

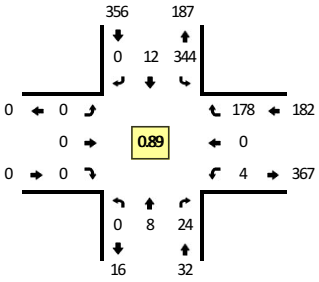
Comments:

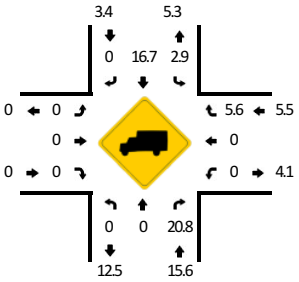
Report generated on 6/4/2019 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak | Method for determining peak hour: Total Entering Volume

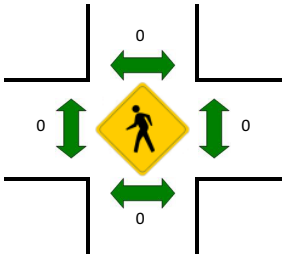
LOCATION: S Lammers Rd -- Valpico Rd | **QC JOB #:** 14993036
CITY/STATE: San Joaquin, CA | **DATE:** Thu, May 23 2019

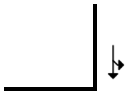
Peak-Hour: 4:35 PM -- 5:35 PM
Peak 15-Min: 4:35 PM -- 4:50 PM

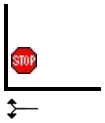


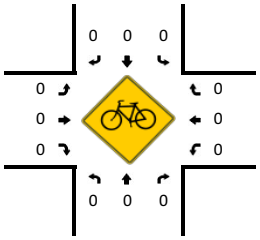


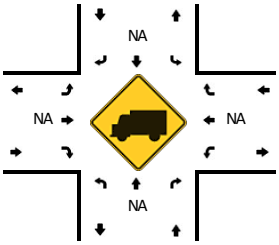
Quality Counts
DATA THAT DRIVES COMMUNITIES

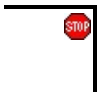


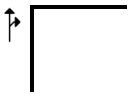


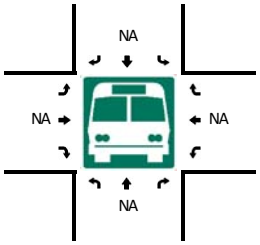












5-Min Count Period Beginning At	S Lammers Rd (Northbound)				S Lammers Rd (Southbound)				Valpico Rd (Eastbound)				Valpico Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	1	0	22	0	0	0	0	0	0	0	1	0	5	0	30	
4:05 PM	0	4	1	0	28	2	0	0	0	0	0	0	0	0	18	0	53	
4:10 PM	0	1	0	0	21	2	0	0	0	0	0	0	0	0	15	0	39	
4:15 PM	0	0	0	0	30	1	0	0	0	0	0	0	0	0	12	0	43	
4:20 PM	0	1	0	0	24	2	0	0	0	0	0	0	3	0	17	0	47	
4:25 PM	0	0	2	0	28	2	0	0	0	0	0	0	1	0	11	0	44	
4:30 PM	0	6	2	0	22	1	0	0	0	0	0	0	0	0	11	0	42	
4:35 PM	0	1	0	0	36	1	0	0	0	0	0	0	0	0	18	0	56	
4:40 PM	0	0	2	0	34	1	0	0	0	0	0	0	0	0	23	0	60	
4:45 PM	0	1	0	0	28	0	0	0	0	0	0	0	0	0	16	0	45	
4:50 PM	0	1	1	0	29	1	0	0	0	0	0	0	0	0	15	0	47	
4:55 PM	0	0	2	0	24	5	0	0	0	0	0	0	1	0	9	0	41	547
5:00 PM	0	1	5	0	32	0	0	0	0	0	0	0	0	0	14	0	52	569
5:05 PM	0	4	11	0	25	1	0	0	0	0	0	0	1	0	8	0	50	566
5:10 PM	0	0	0	0	23	1	0	0	0	0	0	0	0	0	16	0	40	567
5:15 PM	0	0	0	0	31	1	0	0	0	0	0	0	1	0	10	0	43	567
5:20 PM	0	0	0	0	20	0	0	1	0	0	0	0	0	0	18	0	39	559
5:25 PM	0	0	1	0	22	1	0	0	0	0	0	0	0	0	14	0	38	553
5:30 PM	0	0	2	0	39	0	0	0	0	0	0	0	1	0	17	0	59	570
5:35 PM	0	2	0	0	24	0	0	0	0	0	0	0	0	0	16	0	42	556
5:40 PM	0	0	0	0	25	0	0	0	0	0	0	0	2	0	19	0	46	542
5:45 PM	0	0	2	0	25	2	0	0	0	0	0	0	0	0	17	0	46	543
5:50 PM	0	1	0	0	20	2	0	0	0	0	0	0	0	0	14	0	37	533
5:55 PM	0	0	0	0	32	0	0	0	0	0	0	0	0	0	16	0	48	540

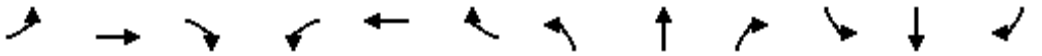
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	8	8	0	392	8	0	0	0	0	0	0	0	0	228	0	644
Heavy Trucks	0	0	4		4	0	0		0	0	0		0	0	12		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 6/4/2019 3:34 PM | SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Kimley»Horn

C. Background Conditions Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	764	323	178	24	239	0	0	768	656
Future Volume (veh/h)	0	0	0	764	323	178	24	239	0	0	768	656
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				840	355	196	26	263	0	0	844	721
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				426	180	936	73	1478	0	0	1603	498
Arrive On Green				0.39	0.37	0.37	0.05	0.46	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1139	481	2502	1598	3272	0	0	4731	1422
Grp Volume(v), veh/h				1195	0	196	26	263	0	0	844	721
Grp Sat Flow(s),veh/h/ln				1621	0	1251	1598	1594	0	0	1527	1422
Q Serve(g_s), s				24.9	0.0	3.5	1.1	3.2	0.0	0.0	9.8	23.3
Cycle Q Clear(g_c), s				24.9	0.0	3.5	1.1	3.2	0.0	0.0	9.8	23.3
Prop In Lane				0.70		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				606	0	936	73	1478	0	0	1603	498
V/C Ratio(X)				1.97	0.00	0.21	0.35	0.18	0.00	0.00	0.53	1.45
Avail Cap(c_a), veh/h				606	0	936	396	2122	0	0	1603	498
HCM Platoon Ratio				1.00	1.00	1.00	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.4	0.0	14.1	30.8	10.4	0.0	0.0	17.2	21.6
Incr Delay (d2), s/veh				442.8	0.0	0.1	1.1	0.0	0.0	0.0	0.2	212.9
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				82.8	0.0	0.9	0.4	1.0	0.0	0.0	3.2	36.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				463.2	0.0	14.2	31.9	10.5	0.0	0.0	17.4	234.5
LnGrp LOS				F	A	B	C	B	A	A	B	F
Approach Vol, veh/h					1391			289			1565	
Approach Delay, s/veh					399.9			12.4			117.4	
Approach LOS					F			B			F	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		36.6			7.6	29.0		30.0				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.1				
Max Green Setting (Gmax), s		44.3			16.5	23.3		24.9				
Max Q Clear Time (g_c+I1), s		5.2			3.1	25.3		26.9				
Green Ext Time (p_c), s		0.7			0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay	229.2	
HCM 6th LOS	F	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	73	0	0	0	0	218	368	0	1228	0
Future Volume (veh/h)	48	0	73	0	0	0	0	218	368	0	1228	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	51	0	77				0	229	387	0	1293	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	345	0	153				0	2333	1040	0	2333	0
Arrive On Green	0.11	0.00	0.11				0.00	0.73	0.73	0.00	0.73	0.00
Sat Flow, veh/h	3196	0	1422				0	3272	1422	0	3355	0
Grp Volume(v), veh/h	51	0	77				0	229	387	0	1293	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1594	1422	0	1594	0
Q Serve(g_s), s	1.0	0.0	3.4				0.0	1.4	6.8	0.0	12.3	0.0
Cycle Q Clear(g_c), s	1.0	0.0	3.4				0.0	1.4	6.8	0.0	12.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	345	0	153				0	2333	1040	0	2333	0
V/C Ratio(X)	0.15	0.00	0.50				0.00	0.10	0.37	0.00	0.55	0.00
Avail Cap(c_a), veh/h	944	0	420				0	2333	1040	0	2333	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.2	0.0	28.3				0.0	2.6	3.3	0.0	4.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.9				0.0	0.1	1.0	0.0	1.0	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	0.4	0.0	1.2				0.0	0.3	1.4	0.0	2.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	29.3				0.0	2.7	4.4	0.0	5.0	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		128						616			1293	
Approach Delay, s/veh		28.5						3.7			5.0	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	12.4	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	8.8	5.4	14.3
Green Ext Time (p_c), s	1.8	0.1	4.7

Intersection Summary	
HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	22	219	806	74	250	66	267	267	181	924	27
Future Volume (veh/h)	29	22	219	806	74	250	66	267	267	181	924	27
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1060	1589	1678	1060	1589	1678	1060	1589	1678	1060	1589	1678
Adj Flow Rate, veh/h	31	24	235	867	80	269	71	287	287	195	994	29
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, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	62	412	194	534	553	494	80	860	404	225	968	456
Arrive On Green	0.06	0.14	0.14	0.27	0.35	0.35	0.08	0.28	0.28	0.11	0.32	0.32
Sat Flow, veh/h	1009	3020	1422	1958	1589	1419	1009	3020	1417	1958	3020	1422
Grp Volume(v), veh/h	31	24	235	867	80	269	71	287	287	195	994	29
Grp Sat Flow(s),veh/h/ln	1009	1510	1422	979	1589	1419	1009	1510	1417	979	1510	1422
Q Serve(g_s), s	4.4	1.0	20.0	40.0	5.1	22.4	10.2	11.0	26.6	14.4	47.0	2.1
Cycle Q Clear(g_c), s	4.4	1.0	20.0	40.0	5.1	22.4	10.2	11.0	26.6	14.4	47.0	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	412	194	534	553	494	80	860	404	225	968	456
V/C Ratio(X)	0.50	0.06	1.21	1.62	0.14	0.54	0.89	0.33	0.71	0.87	1.03	0.06
Avail Cap(c_a), veh/h	138	412	194	534	553	494	138	968	454	334	968	456
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	66.6	55.1	63.3	53.3	32.8	38.5	66.8	41.4	47.0	63.8	49.8	34.6
Incr Delay (d2), s/veh	6.1	0.1	133.3	289.1	0.1	1.2	27.6	0.2	4.5	14.5	36.0	0.1
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	1.2	0.4	14.3	31.0	2.0	7.8	3.3	4.2	9.7	4.0	22.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	55.2	196.6	342.4	33.0	39.7	94.4	41.7	51.5	78.3	85.8	34.6
LnGrp LOS	E	E	F	F	C	D	F	D	D	E	F	C
Approach Vol, veh/h		290			1216			645			1218	
Approach Delay, s/veh		171.7			255.1			51.8			83.4	
Approach LOS		F			F			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.9	48.8	47.0	27.0	18.6	54.0	16.0	58.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	47.0	40.0	20.0	20.0	47.0	20.0	47.0
Max Q Clear Time (g_c+I1), s	16.4	28.6	42.0	22.0	12.2	49.0	6.4	24.4
Green Ext Time (p_c), s	0.5	2.6	0.0	0.0	0.1	0.0	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	146.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	381	1	510	2	99	0	0	1166	809
Future Volume (veh/h)	0	0	0	381	1	510	2	99	0	0	1166	809
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				410	1	0	2	106	0	0	1254	870
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				719	2		2	130	0	0	624	529
Arrive On Green				0.45	0.45	0.00	0.08	0.08	0.00	0.00	0.37	0.37
Sat Flow, veh/h				1594	4	1422	31	1645	0	0	1678	1422
Grp Volume(v), veh/h				411	0	0	108	0	0	0	1254	870
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1676	0	0	0	1678	1422
Q Serve(g_s), s				32.3	0.0	0.0	10.8	0.0	0.0	0.0	63.2	63.2
Cycle Q Clear(g_c), s				32.3	0.0	0.0	10.8	0.0	0.0	0.0	63.2	63.2
Prop In Lane				1.00		1.00	0.02		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				721	0		132	0	0	0	624	529
V/C Ratio(X)				0.57	0.00		0.82	0.00	0.00	0.00	2.01	1.65
Avail Cap(c_a), veh/h				721	0		288	0	0	0	624	529
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.99	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				34.5	0.0	0.0	77.1	0.0	0.0	0.0	53.4	53.4
Incr Delay (d2), s/veh				3.3	0.0	0.0	22.1	0.0	0.0	0.0	460.4	299.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.4	0.0	0.0	5.5	0.0	0.0	0.0	106.3	66.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				37.7	0.0	0.0	99.2	0.0	0.0	0.0	513.8	352.5
LnGrp LOS				D	A		F	A	A	A	F	F
Approach Vol, veh/h					411	A		108			2124	
Approach Delay, s/veh					37.7			99.2			447.7	
Approach LOS					D			F			F	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	19.2		69.0		81.8	
Change Period (Y+Rc), s	5.8		5.8		5.1	
Max Green Setting (Gmax), s	29.2		63.2		60.9	
Max Q Clear Time (g_c+I1), s	12.8		65.2		34.3	
Green Ext Time (p_c), s	0.6		0.0		1.8	

Intersection Summary		
HCM 6th Ctrl Delay	369.7	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	2	14	0	0	0	0	12	11	280	1266	0
Future Volume (veh/h)	92	2	14	0	0	0	0	12	11	280	1266	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	1678	1678	1678				0	1678	1678	1678	1678	0
Adj Flow Rate, veh/h	99	2	0				0	13	12	301	1361	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	15	15	15				0	15	15	15	15	0
Cap, veh/h	118	2					0	161	137	220	995	0
Arrive On Green	0.07	0.07	0.00				0.00	0.10	0.10	1.00	1.00	0.00
Sat Flow, veh/h	1568	32	1422				0	1678	1422	301	1362	0
Grp Volume(v), veh/h	101	0	0				0	13	12	1662	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	1422				0	1678	1422	1663	0	0
Q Serve(g_s), s	10.6	0.0	0.0				0.0	1.2	1.3	116.7	0.0	0.0
Cycle Q Clear(g_c), s	10.6	0.0	0.0				0.0	1.2	1.3	116.7	0.0	0.0
Prop In Lane	0.98		1.00				0.00		1.00	0.18		0.00
Lane Grp Cap(c), veh/h	120	0					0	161	137	1215	0	0
V/C Ratio(X)	0.84	0.00					0.00	0.08	0.09	1.37	0.00	0.00
Avail Cap(c_a), veh/h	215	0					0	161	137	1215	0	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	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	77.6	0.0	0.0				0.0	70.0	70.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.0	0.0				0.0	0.2	0.3	166.2	0.0	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	5.0	0.0	0.0				0.0	0.5	0.5	56.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.6	0.0	0.0				0.0	70.2	70.3	166.2	0.0	0.0
LnGrp LOS	F	A					A	E	E	F	A	A
Approach Vol, veh/h		101	A					25			1662	
Approach Delay, s/veh		94.6						70.2			166.2	
Approach LOS		F						E			F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	22.2	17.8	130.0
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	6.2	22.9	124.2
Max Q Clear Time (g_c+I1), s	3.3	12.6	118.7
Green Ext Time (p_c), s	0.0	0.3	5.4

Intersection Summary	
HCM 6th Ctrl Delay	160.8
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



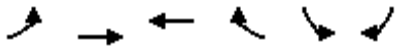
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	114	19	8	644	150	15	5	10	97	9	184
Future Volume (veh/h)	116	114	19	8	644	150	15	5	10	97	9	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	138	136	23	10	767	179	18	6	12	115	11	219
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	168	867	735	35	728	617	58	54	108	148	276	234
Arrive On Green	0.11	0.52	0.52	0.02	0.43	0.43	0.04	0.11	0.11	0.09	0.16	0.16
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	499	999	1598	1678	1422
Grp Volume(v), veh/h	138	136	23	10	767	179	18	0	18	115	11	219
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	0	1498	1598	1678	1422
Q Serve(g_s), s	7.8	3.9	0.7	0.6	40.0	7.5	1.0	0.0	1.0	6.5	0.5	14.0
Cycle Q Clear(g_c), s	7.8	3.9	0.7	0.6	40.0	7.5	1.0	0.0	1.0	6.5	0.5	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	168	867	735	35	728	617	58	0	162	148	276	234
V/C Ratio(X)	0.82	0.16	0.03	0.28	1.05	0.29	0.31	0.00	0.11	0.78	0.04	0.93
Avail Cap(c_a), veh/h	260	867	735	260	728	617	260	0	244	260	276	234
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	11.7	10.9	44.4	26.1	16.9	43.3	0.0	37.1	40.9	32.4	38.0
Incr Delay (d2), s/veh	11.5	0.1	0.0	4.3	48.4	0.4	3.0	0.0	0.4	8.5	0.1	41.5
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	3.5	1.3	0.2	0.3	23.8	2.4	0.4	0.0	0.4	2.9	0.2	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	11.8	11.0	48.7	74.5	17.3	46.4	0.0	37.5	49.4	32.5	79.5
LnGrp LOS	D	B	B	D	F	B	D	A	D	D	C	E
Approach Vol, veh/h		297			956			36			345	
Approach Delay, s/veh		30.4			63.5			41.9			68.0	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.5	54.2	14.0	15.5	16.2	46.5	8.8	20.7
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	15.0	40.0	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.0	5.9	8.5	3.0	9.8	42.0	3.0	16.0
Green Ext Time (p_c), s	0.0	0.9	0.2	0.0	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.0
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	31	190	794	77	22	13
Future Volume (veh/h)	31	190	794	77	22	13
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	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	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	37	226	945	92	26	15
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15
Cap, veh/h	56	931	788	668	119	106
Arrive On Green	0.04	0.56	0.47	0.47	0.07	0.07
Sat Flow, veh/h	1598	1678	1678	1422	1598	1422
Grp Volume(v), veh/h	37	226	945	92	26	15
Grp Sat Flow(s),veh/h/ln	1598	1678	1678	1422	1598	1422
Q Serve(g_s), s	1.8	5.5	37.6	2.9	1.2	0.8
Cycle Q Clear(g_c), s	1.8	5.5	37.6	2.9	1.2	0.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	56	931	788	668	119	106
V/C Ratio(X)	0.66	0.24	1.20	0.14	0.22	0.14
Avail Cap(c_a), veh/h	168	931	788	668	489	435
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.96	0.96	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	9.2	21.2	12.0	34.8	34.6
Incr Delay (d2), s/veh	12.1	0.6	101.5	0.4	0.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	1.8	34.5	0.9	0.5	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.2	9.7	122.7	12.4	35.7	35.2
LnGrp LOS	D	A	F	B	D	D
Approach Vol, veh/h		263	1037		41	
Approach Delay, s/veh		15.4	112.9		35.5	
Approach LOS		B	F		D	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	50.9			6.8	44.1	10.6
Change Period (Y+Rc), s	6.5			4.0	6.5	4.6
Max Green Setting (Gmax), s	44.4			8.4	32.0	24.5
Max Q Clear Time (g_c+I1), s	7.5			3.8	39.6	3.2
Green Ext Time (p_c), s	1.2			0.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	91.4
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	224	2	0	832	13	1	0	2	34	0	2
Future Volume (veh/h)	8	224	2	0	832	13	1	0	2	34	0	2
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	303	3	0	1124	18	1	0	3	46	0	3
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	18	1329	13	2	1196	19	21	0	64	87	0	6
Arrive On Green	0.01	0.72	0.72	0.00	0.65	0.65	0.06	0.00	0.06	0.06	0.00	0.06
Sat Flow, veh/h	1668	1849	18	1668	1836	29	382	0	1145	1554	0	101
Grp Volume(v), veh/h	11	0	306	0	0	1142	4	0	0	49	0	0
Grp Sat Flow(s),veh/h/ln	1668	0	1867	1668	0	1865	1527	0	0	1656	0	0
Q Serve(g_s), s	0.5	0.0	3.9	0.0	0.0	39.1	0.2	0.0	0.0	2.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	3.9	0.0	0.0	39.1	0.2	0.0	0.0	2.0	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.02	0.25		0.75	0.94		0.06
Lane Grp Cap(c), veh/h	18	0	1342	2	0	1215	86	0	0	93	0	0
V/C Ratio(X)	0.60	0.00	0.23	0.00	0.00	0.94	0.05	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	94	0	1365	94	0	1364	86	0	0	93	0	0
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.0	0.0	3.4	0.0	0.0	11.1	31.8	0.0	0.0	32.6	0.0	0.0
Incr Delay (d2), s/veh	27.6	0.0	0.1	0.0	0.0	12.0	0.2	0.0	0.0	5.4	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	1.0	0.0	0.0	15.8	0.1	0.0	0.0	0.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.6	0.0	3.4	0.0	0.0	23.1	32.0	0.0	0.0	38.0	0.0	0.0
LnGrp LOS	E	A	A	A	A	C	C	A	A	D	A	A
Approach Vol, veh/h		317			1142			4			49	
Approach Delay, s/veh		5.5			23.1			32.0			38.0	
Approach LOS		A			C			C			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	55.1		8.0	4.8	50.3		8.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	52.0		4.0	4.0	52.0		4.0
Max Q Clear Time (g_c+I1), s	1.0	5.9		2.2	2.5	41.1		4.0
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	5.2		0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	69	203	442	393	308	270
Future Volume (veh/h)	69	203	442	393	308	270
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	78	228	497	442	346	303
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	250	222	530	1396	361	316
Arrive On Green	0.14	0.14	0.30	0.75	0.39	0.39
Sat Flow, veh/h	1781	1585	1781	1870	920	806
Grp Volume(v), veh/h	78	228	497	442	0	649
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1725
Q Serve(g_s), s	4.5	16.1	31.2	9.0	0.0	42.0
Cycle Q Clear(g_c), s	4.5	16.1	31.2	9.0	0.0	42.0
Prop In Lane	1.00	1.00	1.00			0.47
Lane Grp Cap(c), veh/h	250	222	530	1396	0	677
V/C Ratio(X)	0.31	1.03	0.94	0.32	0.00	0.96
Avail Cap(c_a), veh/h	250	222	582	1482	0	705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	49.3	39.3	4.8	0.0	34.0
Incr Delay (d2), s/veh	0.7	67.0	22.1	0.1	0.0	23.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.1	16.7	3.0	0.0	21.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.0	116.3	61.4	5.0	0.0	57.7
LnGrp LOS	D	F	E	A	A	E
Approach Vol, veh/h	306			939	649	
Approach Delay, s/veh	98.2			34.8	57.7	
Approach LOS	F			C	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		92.1		22.6	40.6	51.5
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		90.9		16.1	37.5	46.9
Max Q Clear Time (g_c+I1), s		11.0		18.1	33.2	44.0
Green Ext Time (p_c), s		2.0		0.0	0.9	1.0

Intersection Summary		
HCM 6th Ctrl Delay		52.9
HCM 6th LOS		D

Intersection	
Int Delay, s/veh	30.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	296	497	1	125	386
Future Vol, veh/h	53	296	497	1	125	386
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	344	578	1	145	449

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1318	579	0	0	579	0
Stage 1	579	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	173	515	-	-	995	-
Stage 1	560	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	139	515	-	-	995	-
Mov Cap-2 Maneuver	139	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	114.6	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	365	995	-
HCM Lane V/C Ratio	-	-	1.112	0.146	-
HCM Control Delay (s)	-	-	114.6	9.2	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	15.1	0.5	-

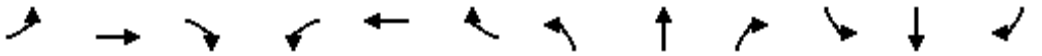
Intersection	
Int Delay, s/veh	53.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	108	0	381	0	16	8	369	17	1
Future Vol, veh/h	0	0	0	108	0	381	0	16	8	369	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	129	0	454	0	19	10	439	20	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1150	928	21	923	923	24	-	0	0	29	0	0
Stage 1	899	899	-	24	24	-	-	-	-	-	-	-
Stage 2	251	29	-	899	899	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	175	268	1056	250	270	1052	0	-	-	1584	-	-
Stage 1	334	358	-	994	875	-	0	-	-	-	-	-
Stage 2	753	871	-	334	358	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	193	1056	196	194	1052	-	-	-	1584	-	-
Mov Cap-2 Maneuver	78	193	-	196	194	-	-	-	-	-	-	-
Stage 1	334	257	-	994	875	-	-	-	-	-	-	-
Stage 2	428	871	-	240	257	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	92.3	0	7.8
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	535	1584	-	-
HCM Lane V/C Ratio	-	-	-	1.088	0.277	-	-
HCM Control Delay (s)	-	-	0	92.3	8.1	0	-
HCM Lane LOS	-	-	A	F	A	A	-
HCM 95th %tile Q(veh)	-	-	-	18	1.1	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	423	4	301	34	449	0	0	530	34
Future Volume (veh/h)	0	0	0	423	4	301	34	449	0	0	530	34
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				460	4	327	37	488	0	0	576	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				558	5	882	104	1330	0	0	1172	
Arrive On Green				0.38	0.35	0.35	0.07	0.42	0.00	0.00	0.26	0.00
Sat Flow, veh/h				1585	14	2502	1598	3272	0	0	4731	1422
Grp Volume(v), veh/h				464	0	327	37	488	0	0	576	0
Grp Sat Flow(s),veh/h/ln				1598	0	1251	1598	1594	0	0	1527	1422
Q Serve(g_s), s				12.3	0.0	4.6	1.0	4.9	0.0	0.0	5.0	0.0
Cycle Q Clear(g_c), s				12.3	0.0	4.6	1.0	4.9	0.0	0.0	5.0	0.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				563	0	882	104	1330	0	0	1172	
V/C Ratio(X)				0.82	0.00	0.37	0.35	0.37	0.00	0.00	0.49	
Avail Cap(c_a), veh/h				849	0	1330	563	3013	0	0	2277	
HCM Platoon Ratio				1.00	1.00	1.00	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	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				13.3	0.0	11.3	21.0	9.4	0.0	0.0	14.8	0.0
Incr Delay (d2), s/veh				3.1	0.0	0.2	0.8	0.1	0.0	0.0	0.1	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				3.9	0.0	1.1	0.4	1.4	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.4	0.0	11.5	21.7	9.5	0.0	0.0	15.0	0.0
LnGrp LOS				B	A	B	C	A	A	A	B	
Approach Vol, veh/h					791			525			576	A
Approach Delay, s/veh					14.3			10.3			15.0	
Approach LOS					B			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		25.3			7.6	17.7		21.6				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.1				
Max Green Setting (Gmax), s		44.3			16.5	23.3		24.9				
Max Q Clear Time (g_c+I1), s		6.9			3.0	7.0		14.3				
Green Ext Time (p_c), s		1.4			0.0	1.6		2.2				

Intersection Summary												
HCM 6th Ctrl Delay			13.4									
HCM 6th LOS			B									

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	54	0	0	0	0	370	844	0	675	0
Future Volume (veh/h)	112	1	54	0	0	0	0	370	844	0	675	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	125	0	60				0	411	938	0	750	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	365	0	162				0	2316	1033	0	2316	0
Arrive On Green	0.11	0.00	0.11				0.00	0.73	0.73	0.00	0.73	0.00
Sat Flow, veh/h	3196	0	1422				0	3272	1422	0	3355	0
Grp Volume(v), veh/h	125	0	60				0	411	938	0	750	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1594	1422	0	1594	0
Q Serve(g_s), s	2.4	0.0	2.6				0.0	2.7	36.0	0.0	5.7	0.0
Cycle Q Clear(g_c), s	2.4	0.0	2.6				0.0	2.7	36.0	0.0	5.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	365	0	162				0	2316	1033	0	2316	0
V/C Ratio(X)	0.34	0.00	0.37				0.00	0.18	0.91	0.00	0.32	0.00
Avail Cap(c_a), veh/h	937	0	417				0	2316	1033	0	2316	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.7	0.0	27.8				0.0	2.9	7.5	0.0	3.3	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5				0.0	0.2	13.1	0.0	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	0.9	0.0	0.9				0.0	0.6	10.0	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	28.3				0.0	3.1	20.5	0.0	3.7	0.0
LnGrp LOS	C	A	C				A	A	C	A	A	A
Approach Vol, veh/h		185						1349			750	
Approach Delay, s/veh		28.0						15.2			3.7	
Approach LOS		C						B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	12.9	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	38.0	4.6	7.7
Green Ext Time (p_c), s	4.0	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	43	77	624	36	275	121	834	508	213	979	23
Future Volume (veh/h)	45	43	77	624	36	275	121	834	508	213	979	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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1060	1589	1324	1060	1589	1324	1060	1589	1324	1060	1589	1324
Adj Flow Rate, veh/h	51	48	87	701	40	309	136	937	571	239	1100	26
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, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	64	275	102	526	470	332	136	953	354	267	960	357
Arrive On Green	0.06	0.09	0.09	0.27	0.30	0.30	0.13	0.32	0.32	0.14	0.32	0.32
Sat Flow, veh/h	1009	3020	1122	1958	1589	1122	1009	3020	1122	1958	3020	1122
Grp Volume(v), veh/h	51	48	87	701	40	309	136	937	571	239	1100	26
Grp Sat Flow(s),veh/h/ln	1009	1510	1122	979	1589	1122	1009	1510	1122	979	1510	1122
Q Serve(g_s), s	7.4	2.2	11.4	40.0	2.7	39.8	20.0	45.8	47.0	17.9	47.3	2.4
Cycle Q Clear(g_c), s	7.4	2.2	11.4	40.0	2.7	39.8	20.0	45.8	47.0	17.9	47.3	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	275	102	526	470	332	136	953	354	267	960	357
V/C Ratio(X)	0.79	0.17	0.85	1.33	0.09	0.93	1.00	0.98	1.61	0.89	1.15	0.07
Avail Cap(c_a), veh/h	136	406	151	526	502	354	136	953	354	329	960	357
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	68.7	62.5	66.7	54.4	37.9	50.9	64.4	50.6	50.9	63.2	50.8	35.5
Incr Delay (d2), s/veh	19.2	0.3	24.7	162.4	0.1	29.7	78.2	24.9	288.0	22.2	78.0	0.1
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	2.3	0.9	3.9	21.5	1.1	13.6	8.1	20.6	41.1	5.3	28.2	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.9	62.8	91.4	216.9	37.9	80.6	142.6	75.5	339.0	85.4	128.8	35.5
LnGrp LOS	F	E	F	F	D	F	F	E	F	F	F	D
Approach Vol, veh/h		186			1050			1644			1365	
Approach Delay, s/veh		83.1			170.0			172.6			119.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.3	54.0	47.0	20.6	27.0	54.3	16.5	51.1
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	47.0	40.0	20.0	20.0	47.0	20.0	47.0
Max Q Clear Time (g_c+I1), s	19.9	49.0	42.0	13.4	22.0	49.3	9.4	41.8
Green Ext Time (p_c), s	0.5	0.0	0.0	0.2	0.0	0.0	0.1	0.7

Intersection Summary	
HCM 6th Ctrl Delay	150.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	442	10	1030	0	0	1295	396
Future Volume (veh/h)	0	0	0	5	0	442	10	1030	0	0	1295	396
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				5	0	0	11	1084	0	0	1363	417
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				12	0		10	975	0	0	515	437
Arrive On Green				0.01	0.00	0.00	0.59	0.59	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1598	0	1422	17	1660	0	0	1678	1422
Grp Volume(v), veh/h				5	0	0	1095	0	0	0	1363	417
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1677	0	0	0	1678	1422
Q Serve(g_s), s				0.5	0.0	0.0	99.8	0.0	0.0	0.0	52.2	48.9
Cycle Q Clear(g_c), s				0.5	0.0	0.0	99.8	0.0	0.0	0.0	52.2	48.9
Prop In Lane				1.00		1.00	0.01		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				12	0		985	0	0	0	515	437
V/C Ratio(X)				0.42	0.00		1.11	0.00	0.00	0.00	2.65	0.96
Avail Cap(c_a), veh/h				131	0		985	0	0	0	515	437
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				84.0	0.0	0.0	35.1	0.0	0.0	0.0	58.9	57.8
Incr Delay (d2), s/veh				22.0	0.0	0.0	51.9	0.0	0.0	0.0	746.2	32.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.3	0.0	0.0	53.8	0.0	0.0	0.0	128.9	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				106.0	0.0	0.0	87.0	0.0	0.0	0.0	805.1	90.6
LnGrp LOS				F	A		F	A	A	A	F	F
Approach Vol, veh/h					5	A		1095			1780	
Approach Delay, s/veh					106.0			87.0			637.7	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	105.6		58.0		6.4			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	87.2		52.2		13.9			
Max Q Clear Time (g_c+I1), s	101.8		54.2		2.5			
Green Ext Time (p_c), s	0.0		0.0		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	427.4	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	4	66	0	0	0	0	859	433	1237	55	0
Future Volume (veh/h)	188	4	66	0	0	0	0	859	433	1237	55	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	1678	1678	1678				0	1678	1678	1678	1678	0
Adj Flow Rate, veh/h	200	4	0				0	914	461	1316	59	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, %	15	15	15				0	15	15	15	15	0
Cap, veh/h	221	4					0	712	603	516	23	0
Arrive On Green	0.14	0.14	0.00				0.00	0.42	0.42	0.34	0.34	0.00
Sat Flow, veh/h	1568	31	1422				0	1678	1422	1532	69	0
Grp Volume(v), veh/h	204	0	0				0	914	461	1375	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	1422				0	1678	1422	1601	0	0
Q Serve(g_s), s	21.3	0.0	0.0				0.0	72.1	47.0	57.2	0.0	0.0
Cycle Q Clear(g_c), s	21.3	0.0	0.0				0.0	72.1	47.0	57.2	0.0	0.0
Prop In Lane	0.98		1.00				0.00		1.00	0.96		0.00
Lane Grp Cap(c), veh/h	226	0					0	712	603	539	0	0
V/C Ratio(X)	0.90	0.00					0.00	1.28	0.76	2.55	0.00	0.00
Avail Cap(c_a), veh/h	310	0					0	712	603	539	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	71.9	0.0	0.0				0.0	48.9	41.7	56.4	0.0	0.0
Incr Delay (d2), s/veh	24.0	0.0	0.0				0.0	138.4	8.9	699.1	0.0	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	10.3	0.0	0.0				0.0	57.4	18.1	127.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.9	0.0	0.0				0.0	187.4	50.6	755.5	0.0	0.0
LnGrp LOS	F	A					A	F	D	F	A	A
Approach Vol, veh/h		204	A					1375			1375	
Approach Delay, s/veh		95.9						141.5			755.5	
Approach LOS		F						F			F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.9	29.1	63.0
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	63.2	32.9	57.2
Max Q Clear Time (g_c+I1), s	74.1	23.3	59.2
Green Ext Time (p_c), s	0.0	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	424.1
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



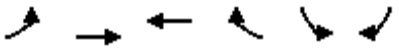
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	501	26	8	143	91	20	6	15	193	2	185
Future Volume (veh/h)	159	501	26	8	143	91	20	6	15	193	2	185
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	189	596	31	10	170	108	24	7	18	230	2	220
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	224	663	562	36	465	394	74	51	131	265	406	344
Arrive On Green	0.14	0.39	0.39	0.02	0.28	0.28	0.05	0.12	0.12	0.17	0.24	0.24
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	416	1069	1598	1678	1422
Grp Volume(v), veh/h	189	596	31	10	170	108	24	0	25	230	2	220
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	0	1485	1598	1678	1422
Q Serve(g_s), s	9.4	27.2	1.1	0.5	6.6	4.8	1.2	0.0	1.2	11.4	0.1	11.3
Cycle Q Clear(g_c), s	9.4	27.2	1.1	0.5	6.6	4.8	1.2	0.0	1.2	11.4	0.1	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	224	663	562	36	465	394	74	0	182	265	406	344
V/C Ratio(X)	0.84	0.90	0.06	0.28	0.37	0.27	0.32	0.00	0.14	0.87	0.00	0.64
Avail Cap(c_a), veh/h	294	824	698	294	824	698	294	0	273	294	406	344
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.1	23.1	15.2	39.2	23.7	23.1	37.6	0.0	31.9	33.1	23.4	27.7
Incr Delay (d2), s/veh	15.5	11.9	0.1	4.2	0.7	0.5	2.5	0.0	0.5	21.7	0.0	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	4.4	11.6	0.4	0.2	2.5	1.6	0.5	0.0	0.5	5.9	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.6	35.0	15.3	43.4	24.4	23.6	40.1	0.0	32.4	54.8	23.5	32.2
LnGrp LOS	D	D	B	D	C	C	D	A	C	D	C	C
Approach Vol, veh/h		816			288			49			452	
Approach Delay, s/veh		37.6			24.7			36.2			43.7	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	38.7	19.0	15.5	17.9	29.1	9.3	25.2
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	15.0	40.0	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.5	29.2	13.4	3.2	11.4	8.6	3.2	13.3
Green Ext Time (p_c), s	0.0	3.0	0.1	0.0	0.2	1.7	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	689	210	64	84	28
Future Volume (veh/h)	20	689	210	64	84	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	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	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	22	749	228	70	91	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	104	1305	1108	939	194	173
Arrive On Green	0.06	0.74	0.63	0.63	0.12	0.12
Sat Flow, veh/h	1668	1752	1752	1485	1668	1485
Grp Volume(v), veh/h	22	749	228	70	91	30
Grp Sat Flow(s),veh/h/ln	1668	1752	1752	1485	1668	1485
Q Serve(g_s), s	1.0	15.3	4.4	1.5	4.1	1.5
Cycle Q Clear(g_c), s	1.0	15.3	4.4	1.5	4.1	1.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	104	1305	1108	939	194	173
V/C Ratio(X)	0.21	0.57	0.21	0.07	0.47	0.17
Avail Cap(c_a), veh/h	167	1305	1108	939	511	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.99	0.99	1.00	1.00
Uniform Delay (d), s/veh	35.6	4.6	6.2	5.7	33.0	31.9
Incr Delay (d2), s/veh	0.7	1.3	0.4	0.2	1.7	0.5
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	3.2	1.3	0.4	1.7	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.3	5.8	6.6	5.8	34.8	32.3
LnGrp LOS	D	A	A	A	C	C
Approach Vol, veh/h		771	298		121	
Approach Delay, s/veh		6.7	6.4		34.2	
Approach LOS		A	A		C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	66.1			9.0	57.1	13.9
Change Period (Y+Rc), s	6.5			4.0	6.5	4.6
Max Green Setting (Gmax), s	44.4			8.0	32.0	24.5
Max Q Clear Time (g_c+I1), s	17.3			3.0	6.4	6.1
Green Ext Time (p_c), s	5.3			0.0	1.4	0.3

Intersection Summary		
HCM 6th Ctrl Delay		9.4
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	709	1	4	257	25	2	0	1	14	0	1
Future Volume (veh/h)	16	709	1	4	257	25	2	0	1	14	0	1
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	19	854	1	5	310	30	2	0	1	17	0	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	32	992	1	9	869	84	4	0	2	28	0	2
Arrive On Green	0.02	0.53	0.53	0.01	0.52	0.52	0.00	0.00	0.00	0.02	0.00	0.02
Sat Flow, veh/h	1668	1868	2	1668	1679	162	1068	0	534	1565	0	92
Grp Volume(v), veh/h	19	0	855	5	0	340	3	0	0	18	0	0
Grp Sat Flow(s),veh/h/ln	1668	0	1870	1668	0	1841	1602	0	0	1657	0	0
Q Serve(g_s), s	0.5	0.0	16.1	0.1	0.0	4.4	0.1	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	16.1	0.1	0.0	4.4	0.1	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.09	0.67		0.33	0.94		0.06
Lane Grp Cap(c), veh/h	32	0	993	9	0	953	5	0	0	30	0	0
V/C Ratio(X)	0.60	0.00	0.86	0.55	0.00	0.36	0.57	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	164	0	1378	164	0	1356	157	0	0	163	0	0
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	0.0	8.2	20.2	0.0	5.8	20.3	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	16.8	0.0	4.2	44.1	0.0	0.2	71.9	0.0	0.0	17.7	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.0	0.2	0.0	1.1	0.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	0.0	12.5	64.3	0.0	6.0	92.2	0.0	0.0	37.6	0.0	0.0
LnGrp LOS	D	A	B	E	A	A	F	A	A	D	A	A
Approach Vol, veh/h		874			345			3			18	
Approach Delay, s/veh		13.0			6.9			92.2			37.6	
Approach LOS		B			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	27.6		4.1	4.8	27.1		4.7
Change Period (Y+Rc), s	4.0	6.0		4.0	4.0	6.0		4.0
Max Green Setting (Gmax), s	4.0	30.0		4.0	4.0	30.0		4.0
Max Q Clear Time (g_c+I2), s	2.1	18.1		2.1	2.5	6.4		2.4
Green Ext Time (p_c), s	0.0	3.6		0.0	0.0	1.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	199	520	227	172	199	59
Future Volume (veh/h)	199	520	227	172	199	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	219	571	249	189	219	65
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	689	613	301	830	263	78
Arrive On Green	0.39	0.39	0.17	0.44	0.19	0.19
Sat Flow, veh/h	1781	1585	1781	1870	1385	411
Grp Volume(v), veh/h	219	571	249	189	0	284
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1796
Q Serve(g_s), s	6.6	26.5	10.4	4.8	0.0	11.7
Cycle Q Clear(g_c), s	6.6	26.5	10.4	4.8	0.0	11.7
Prop In Lane	1.00	1.00	1.00			0.23
Lane Grp Cap(c), veh/h	689	613	301	830	0	341
V/C Ratio(X)	0.32	0.93	0.83	0.23	0.00	0.83
Avail Cap(c_a), veh/h	731	650	522	1352	0	620
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	22.5	30.8	13.2	0.0	29.9
Incr Delay (d2), s/veh	0.3	19.6	5.7	0.1	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	23.0	4.8	1.9	0.0	5.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.7	42.2	36.6	13.4	0.0	35.2
LnGrp LOS	B	D	D	B	A	D
Approach Vol, veh/h	790			438	284	
Approach Delay, s/veh	35.1			26.5	35.2	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		40.6		36.2	19.5	21.1
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		55.5		31.5	22.5	26.5
Max Q Clear Time (g_c+I1), s		6.8		28.5	12.4	13.7
Green Ext Time (p_c), s		0.7		1.2	0.7	0.9

Intersection Summary		
HCM 6th Ctrl Delay		32.6
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	3.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	75	301	0	225	497
Future Vol, veh/h	26	75	301	0	225	497
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	83	334	0	250	552

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1386	334	0	0	334	0
Stage 1	334	-	-	-	-	-
Stage 2	1052	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	158	708	-	-	1225	-
Stage 1	725	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	112	708	-	-	1225	-
Mov Cap-2 Maneuver	112	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	237	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.1	0	2.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	299	1225	-
HCM Lane V/C Ratio	-	-	0.375	0.204	-
HCM Control Delay (s)	-	-	24.1	8.7	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.7	0.8	-

Intersection	
Int Delay, s/veh	14

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	48	0	229	0	19	24	480	24	0
Future Vol, veh/h	0	0	0	48	0	229	0	19	24	480	24	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	54	0	257	0	21	27	539	27	0

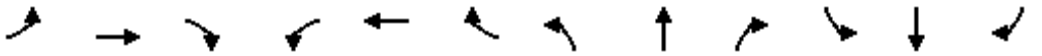
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1268	1153	27	1140	1140	35	-	0	0	48	0	0
Stage 1	1105	1105	-	35	35	-	-	-	-	-	-	-
Stage 2	163	48	-	1105	1105	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	145	197	1048	178	201	1038	0	-	-	1559	-	0
Stage 1	256	286	-	981	866	-	0	-	-	-	-	0
Stage 2	839	855	-	256	286	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	79	128	1048	129	130	1038	-	-	-	1559	-	-
Mov Cap-2 Maneuver	79	128	-	129	130	-	-	-	-	-	-	-
Stage 1	256	186	-	981	866	-	-	-	-	-	-	-
Stage 2	631	855	-	166	186	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	26.8	0	8.1
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	467	1559	-
HCM Lane V/C Ratio	-	-	-	0.666	0.346	-
HCM Control Delay (s)	-	-	0	26.8	8.5	0
HCM Lane LOS	-	-	A	D	A	A
HCM 95th %tile Q(veh)	-	-	-	4.8	1.6	-

Kimley»Horn

D. Background Plus Project Conditions Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	871	323	178	25	241	0	0	807	656
Future Volume (veh/h)	0	0	0	871	323	178	25	241	0	0	807	656
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				957	355	196	27	265	0	0	887	721
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				441	164	935	75	1480	0	0	1601	497
Arrive On Green				0.39	0.37	0.37	0.05	0.46	0.00	0.00	0.35	0.35
Sat Flow, veh/h				1181	438	2502	1598	3272	0	0	4731	1422
Grp Volume(v), veh/h				1312	0	196	27	265	0	0	887	721
Grp Sat Flow(s),veh/h/ln				1619	0	1251	1598	1594	0	0	1527	1422
Q Serve(g_s), s				24.9	0.0	3.5	1.1	3.2	0.0	0.0	10.4	23.3
Cycle Q Clear(g_c), s				24.9	0.0	3.5	1.1	3.2	0.0	0.0	10.4	23.3
Prop In Lane				0.73		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				605	0	935	75	1480	0	0	1601	497
V/C Ratio(X)				2.17	0.00	0.21	0.36	0.18	0.00	0.00	0.55	1.45
Avail Cap(c_a), veh/h				605	0	935	396	2119	0	0	1601	497
HCM Platoon Ratio				1.00	1.00	1.00	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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				20.5	0.0	14.2	30.8	10.4	0.0	0.0	17.5	21.7
Incr Delay (d2), s/veh				531.7	0.0	0.1	1.1	0.0	0.0	0.0	0.3	213.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				97.6	0.0	0.9	0.4	1.0	0.0	0.0	3.4	36.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				552.2	0.0	14.3	31.8	10.4	0.0	0.0	17.7	235.5
LnGrp LOS				F	A	B	C	B	A	A	B	F
Approach Vol, veh/h					1508			292			1608	
Approach Delay, s/veh					482.3			12.4			115.4	
Approach LOS					F			B			F	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		36.6			7.6	29.0		30.0				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.1				
Max Green Setting (Gmax), s		44.3			16.5	23.3		24.9				
Max Q Clear Time (g_c+I1), s		5.2			3.1	25.3		26.9				
Green Ext Time (p_c), s		0.7			0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			268.9									
HCM 6th LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	91	0	0	0	0	221	376	0	1374	0
Future Volume (veh/h)	48	0	91	0	0	0	0	221	376	0	1374	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	51	0	96				0	233	396	0	1446	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	354	0	158				0	2325	1037	0	2325	0
Arrive On Green	0.11	0.00	0.11				0.00	0.73	0.73	0.00	0.73	0.00
Sat Flow, veh/h	3196	0	1422				0	3272	1422	0	3355	0
Grp Volume(v), veh/h	51	0	96				0	233	396	0	1446	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1594	1422	0	1594	0
Q Serve(g_s), s	1.0	0.0	4.4				0.0	1.4	7.1	0.0	15.2	0.0
Cycle Q Clear(g_c), s	1.0	0.0	4.4				0.0	1.4	7.1	0.0	15.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	354	0	158				0	2325	1037	0	2325	0
V/C Ratio(X)	0.14	0.00	0.61				0.00	0.10	0.38	0.00	0.62	0.00
Avail Cap(c_a), veh/h	941	0	419				0	2325	1037	0	2325	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.2	0.0	28.7				0.0	2.7	3.4	0.0	4.5	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.4				0.0	0.1	1.1	0.0	1.3	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	0.4	0.0	1.5				0.0	0.3	1.5	0.0	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.2	0.0	30.1				0.0	2.8	4.5	0.0	5.8	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		147						629			1446	
Approach Delay, s/veh		29.1						3.9			5.8	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	12.6	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	9.1	6.4	17.2
Green Ext Time (p_c), s	1.8	0.1	5.5

Intersection Summary	
HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	22	219	814	74	260	66	267	400	329	924	27
Future Volume (veh/h)	29	22	219	814	74	260	66	267	400	329	924	27
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1060	1589	1678	1060	1589	1678	1060	1589	1678	1060	1589	1678
Adj Flow Rate, veh/h	31	24	235	875	80	280	71	287	430	354	994	29
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, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	57	377	178	489	507	452	80	887	416	306	1120	527
Arrive On Green	0.06	0.13	0.13	0.25	0.32	0.32	0.08	0.29	0.29	0.16	0.37	0.37
Sat Flow, veh/h	1009	3020	1422	1958	1589	1419	1009	3020	1417	1958	3020	1422
Grp Volume(v), veh/h	31	24	235	875	80	280	71	287	430	354	994	29
Grp Sat Flow(s),veh/h/ln	1009	1510	1422	979	1589	1419	1009	1510	1417	979	1510	1422
Q Serve(g_s), s	4.8	1.1	20.0	40.0	5.8	26.8	11.1	11.9	47.0	25.0	49.4	2.1
Cycle Q Clear(g_c), s	4.8	1.1	20.0	40.0	5.8	26.8	11.1	11.9	47.0	25.0	49.4	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	57	377	178	489	507	452	80	887	416	306	1120	527
V/C Ratio(X)	0.55	0.06	1.32	1.79	0.16	0.62	0.89	0.32	1.03	1.16	0.89	0.06
Avail Cap(c_a), veh/h	126	377	178	489	507	452	126	887	416	306	1120	527
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	73.5	61.7	70.0	60.0	39.1	46.3	73.0	44.1	56.5	67.5	47.2	32.3
Incr Delay (d2), s/veh	7.9	0.1	178.7	362.7	0.1	2.6	33.7	0.2	52.8	101.1	8.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.4	16.0	34.4	2.3	9.6	3.7	4.5	22.5	10.6	20.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.4	61.8	248.7	422.7	39.2	48.8	106.7	44.3	109.3	168.6	56.1	32.4
LnGrp LOS	F	E	F	F	D	D	F	D	F	F	E	C
Approach Vol, veh/h		290			1235			788			1377	
Approach Delay, s/veh		215.4			313.1			85.4			84.5	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.0	47.0	27.0	19.7	66.3	16.0	58.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	47.0	40.0	20.0	20.0	47.0	20.0	47.0
Max Q Clear Time (g_c+I1), s	27.0	49.0	42.0	22.0	13.1	51.4	6.8	28.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	171.5
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	381	1	613	2	129	0	0	1172	811
Future Volume (veh/h)	0	0	0	381	1	613	2	129	0	0	1172	811
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				410	1	0	2	139	0	0	1260	872
Peak Hour Factor				0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				687	2		2	164	0	0	624	529
Arrive On Green				0.43	0.43	0.00	0.10	0.10	0.00	0.00	0.37	0.37
Sat Flow, veh/h				1594	4	1422	24	1653	0	0	1678	1422
Grp Volume(v), veh/h				411	0	0	141	0	0	0	1260	872
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1677	0	0	0	1678	1422
Q Serve(g_s), s				33.5	0.0	0.0	14.1	0.0	0.0	0.0	63.2	63.2
Cycle Q Clear(g_c), s				33.5	0.0	0.0	14.1	0.0	0.0	0.0	63.2	63.2
Prop In Lane				1.00		1.00	0.01		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				689	0		166	0	0	0	624	529
V/C Ratio(X)				0.60	0.00		0.85	0.00	0.00	0.00	2.02	1.65
Avail Cap(c_a), veh/h				689	0		288	0	0	0	624	529
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.98	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.0	0.0	0.0	75.4	0.0	0.0	0.0	53.4	53.4
Incr Delay (d2), s/veh				3.8	0.0	0.0	21.2	0.0	0.0	0.0	464.7	300.8
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				14.0	0.0	0.0	7.1	0.0	0.0	0.0	107.1	66.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				40.8	0.0	0.0	96.6	0.0	0.0	0.0	518.1	354.2
LnGrp LOS				D	A		F	A	A	A	F	F
Approach Vol, veh/h					411	A		141			2132	
Approach Delay, s/veh					40.8			96.6			451.1	
Approach LOS					D			F			F	

Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	22.6		69.0		78.4	
Change Period (Y+Rc), s	5.8		5.8		5.1	
Max Green Setting (Gmax), s	29.2		63.2		60.9	
Max Q Clear Time (g_c+I1), s	16.1		65.2		35.5	
Green Ext Time (p_c), s	0.8		0.0		1.8	

Intersection Summary		
HCM 6th Ctrl Delay	369.6	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	2	14	0	0	0	0	12	11	286	1266	0
Future Volume (veh/h)	122	2	14	0	0	0	0	12	11	286	1266	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	1678	1678	1678				0	1678	1678	1678	1678	0
Adj Flow Rate, veh/h	131	2	0				0	13	12	308	1361	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	15	15	15				0	15	15	15	15	0
Cap, veh/h	150	2					0	127	108	224	990	0
Arrive On Green	0.10	0.10	0.00				0.00	0.08	0.08	1.00	1.00	0.00
Sat Flow, veh/h	1575	24	1422				0	1678	1422	307	1356	0
Grp Volume(v), veh/h	133	0	0				0	13	12	1669	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	1422				0	1678	1422	1662	0	0
Q Serve(g_s), s	14.0	0.0	0.0				0.0	1.2	1.3	121.3	0.0	0.0
Cycle Q Clear(g_c), s	14.0	0.0	0.0				0.0	1.2	1.3	121.3	0.0	0.0
Prop In Lane	0.98		1.00				0.00		1.00	0.18		0.00
Lane Grp Cap(c), veh/h	152	0					0	127	108	1215	0	0
V/C Ratio(X)	0.87	0.00					0.00	0.10	0.11	1.37	0.00	0.00
Avail Cap(c_a), veh/h	215	0					0	127	108	1215	0	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	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	75.9	0.0	0.0				0.0	73.2	73.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	24.6	0.0	0.0				0.0	0.3	0.5	168.9	0.0	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	6.8	0.0	0.0				0.0	0.5	0.5	57.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.5	0.0	0.0				0.0	73.5	73.7	168.9	0.0	0.0
LnGrp LOS	F	A					A	E	E	F	A	A
Approach Vol, veh/h		133	A					25			1669	
Approach Delay, s/veh		100.5						73.6			168.9	
Approach LOS		F						E			F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	18.7	21.3	130.0
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	6.2	22.9	124.2
Max Q Clear Time (g_c+I1), s	3.3	16.0	123.3
Green Ext Time (p_c), s	0.0	0.3	0.9

Intersection Summary	
HCM 6th Ctrl Delay	162.6
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	395	19	8	662	151	15	5	10	113	9	184
Future Volume (veh/h)	116	395	19	8	662	151	15	5	10	113	9	184
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	138	470	23	10	788	180	18	6	12	135	11	219
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	168	857	727	35	718	609	57	53	107	165	292	247
Arrive On Green	0.10	0.51	0.51	0.02	0.43	0.43	0.04	0.11	0.11	0.10	0.17	0.17
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	499	999	1598	1678	1422
Grp Volume(v), veh/h	138	470	23	10	788	180	18	0	18	135	11	219
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	0	1498	1598	1678	1422
Q Serve(g_s), s	7.9	17.8	0.8	0.6	40.0	7.7	1.0	0.0	1.0	7.7	0.5	14.0
Cycle Q Clear(g_c), s	7.9	17.8	0.8	0.6	40.0	7.7	1.0	0.0	1.0	7.7	0.5	14.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	168	857	727	35	718	609	57	0	160	165	292	247
V/C Ratio(X)	0.82	0.55	0.03	0.28	1.10	0.30	0.31	0.00	0.11	0.82	0.04	0.89
Avail Cap(c_a), veh/h	257	857	727	257	718	609	257	0	241	257	292	247
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	15.5	11.3	44.9	26.7	17.5	43.9	0.0	37.7	41.0	32.1	37.7
Incr Delay (d2), s/veh	12.0	0.9	0.0	4.3	63.1	0.4	3.1	0.0	0.4	11.3	0.1	29.9
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	3.5	6.2	0.2	0.3	26.8	2.5	0.5	0.0	0.4	3.5	0.2	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	16.5	11.4	49.3	89.8	17.9	47.0	0.0	38.1	52.3	32.1	67.6
LnGrp LOS	D	B	B	D	F	B	D	A	D	D	C	E
Approach Vol, veh/h		631			978			36			365	
Approach Delay, s/veh		24.3			76.2			42.5			60.9	
Approach LOS		C			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	54.2	15.1	15.5	16.3	46.5	8.9	21.8
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	15.0	40.0	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.6	19.8	9.7	3.0	9.9	42.0	3.0	16.0
Green Ext Time (p_c), s	0.0	3.0	0.2	0.0	0.2	0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.5
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	415	72	80	800	77	13	0	2	22	0	13
Future Volume (veh/h)	31	415	72	80	800	77	13	0	2	22	0	13
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	34	451	78	87	870	84	14	0	2	24	0	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	53	1076	480	108	1205	537	21	0	86	55	0	116
Arrive On Green	0.03	0.34	0.34	0.07	0.38	0.38	0.01	0.00	0.06	0.03	0.00	0.08
Sat Flow, veh/h	1598	3188	1422	1598	3188	1422	1598	0	1422	1598	0	1422
Grp Volume(v), veh/h	34	451	78	87	870	84	14	0	2	24	0	14
Grp Sat Flow(s),veh/h/ln	1598	1594	1422	1598	1594	1422	1598	0	1422	1598	0	1422
Q Serve(g_s), s	1.7	8.7	3.1	4.3	18.7	3.1	0.7	0.0	0.1	1.2	0.0	0.7
Cycle Q Clear(g_c), s	1.7	8.7	3.1	4.3	18.7	3.1	0.7	0.0	0.1	1.2	0.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	1076	480	108	1205	537	21	0	86	55	0	116
V/C Ratio(X)	0.64	0.42	0.16	0.81	0.72	0.16	0.66	0.00	0.02	0.44	0.00	0.12
Avail Cap(c_a), veh/h	100	1076	480	108	1205	537	80	0	427	80	0	427
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	20.4	18.6	36.8	21.3	16.5	39.3	0.0	35.3	37.9	0.0	34.1
Incr Delay (d2), s/veh	12.2	1.2	0.7	35.0	3.8	0.6	29.2	0.0	0.1	5.4	0.0	0.5
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	0.8	3.1	1.1	2.6	6.8	1.1	0.4	0.0	0.0	0.5	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.5	21.7	19.3	71.8	25.1	17.1	68.4	0.0	35.4	43.3	0.0	34.5
LnGrp LOS	D	C	B	E	C	B	E	A	D	D	A	C
Approach Vol, veh/h		563			1041			16			38	
Approach Delay, s/veh		23.1			28.3			64.3			40.1	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	33.5	6.7	9.5	6.7	36.7	5.1	11.1
Change Period (Y+Rc), s	4.5	6.5	4.0	4.6	4.0	6.5	4.0	4.6
Max Green Setting (Gmax), s	5.4	27.0	4.0	24.0	5.0	27.9	4.0	24.0
Max Q Clear Time (g_c+I1), s	5.3	10.7	3.2	2.1	3.7	20.7	2.7	2.7
Green Ext Time (p_c), s	0.0	2.7	0.0	0.0	0.0	3.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	27.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	331	108	0	957	0	3
Future Vol, veh/h	331	108	0	957	0	3
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, %	15	0	0	15	0	0
Mvmt Flow	360	117	0	1040	0	3

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	239
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	-	0	768
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	768
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	768	-	-	-
HCM Lane V/C Ratio	0.004	-	-	-
HCM Control Delay (s)	9.7	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	217	117	0	951	6	0
Future Volume (veh/h)	217	117	0	951	6	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		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	1678	418	418	1678	418	418
Adj Flow Rate, veh/h	236	127	0	1034	127	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	100	100	15	100	100
Cap, veh/h	1612	179	1	1612	9999	9999
Arrive On Green	0.51	0.51	0.00	0.51	0.20	0.20
Sat Flow, veh/h	3272	354	398	4272	1206	1098240
Grp Volume(v), veh/h	236	127	0	1034	127	1
Grp Sat Flow(s),veh/h/ln	1594	354	398	1594	398	354
Q Serve(g_s), s	1.4	9.9	0.0	8.5	0.0	0.0
Cycle Q Clear(g_c), s	1.4	9.9	0.0	8.5	0.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1612	179	1	1612	9999	9999
V/C Ratio(X)	0.15	0.71	0.00	0.64	0.00	0.00
Avail Cap(c_a), veh/h	2538	282	44	2538	4603	330112
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	4.7	6.8	0.0	6.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	5.1	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.5	0.0	1.1	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	11.9	0.0	6.9	0.0	0.0
LnGrp LOS	A	B	A	A	A	A
Approach Vol, veh/h	363			1034	128	
Approach Delay, s/veh	7.3			6.9	0.0	
Approach LOS	A			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	0.0	24.6		11.2		24.6
Change Period (Y+Rc), s	4.0	6.5		4.0		6.5
Max Green Setting (Gmax), s	4.0	28.5		18.0		36.5
Max Q Clear Time (g_c+I1), s	0.0	11.9		2.0		10.5
Green Ext Time (p_c), s	0.0	1.6		0.4		7.6

Intersection Summary	
HCM 6th Ctrl Delay	6.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	229	2	0	912	13	1	0	2	34	0	2
Future Volume (veh/h)	8	229	2	0	912	13	1	0	2	34	0	2
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	309	3	0	1232	18	1	0	3	46	0	3
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	18	1458	14	2	1325	19	2	0	5	55	0	4
Arrive On Green	0.01	0.79	0.79	0.00	0.72	0.72	0.00	0.00	0.00	0.04	0.00	0.04
Sat Flow, veh/h	1668	1849	18	1668	1839	27	382	0	1145	1554	0	101
Grp Volume(v), veh/h	11	0	312	0	0	1250	4	0	0	49	0	0
Grp Sat Flow(s),veh/h/ln	1668	0	1867	1668	0	1866	1527	0	0	1656	0	0
Q Serve(g_s), s	0.5	0.0	3.0	0.0	0.0	39.7	0.2	0.0	0.0	2.1	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	3.0	0.0	0.0	39.7	0.2	0.0	0.0	2.1	0.0	0.0
Prop In Lane	1.00		0.01	1.00		0.01	0.25		0.75	0.94		0.06
Lane Grp Cap(c), veh/h	18	0	1472	2	0	1344	7	0	0	59	0	0
V/C Ratio(X)	0.60	0.00	0.21	0.00	0.00	0.93	0.61	0.00	0.00	0.83	0.00	0.00
Avail Cap(c_a), veh/h	95	0	1655	95	0	1653	87	0	0	95	0	0
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	34.4	0.0	1.9	0.0	0.0	8.3	34.8	0.0	0.0	33.5	0.0	0.0
Incr Delay (d2), s/veh	27.5	0.0	0.1	0.0	0.0	8.6	67.8	0.0	0.0	27.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.5	0.0	0.0	12.9	0.2	0.0	0.0	1.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	0.0	1.9	0.0	0.0	16.9	102.6	0.0	0.0	60.5	0.0	0.0
LnGrp LOS	E	A	A	A	A	B	F	A	A	E	A	A
Approach Vol, veh/h		323			1250			4			49	
Approach Delay, s/veh		4.0			16.9			102.6			60.5	
Approach LOS		A			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	59.2		4.3	4.8	54.4		6.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	62.0		4.0	4.0	62.0		4.0				
Max Q Clear Time (g_c+I1), s	10.0	5.0		2.2	2.5	41.7		4.1				
Green Ext Time (p_c), s	0.0	1.3		0.0	0.0	8.7		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		15.9
HCM 6th LOS		B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	207	506	393	308	286
Future Volume (veh/h)	70	207	506	393	308	286
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	233	569	442	346	321
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	239	213	557	1417	349	324
Arrive On Green	0.13	0.13	0.31	0.76	0.39	0.39
Sat Flow, veh/h	1781	1585	1781	1870	893	828
Grp Volume(v), veh/h	79	233	569	442	0	667
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1721
Q Serve(g_s), s	4.8	16.1	37.5	9.0	0.0	46.2
Cycle Q Clear(g_c), s	4.8	16.1	37.5	9.0	0.0	46.2
Prop In Lane	1.00	1.00	1.00			0.48
Lane Grp Cap(c), veh/h	239	213	557	1417	0	673
V/C Ratio(X)	0.33	1.10	1.02	0.31	0.00	0.99
Avail Cap(c_a), veh/h	239	213	557	1417	0	673
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	52.0	41.3	4.6	0.0	36.4
Incr Delay (d2), s/veh	0.8	89.6	43.9	0.1	0.0	32.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	18.5	23.0	3.0	0.0	25.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	47.9	141.6	85.1	4.7	0.0	68.8
LnGrp LOS	D	F	F	A	A	E
Approach Vol, veh/h	312			1011	667	
Approach Delay, s/veh	117.8			50.0	68.8	
Approach LOS	F			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		97.4		22.6	44.0	53.4
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		90.9		16.1	37.5	46.9
Max Q Clear Time (g_c+I1), s		11.0		18.1	39.5	48.2
Green Ext Time (p_c), s		2.0		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		66.9
HCM 6th LOS		E

Intersection	
Int Delay, s/veh	40.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	53	296	561	1	125	390
Future Vol, veh/h	53	296	561	1	125	390
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	344	652	1	145	453

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1396	653	0	0	653	0
Stage 1	653	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	156	467	-	-	934	-
Stage 1	518	-	-	-	-	-
Stage 2	470	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	124	467	-	-	934	-
Mov Cap-2 Maneuver	124	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	372	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	162.5	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	329	934	-
HCM Lane V/C Ratio	-	-	1.233	0.156	-
HCM Control Delay (s)	-	-	162.5	9.6	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	18	0.6	-

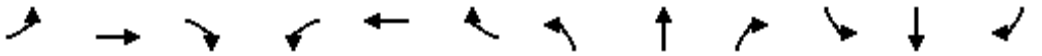
Intersection	
Int Delay, s/veh	72.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	108	0	441	0	20	8	373	17	1
Future Vol, veh/h	0	0	0	108	0	441	0	20	8	373	17	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	129	0	525	0	24	10	444	20	1

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1201	943	21	938	938	29	-	0	0	34	0	0
Stage 1	909	909	-	29	29	-	-	-	-	-	-	-
Stage 2	292	34	-	909	909	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	162	263	1056	244	264	1046	0	-	-	1578	-	-
Stage 1	329	354	-	988	871	-	0	-	-	-	-	-
Stage 2	716	867	-	329	354	-	0	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	63	188	1056	190	189	1046	-	-	-	1578	-	-
Mov Cap-2 Maneuver	63	188	-	190	189	-	-	-	-	-	-	-
Stage 1	329	253	-	988	871	-	-	-	-	-	-	-
Stage 2	357	867	-	235	253	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	122.4	0	7.8
HCM LOS	A	F		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	-	-	-	555	1578	-	-
HCM Lane V/C Ratio	-	-	-	1.178	0.281	-	-
HCM Control Delay (s)	-	-	0	122.4	8.2	0	-
HCM Lane LOS	-	-	A	F	A	A	-
HCM 95th %tile Q(veh)	-	-	-	23	1.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	4	301	37	457	0	0	532	34
Future Volume (veh/h)	0	0	0	428	4	301	37	457	0	0	532	34
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				465	4	327	40	497	0	0	578	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				562	5	887	110	1331	0	0	1160	
Arrive On Green				0.38	0.35	0.35	0.07	0.42	0.00	0.00	0.25	0.00
Sat Flow, veh/h				1585	14	2502	1598	3272	0	0	4731	1422
Grp Volume(v), veh/h				469	0	327	40	497	0	0	578	0
Grp Sat Flow(s),veh/h/ln				1598	0	1251	1598	1594	0	0	1527	1422
Q Serve(g_s), s				12.6	0.0	4.6	1.1	5.1	0.0	0.0	5.1	0.0
Cycle Q Clear(g_c), s				12.6	0.0	4.6	1.1	5.1	0.0	0.0	5.1	0.0
Prop In Lane				0.99		1.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				566	0	887	110	1331	0	0	1160	
V/C Ratio(X)				0.83	0.00	0.37	0.36	0.37	0.00	0.00	0.50	
Avail Cap(c_a), veh/h				841	0	1316	557	2983	0	0	2254	
HCM Platoon Ratio				1.00	1.00	1.00	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	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				13.4	0.0	11.4	21.0	9.5	0.0	0.0	15.1	0.0
Incr Delay (d2), s/veh				3.4	0.0	0.2	0.7	0.1	0.0	0.0	0.1	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				4.1	0.0	1.1	0.4	1.4	0.0	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				16.8	0.0	11.5	21.8	9.6	0.0	0.0	15.2	0.0
LnGrp LOS				B	A	B	C	A	A	A	B	
Approach Vol, veh/h					796			537			578	A
Approach Delay, s/veh					14.6			10.5			15.2	
Approach LOS					B			B			B	

Timer - Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		25.5			7.8	17.7		21.9				
Change Period (Y+Rc), s		5.7			4.5	5.7		5.1				
Max Green Setting (Gmax), s		44.3			16.5	23.3		24.9				
Max Q Clear Time (g_c+I1), s		7.1			3.1	7.1		14.6				
Green Ext Time (p_c), s		1.4			0.0	1.6		2.2				

Intersection Summary		
HCM 6th Ctrl Delay	13.7	
HCM 6th LOS	B	

Notes

Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	1	54	0	0	0	0	381	863	0	682	0
Future Volume (veh/h)	112	1	54	0	0	0	0	381	863	0	682	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	125	0	60				0	423	959	0	758	0
Peak Hour Factor	0.90	0.90	0.90				0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	365	0	162				0	2316	1033	0	2316	0
Arrive On Green	0.11	0.00	0.11				0.00	0.73	0.73	0.00	0.73	0.00
Sat Flow, veh/h	3196	0	1422				0	3272	1422	0	3355	0
Grp Volume(v), veh/h	125	0	60				0	423	959	0	758	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1594	1422	0	1594	0
Q Serve(g_s), s	2.4	0.0	2.6				0.0	2.8	38.5	0.0	5.8	0.0
Cycle Q Clear(g_c), s	2.4	0.0	2.6				0.0	2.8	38.5	0.0	5.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	365	0	162				0	2316	1033	0	2316	0
V/C Ratio(X)	0.34	0.00	0.37				0.00	0.18	0.93	0.00	0.33	0.00
Avail Cap(c_a), veh/h	937	0	417				0	2316	1033	0	2316	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.7	0.0	27.8				0.0	2.9	7.8	0.0	3.3	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.5				0.0	0.2	15.3	0.0	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	0.9	0.0	0.9				0.0	0.6	11.1	0.0	1.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.9	0.0	28.3				0.0	3.1	23.1	0.0	3.7	0.0
LnGrp LOS	C	A	C				A	A	C	A	A	A
Approach Vol, veh/h		185						1382			758	
Approach Delay, s/veh		28.0						17.0			3.7	
Approach LOS		C						B			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	12.9	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	40.5	4.6	7.8
Green Ext Time (p_c), s	3.6	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	13.5
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	43	77	646	36	302	121	834	514	219	979	23
Future Volume (veh/h)	45	43	77	646	36	302	121	834	514	219	979	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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1060	1589	1324	1060	1589	1324	1060	1589	1324	1060	1589	1324
Adj Flow Rate, veh/h	51	48	87	726	40	339	136	937	578	246	1100	26
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, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	64	330	123	512	488	345	132	928	345	273	954	354
Arrive On Green	0.06	0.11	0.11	0.26	0.31	0.31	0.13	0.31	0.31	0.14	0.32	0.32
Sat Flow, veh/h	1009	3020	1122	1958	1589	1122	1009	3020	1122	1958	3020	1122
Grp Volume(v), veh/h	51	48	87	726	40	339	136	937	578	246	1100	26
Grp Sat Flow(s),veh/h/ln	1009	1510	1122	979	1589	1122	1009	1510	1122	979	1510	1122
Q Serve(g_s), s	7.6	2.2	11.5	40.0	2.7	45.9	20.0	47.0	47.0	18.9	48.3	2.5
Cycle Q Clear(g_c), s	7.6	2.2	11.5	40.0	2.7	45.9	20.0	47.0	47.0	18.9	48.3	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	330	123	512	488	345	132	928	345	273	954	354
V/C Ratio(X)	0.80	0.15	0.71	1.42	0.08	0.98	1.03	1.01	1.68	0.90	1.15	0.07
Avail Cap(c_a), veh/h	132	395	147	512	488	345	132	928	345	320	954	354
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	70.7	61.7	65.8	56.5	37.7	52.6	66.5	53.0	53.0	64.8	52.4	36.7
Incr Delay (d2), s/veh	19.6	0.2	11.9	199.7	0.1	43.8	86.9	32.1	316.9	24.8	81.1	0.1
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	2.3	0.9	3.6	23.8	1.1	16.8	8.4	21.9	43.2	5.7	29.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.3	61.9	77.8	256.2	37.7	96.5	153.4	85.1	369.9	89.6	133.5	36.8
LnGrp LOS	F	E	E	F	D	F	F	F	F	F	F	D
Approach Vol, veh/h		186			1105			1651			1372	
Approach Delay, s/veh		77.1			199.3			190.4			123.8	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.3	54.0	47.0	23.7	27.0	55.3	16.7	54.0
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	25.0	47.0	40.0	20.0	20.0	47.0	20.0	47.0
Max Q Clear Time (g_c+I1), s	20.9	49.0	42.0	13.5	22.0	50.3	9.6	47.9
Green Ext Time (p_c), s	0.4	0.0	0.0	0.2	0.0	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	166.6
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	5	0	447	10	1031	0	0	1312	401
Future Volume (veh/h)	0	0	0	5	0	447	10	1031	0	0	1312	401
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				5	0	0	11	1085	0	0	1381	422
Peak Hour Factor				0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				12	0		10	975	0	0	515	437
Arrive On Green				0.01	0.00	0.00	0.59	0.59	0.00	0.00	0.31	0.31
Sat Flow, veh/h				1598	0	1422	17	1660	0	0	1678	1422
Grp Volume(v), veh/h				5	0	0	1096	0	0	0	1381	422
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1677	0	0	0	1678	1422
Q Serve(g_s), s				0.5	0.0	0.0	99.8	0.0	0.0	0.0	52.2	49.7
Cycle Q Clear(g_c), s				0.5	0.0	0.0	99.8	0.0	0.0	0.0	52.2	49.7
Prop In Lane				1.00		1.00	0.01		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				12	0		985	0	0	0	515	437
V/C Ratio(X)				0.42	0.00		1.11	0.00	0.00	0.00	2.68	0.97
Avail Cap(c_a), veh/h				131	0		985	0	0	0	515	437
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.09	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				84.0	0.0	0.0	35.1	0.0	0.0	0.0	58.9	58.0
Incr Delay (d2), s/veh				22.0	0.0	0.0	52.4	0.0	0.0	0.0	761.9	35.2
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				0.3	0.0	0.0	53.9	0.0	0.0	0.0	131.2	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				106.0	0.0	0.0	87.5	0.0	0.0	0.0	820.8	93.2
LnGrp LOS				F	A		F	A	A	A	F	F
Approach Vol, veh/h					5	A		1096			1803	
Approach Delay, s/veh					106.0			87.5			650.5	
Approach LOS					F			F			F	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	105.6		58.0		6.4			
Change Period (Y+Rc), s	5.8		5.8		5.1			
Max Green Setting (Gmax), s	87.2		52.2		13.9			
Max Q Clear Time (g_c+I1), s	101.8		54.2		2.5			
Green Ext Time (p_c), s	0.0		0.0		0.0			

Intersection Summary		
HCM 6th Ctrl Delay	437.1	
HCM 6th LOS	F	

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	189	4	66	0	0	0	0	859	433	1254	55	0
Future Volume (veh/h)	189	4	66	0	0	0	0	859	433	1254	55	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	1678	1678	1678				0	1678	1678	1678	1678	0
Adj Flow Rate, veh/h	201	4	0				0	914	461	1334	59	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, %	15	15	15				0	15	15	15	15	0
Cap, veh/h	222	4					0	711	602	516	23	0
Arrive On Green	0.14	0.14	0.00				0.00	0.42	0.42	0.34	0.34	0.00
Sat Flow, veh/h	1568	31	1422				0	1678	1422	1533	68	0
Grp Volume(v), veh/h	205	0	0				0	914	461	1393	0	0
Grp Sat Flow(s),veh/h/ln	1599	0	1422				0	1678	1422	1601	0	0
Q Serve(g_s), s	21.5	0.0	0.0				0.0	72.0	47.0	57.2	0.0	0.0
Cycle Q Clear(g_c), s	21.5	0.0	0.0				0.0	72.0	47.0	57.2	0.0	0.0
Prop In Lane	0.98		1.00				0.00		1.00	0.96		0.00
Lane Grp Cap(c), veh/h	227	0					0	711	602	539	0	0
V/C Ratio(X)	0.90	0.00					0.00	1.29	0.77	2.59	0.00	0.00
Avail Cap(c_a), veh/h	310	0					0	711	602	539	0	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00				0.00	1.00	1.00	0.09	0.00	0.00
Uniform Delay (d), s/veh	71.8	0.0	0.0				0.0	49.0	41.8	56.4	0.0	0.0
Incr Delay (d2), s/veh	24.2	0.0	0.0				0.0	139.2	9.0	714.1	0.0	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	10.4	0.0	0.0				0.0	57.5	18.1	129.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.0	0.0	0.0				0.0	188.2	50.8	770.5	0.0	0.0
LnGrp LOS	F	A					A	F	D	F	A	A
Approach Vol, veh/h		205	A					1375			1393	
Approach Delay, s/veh		96.0						142.1			770.5	
Approach LOS		F						F			F	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	77.8	29.2	63.0
Change Period (Y+Rc), s	5.8	5.1	5.8
Max Green Setting (Gmax), s	63.2	32.9	57.2
Max Q Clear Time (g_c+I1), s	74.0	23.5	59.2
Green Ext Time (p_c), s	0.0	0.6	0.0

Intersection Summary	
HCM 6th Ctrl Delay	433.4
HCM 6th LOS	F

Notes

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	513	26	8	192	94	20	6	15	194	2	185
Future Volume (veh/h)	159	513	26	8	192	94	20	6	15	194	2	185
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	189	611	31	10	229	112	24	7	18	231	2	220
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	224	674	571	36	477	404	74	50	129	265	403	341
Arrive On Green	0.14	0.40	0.40	0.02	0.28	0.28	0.05	0.12	0.12	0.17	0.24	0.24
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	416	1069	1598	1678	1422
Grp Volume(v), veh/h	189	611	31	10	229	112	24	0	25	231	2	220
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	0	1485	1598	1678	1422
Q Serve(g_s), s	9.6	28.4	1.1	0.5	9.4	5.1	1.2	0.0	1.2	11.7	0.1	11.5
Cycle Q Clear(g_c), s	9.6	28.4	1.1	0.5	9.4	5.1	1.2	0.0	1.2	11.7	0.1	11.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	224	674	571	36	477	404	74	0	179	265	403	341
V/C Ratio(X)	0.84	0.91	0.05	0.28	0.48	0.28	0.33	0.00	0.14	0.87	0.00	0.64
Avail Cap(c_a), veh/h	289	810	686	289	810	686	289	0	269	289	403	341
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	23.3	15.2	39.8	24.6	23.0	38.3	0.0	32.6	33.7	23.9	28.3
Incr Delay (d2), s/veh	16.2	13.0	0.1	4.2	1.1	0.5	2.5	0.0	0.5	22.7	0.0	4.7
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	4.5	12.2	0.4	0.2	3.6	1.7	0.5	0.0	0.5	6.1	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.0	36.4	15.2	44.0	25.7	23.6	40.8	0.0	33.1	56.4	24.0	33.0
LnGrp LOS	D	D	B	D	C	C	D	A	C	E	C	C
Approach Vol, veh/h		831			351			49			453	
Approach Delay, s/veh		38.9			25.5			36.9			44.9	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.4	39.8	19.2	15.5	18.1	30.0	9.3	25.4
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	15.0	40.0	15.0	15.0	15.0	40.0	15.0	15.0
Max Q Clear Time (g_c+I1), s	2.5	30.4	13.7	3.2	11.6	11.4	3.2	13.5
Green Ext Time (p_c), s	0.0	2.9	0.1	0.0	0.2	2.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	698	4	6	222	64	40	0	6	84	0	28
Future Volume (veh/h)	20	698	4	6	222	64	40	0	6	84	0	28
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	22	759	4	7	241	70	43	0	7	91	0	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	100	1887	842	14	1737	775	51	0	148	80	0	173
Arrive On Green	0.06	0.59	0.59	0.01	0.54	0.54	0.03	0.00	0.10	0.05	0.00	0.12
Sat Flow, veh/h	1598	3188	1422	1598	3188	1422	1598	0	1422	1598	0	1422
Grp Volume(v), veh/h	22	759	4	7	241	70	43	0	7	91	0	30
Grp Sat Flow(s),veh/h/ln	1598	1594	1422	1598	1594	1422	1598	0	1422	1598	0	1422
Q Serve(g_s), s	1.0	10.2	0.1	0.3	3.0	1.9	2.1	0.0	0.4	4.0	0.0	1.5
Cycle Q Clear(g_c), s	1.0	10.2	0.1	0.3	3.0	1.9	2.1	0.0	0.4	4.0	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	1887	842	14	1737	775	51	0	148	80	0	173
V/C Ratio(X)	0.22	0.40	0.00	0.49	0.14	0.09	0.84	0.00	0.05	1.14	0.00	0.17
Avail Cap(c_a), veh/h	100	1887	842	100	1737	775	80	0	427	80	0	428
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.6	8.7	6.7	39.5	9.0	8.7	38.5	0.0	32.3	38.0	0.0	31.5
Incr Delay (d2), s/veh	1.1	0.6	0.0	23.3	0.2	0.2	35.3	0.0	0.1	143.2	0.0	0.5
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	0.4	2.9	0.0	0.2	0.9	0.6	1.3	0.0	0.1	4.7	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	9.4	6.7	62.7	9.1	8.9	73.8	0.0	32.4	181.2	0.0	32.0
LnGrp LOS	D	A	A	E	A	A	E	A	C	F	A	C
Approach Vol, veh/h		785			318			50			121	
Approach Delay, s/veh		10.1			10.3			68.0			144.2	
Approach LOS		B			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	53.9	8.0	12.9	9.0	50.1	6.5	14.4
Change Period (Y+Rc), s	4.5	6.5	4.0	4.6	4.0	6.5	4.0	* 4.6
Max Green Setting (Gmax), s	5.0	27.4	4.0	24.0	5.0	27.9	4.0	* 24
Max Q Clear Time (g_c+I1), s	2.3	12.2	6.0	2.4	3.0	5.0	4.1	3.5
Green Ext Time (p_c), s	0.0	4.3	0.0	0.0	0.0	1.6	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	783	5	0	292	0	10
Future Vol, veh/h	783	5	0	292	0	10
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, %	15	0	0	15	0	0
Mvmt Flow	851	5	0	317	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	428
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	-	0	581
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	581
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	581	-	-	-
HCM Lane V/C Ratio	0.019	-	-	-
HCM Control Delay (s)	11.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	789	4	0	280	12	0
Future Volume (veh/h)	789	4	0	280	12	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		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	1678	418	418	1678	418	418
Adj Flow Rate, veh/h	858	4	0	304	4	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	100	100	15	100	100
Cap, veh/h	1677	186	2	1677	9999	9999
Arrive On Green	0.53	0.53	0.00	0.53	0.01	0.01
Sat Flow, veh/h	3272	354	398	4272	1206	1247	0	205	440
Grp Volume(v), veh/h	858	4	0	304	4	1
Grp Sat Flow(s),veh/h/ln	1594	354	398	1594	398	354
Q Serve(g_s), s	4.0	0.1	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.1	0.0	1.1	0.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1677	186	2	1677	1076	1483	64	800
V/C Ratio(X)	0.51	0.02	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	3982	443	70	3982	1165	1262	405	976
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	3.5	2.6	0.0	2.8	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.0	0.0	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.7	2.6	0.0	2.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	862			304	5	
Approach Delay, s/veh	3.7			2.9	0.0	
Approach LOS	A			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	0.0	18.5		4.3		18.5
Change Period (Y+Rc), s	4.0	6.5		4.0		6.5
Max Green Setting (Gmax), s	4.0	28.5		18.0		36.5
Max Q Clear Time (g_c+I1), s	0.0	6.0		2.0		3.1
Green Ext Time (p_c), s	0.0	5.8		0.0		1.9

Intersection Summary	
HCM 6th Ctrl Delay	3.5
HCM 6th LOS	A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	725	1	4	263	25	2	0	1	14	0	1
Future Volume (veh/h)	16	725	1	4	263	25	2	0	1	14	0	1
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	19	873	1	5	317	30	2	0	1	17	0	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	32	1006	1	9	884	84	3	0	2	28	0	2
Arrive On Green	0.02	0.54	0.54	0.01	0.53	0.53	0.00	0.00	0.00	0.02	0.00	0.02
Sat Flow, veh/h	1668	1868	2	1668	1682	159	1068	0	534	1565	0	92
Grp Volume(v), veh/h	19	0	874	5	0	347	3	0	0	18	0	0
Grp Sat Flow(s),veh/h/ln	1668	0	1870	1668	0	1842	1602	0	0	1657	0	0
Q Serve(g_s), s	0.5	0.0	16.8	0.1	0.0	4.6	0.1	0.0	0.0	0.4	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	16.8	0.1	0.0	4.6	0.1	0.0	0.0	0.4	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.09	0.67		0.33	0.94		0.06
Lane Grp Cap(c), veh/h	32	0	1007	9	0	967	5	0	0	30	0	0
V/C Ratio(X)	0.60	0.00	0.87	0.56	0.00	0.36	0.57	0.00	0.00	0.60	0.00	0.00
Avail Cap(c_a), veh/h	161	0	1354	161	0	1334	155	0	0	160	0	0
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.2	0.0	8.3	20.6	0.0	5.8	20.6	0.0	0.0	20.2	0.0	0.0
Incr Delay (d2), s/veh	16.9	0.0	4.8	44.1	0.0	0.2	71.9	0.0	0.0	17.8	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	5.4	0.2	0.0	1.2	0.1	0.0	0.0	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	13.1	64.7	0.0	6.0	92.6	0.0	0.0	38.0	0.0	0.0
LnGrp LOS	D	A	B	E	A	A	F	A	A	D	A	A
Approach Vol, veh/h		893			352			3			18	
Approach Delay, s/veh		13.6			6.8			92.6			38.0	
Approach LOS		B			A			F			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	4.2	28.3		4.1	4.8	27.8		4.7
Change Period (Y+Rc), s	4.0	6.0		4.0	4.0	6.0		4.0
Max Green Setting (Gmax), s	4.0	30.0		4.0	4.0	30.0		4.0
Max Q Clear Time (g_c+I2), s	2.1	18.8		2.1	2.5	6.6		2.4
Green Ext Time (p_c), s	0.0	3.6		0.0	0.0	1.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	12.2
HCM 6th LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	202	533	232	172	199	60
Future Volume (veh/h)	202	533	232	172	199	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	586	255	189	219	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	696	619	306	831	262	79
Arrive On Green	0.39	0.39	0.17	0.44	0.19	0.19
Sat Flow, veh/h	1781	1585	1781	1870	1380	416
Grp Volume(v), veh/h	222	586	255	189	0	285
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1796
Q Serve(g_s), s	6.8	28.1	10.9	4.9	0.0	12.0
Cycle Q Clear(g_c), s	6.8	28.1	10.9	4.9	0.0	12.0
Prop In Lane	1.00	1.00	1.00			0.23
Lane Grp Cap(c), veh/h	696	619	306	831	0	341
V/C Ratio(X)	0.32	0.95	0.83	0.23	0.00	0.84
Avail Cap(c_a), veh/h	713	635	509	1319	0	605
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.7	23.2	31.5	13.5	0.0	30.7
Incr Delay (d2), s/veh	0.3	23.1	5.9	0.1	0.0	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	24.6	5.0	2.0	0.0	5.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	16.9	46.2	37.4	13.7	0.0	36.2
LnGrp LOS	B	D	D	B	A	D
Approach Vol, veh/h	808			444	285	
Approach Delay, s/veh	38.2			27.3	36.2	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		41.4		37.2	20.0	21.4
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		55.5		31.5	22.5	26.5
Max Q Clear Time (g_c+I1), s		6.9		30.1	12.9	14.0
Green Ext Time (p_c), s		0.7		0.6	0.7	0.9

Intersection Summary		
HCM 6th Ctrl Delay		34.7
HCM 6th LOS		C

Intersection	
Int Delay, s/veh	4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	75	306	0	225	510
Future Vol, veh/h	26	75	306	0	225	510
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, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	29	83	340	0	250	567

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1407	340	0	0	340	0
Stage 1	340	-	-	-	-	-
Stage 2	1067	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	153	702	-	-	1219	-
Stage 1	721	-	-	-	-	-
Stage 2	331	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	107	702	-	-	1219	-
Mov Cap-2 Maneuver	107	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	232	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	2.7
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	289	1219	-
HCM Lane V/C Ratio	-	-	0.388	0.205	-
HCM Control Delay (s)	-	-	25.2	8.7	0
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	1.8	0.8	-

Intersection	
Int Delay, s/veh	14.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	48	0	233	0	20	24	492	25	0
Future Vol, veh/h	0	0	0	48	0	233	0	20	24	492	25	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	54	0	262	0	22	27	553	28	0

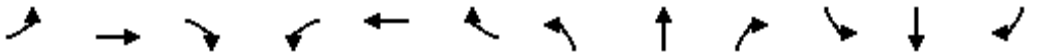
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1301	1183	28	1170	1170	36	-	0	0	49	0	0
Stage 1	1134	1134	-	36	36	-	-	-	-	-	-	-
Stage 2	167	49	-	1134	1134	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	-	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	-	-	-	2.218	-	-
Pot Cap-1 Maneuver	138	189	1047	170	193	1037	0	-	-	1558	-	0
Stage 1	246	278	-	980	865	-	0	-	-	-	-	0
Stage 2	835	854	-	246	278	-	0	-	-	-	-	0
Platoon blocked, %								-	-		-	
Mov Cap-1 Maneuver	74	121	1047	122	123	1037	-	-	-	1558	-	-
Mov Cap-2 Maneuver	74	121	-	122	123	-	-	-	-	-	-	-
Stage 1	246	178	-	980	865	-	-	-	-	-	-	-
Stage 2	624	854	-	157	178	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	29	0	8.2
HCM LOS	A	D		

Minor Lane/Major Mvmt	NBT	NBR	EBLn1	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	455	1558	-
HCM Lane V/C Ratio	-	-	-	0.694	0.355	-
HCM Control Delay (s)	-	-	0	29	8.6	0
HCM Lane LOS	-	-	A	D	A	A
HCM 95th %tile Q(veh)	-	-	-	5.2	1.6	-

Kimley»Horn

E. Background Plus Project Conditions (Mitigated) Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	871	323	178	25	241	0	0	807	656
Future Volume (veh/h)	0	0	0	871	323	178	25	241	0	0	807	656
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				1678	1678	1678	1678	1678	1678	0	1678	1678
Adj Flow Rate, veh/h				916	413	0	27	265	0	0	887	0
Peak Hour Factor				0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %				15	15	15	15	15	15	0	15	15
Cap, veh/h				1365	668		144	894		0	1828	
Arrive On Green				0.43	0.40	0.00	0.32	0.32	0.00	0.00	0.32	0.00
Sat Flow, veh/h				3196	1678	2844	102	2824	2502	0	6006	1422
Grp Volume(v), veh/h				916	413	0	154	138	0	0	887	0
Grp Sat Flow(s),veh/h/ln				1598	1678	1422	1475	1450	1251	0	1443	1422
Q Serve(g_s), s				8.7	7.4	0.0	0.0	2.7	0.0	0.0	4.7	0.0
Cycle Q Clear(g_c), s				8.7	7.4	0.0	2.6	2.7	0.0	0.0	4.7	0.0
Prop In Lane				1.00		1.00	0.18		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1365	668		579	459		0	1828	
V/C Ratio(X)				0.67	0.62		0.27	0.30		0.00	0.49	
Avail Cap(c_a), veh/h				2193	1103		1640	1696		0	3550	
HCM Platoon Ratio				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	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				8.7	9.1	0.0	9.7	9.8	0.0	0.0	10.4	0.0
Incr Delay (d2), s/veh				0.4	0.6	0.0	0.1	0.1	0.0	0.0	0.1	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				2.1	2.0	0.0	0.7	0.7	0.0	0.0	1.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				9.1	9.7	0.0	9.8	9.9	0.0	0.0	10.5	0.0
LnGrp LOS				A	A		A	A		A	B	
Approach Vol, veh/h					1329	A		292	A		887	A
Approach Delay, s/veh					9.3			9.9			10.5	
Approach LOS					A			A			B	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	17.7		17.7		20.2			
Change Period (Y+Rc), s	5.7		5.7		5.1			
Max Green Setting (Gmax), s	44.3		23.3		24.9			
Max Q Clear Time (g_c+I1), s	4.7		6.7		10.7			
Green Ext Time (p_c), s	0.8		2.6		4.4			

Intersection Summary		
HCM 6th Ctrl Delay	9.8	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	116	395	19	8	662	151	15	5	10	113	9	184
Future Volume (veh/h)	116	395	19	8	662	151	15	5	10	113	9	184
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	138	470	23	10	788	180	18	6	12	135	11	219
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	180	1320	589	36	1033	461	60	66	132	180	347	294
Arrive On Green	0.11	0.41	0.41	0.02	0.32	0.32	0.04	0.13	0.13	0.11	0.21	0.21
Sat Flow, veh/h	1598	3188	1422	1598	3188	1422	1598	499	999	1598	1678	1422
Grp Volume(v), veh/h	138	470	23	10	788	180	18	0	18	135	11	219
Grp Sat Flow(s),veh/h/ln	1598	1594	1422	1598	1594	1422	1598	0	1498	1598	1678	1422
Q Serve(g_s), s	6.3	7.6	0.7	0.5	16.7	7.4	0.8	0.0	0.8	6.2	0.4	10.9
Cycle Q Clear(g_c), s	6.3	7.6	0.7	0.5	16.7	7.4	0.8	0.0	0.8	6.2	0.4	10.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	180	1320	589	36	1033	461	60	0	198	180	347	294
V/C Ratio(X)	0.77	0.36	0.04	0.28	0.76	0.39	0.30	0.00	0.09	0.75	0.03	0.74
Avail Cap(c_a), veh/h	201	1439	642	191	1418	632	191	0	573	301	757	642
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	15.2	13.1	36.2	22.9	19.7	35.3	0.0	28.7	32.4	23.8	28.0
Incr Delay (d2), s/veh	14.5	0.2	0.0	4.1	2.1	0.8	2.8	0.0	0.3	6.2	0.1	5.2
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	3.0	2.4	0.2	0.2	5.8	2.4	0.4	0.0	0.3	2.6	0.2	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	15.4	13.2	40.3	25.0	20.5	38.1	0.0	29.0	38.6	23.9	33.2
LnGrp LOS	D	B	B	D	C	C	D	A	C	D	C	C
Approach Vol, veh/h		631			978			36			365	
Approach Delay, s/veh		22.2			24.3			33.5			34.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.2	37.7	14.0	15.5	15.0	30.9	8.3	21.1
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	9.6	34.0	14.2	28.8	9.5	33.5	9.0	34.0
Max Q Clear Time (g_c+I1), s	2.5	9.6	8.2	2.8	8.3	18.7	2.8	12.9
Green Ext Time (p_c), s	0.0	3.3	0.2	0.0	0.0	5.7	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	229	2	0	912	13	1	0	2	34	0	2
Future Volume (veh/h)	8	229	2	0	912	13	1	0	2	34	0	2
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	11	309	3	0	1232	18	1	0	3	46	0	3
Peak Hour Factor	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74	0.74
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	253	1392	14	148	1384	20	255	0	122	255	0	122
Arrive On Green	0.75	0.75	0.75	0.00	0.75	0.75	0.08	0.00	0.08	0.08	0.00	0.08
Sat Flow, veh/h	416	1849	18	1000	1839	27	1324	0	1485	1324	0	1485
Grp Volume(v), veh/h	11	0	312	0	0	1250	1	0	3	46	0	3
Grp Sat Flow(s),veh/h/ln	416	0	1867	1000	0	1866	1324	0	1485	1324	0	1485
Q Serve(g_s), s	1.0	0.0	2.4	0.0	0.0	24.4	0.0	0.0	0.1	1.6	0.0	0.1
Cycle Q Clear(g_c), s	25.4	0.0	2.4	0.0	0.0	24.4	0.1	0.0	0.1	1.7	0.0	0.1
Prop In Lane	1.00		0.01	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	0	1405	148	0	1404	255	0	122	255	0	122
V/C Ratio(X)	0.04	0.00	0.22	0.00	0.00	0.89	0.00	0.00	0.02	0.18	0.00	0.02
Avail Cap(c_a), veh/h	420	0	2154	549	0	2152	582	0	489	582	0	489
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	0.00	1.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.0	0.0	1.8	0.0	0.0	4.5	20.5	0.0	20.5	21.3	0.0	20.5
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.0	0.0	3.3	0.0	0.0	0.1	0.3	0.0	0.1
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	0.1	0.0	0.2	0.0	0.0	3.0	0.0	0.0	0.0	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	0.0	1.9	0.0	0.0	7.8	20.5	0.0	20.6	21.6	0.0	20.6
LnGrp LOS	B	A	A	A	A	A	C	A	C	C	A	C
Approach Vol, veh/h		323			1250			4			49	
Approach Delay, s/veh		2.3			7.8			20.5			21.5	
Approach LOS		A			A			C			C	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	8.0	40.5	8.0	40.5
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	16.0	56.0	16.0	56.0
Max Q Clear Time (g_c+I1), s	2.1	27.4	3.7	26.4
Green Ext Time (p_c), s	0.0	1.4	0.1	10.2

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	70	207	506	393	308	286
Future Volume (veh/h)	70	207	506	393	308	286
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	233	569	442	346	321
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	206	710	593	1446	344	319
Arrive On Green	0.12	0.12	0.33	0.77	0.39	0.39
Sat Flow, veh/h	1781	1585	1781	1870	893	828
Grp Volume(v), veh/h	79	233	569	442	0	667
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1721
Q Serve(g_s), s	4.8	11.1	36.6	8.2	0.0	45.0
Cycle Q Clear(g_c), s	4.8	11.1	36.6	8.2	0.0	45.0
Prop In Lane	1.00	1.00	1.00			0.48
Lane Grp Cap(c), veh/h	206	710	593	1446	0	663
V/C Ratio(X)	0.38	0.33	0.96	0.31	0.00	1.01
Avail Cap(c_a), veh/h	244	744	602	1456	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	47.8	20.9	38.2	3.9	0.0	35.9
Incr Delay (d2), s/veh	1.2	0.3	26.8	0.1	0.0	36.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	11.8	20.1	2.6	0.0	25.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.0	21.1	65.0	4.1	0.0	72.5
LnGrp LOS	D	C	E	A	A	F
Approach Vol, veh/h	312			1011	667	
Approach Delay, s/veh	28.2			38.4	72.5	
Approach LOS	C			D	E	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		96.9		20.0	45.4	51.5
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		91.0		16.0	39.5	45.0
Max Q Clear Time (g_c+I1), s		10.2		13.1	38.6	47.0
Green Ext Time (p_c), s		2.0		0.4	0.3	0.0

Intersection Summary		
HCM 6th Ctrl Delay		48.2
HCM 6th LOS		D



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	53	296	561	1	125	390
Future Volume (veh/h)	53	296	561	1	125	390
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	344	652	1	145	453
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	69	385	732	620	185	1065
Arrive On Green	0.28	0.28	0.39	0.39	0.10	0.57
Sat Flow, veh/h	246	1363	1870	1585	1781	1870
Grp Volume(v), veh/h	407	0	652	1	145	453
Grp Sat Flow(s),veh/h/ln	1613	0	1870	1585	1781	1870
Q Serve(g_s), s	13.1	0.0	17.6	0.0	4.3	7.4
Cycle Q Clear(g_c), s	13.1	0.0	17.6	0.0	4.3	7.4
Prop In Lane	0.15	0.85		1.00	1.00	
Lane Grp Cap(c), veh/h	456	0	732	620	185	1065
V/C Ratio(X)	0.89	0.00	0.89	0.00	0.78	0.43
Avail Cap(c_a), veh/h	479	0	867	735	231	1249
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	18.6	0.0	15.3	10.0	23.6	6.6
Incr Delay (d2), s/veh	18.4	0.0	10.2	0.0	13.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	8.3	0.0	2.3	2.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.9	0.0	25.5	10.0	36.5	6.9
LnGrp LOS	D	A	C	A	D	A
Approach Vol, veh/h	407		653			598
Approach Delay, s/veh	36.9		25.5			14.1
Approach LOS	D		C			B

Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.6	25.1			34.7	19.2
Change Period (Y+Rc), s	4.0	4.0			4.0	4.0
Max Green Setting (Gmax), s	7.6	25.0			36.0	16.0
Max Q Clear Time (g_c+I1), s	6.3	19.6			9.4	15.1
Green Ext Time (p_c), s	0.0	1.5			1.9	0.2

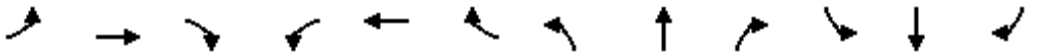
Intersection Summary		
HCM 6th Ctrl Delay	24.2	
HCM 6th LOS	C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	108	0	441	0	20	8	373	17	1
Future Volume (veh/h)	0	0	0	108	0	441	0	20	8	373	17	1
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	129	0	525	0	24	10	444	20	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	721	0	183	23	485	0	102	42	516	798	40
Arrive On Green	0.00	0.00	0.00	0.39	0.00	0.39	0.00	0.08	0.08	0.29	0.45	0.45
Sat Flow, veh/h	0	1870	0	248	60	1256	0	1254	522	1781	1766	88
Grp Volume(v), veh/h	0	0	0	654	0	0	0	0	34	444	0	21
Grp Sat Flow(s),veh/h/ln	0	1870	0	1565	0	0	0	0	1776	1781	0	1854
Q Serve(g_s), s	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0	0.9	11.6	0.0	0.3
Cycle Q Clear(g_c), s	0.0	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.9	11.6	0.0	0.3
Prop In Lane	0.00		0.00	0.20		0.80	0.00		0.29	1.00		0.05
Lane Grp Cap(c), veh/h	0	721	0	691	0	0	0	0	144	516	0	838
V/C Ratio(X)	0.00	0.00	0.00	0.95	0.00	0.00	0.00	0.00	0.24	0.86	0.00	0.03
Avail Cap(c_a), veh/h	0	721	0	691	0	0	0	0	613	615	0	1431
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)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	15.8	0.0	0.0	0.0	0.0	21.2	16.6	0.0	7.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.8	10.5	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.4	5.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	37.8	0.0	0.0	0.0	0.0	22.0	27.0	0.0	7.5
LnGrp LOS	A	A	A	D	A	A	A	A	C	C	A	A
Approach Vol, veh/h		0			654			34			465	
Approach Delay, s/veh		0.0			37.8			22.0			26.2	
Approach LOS					D			C			C	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	8.3	8.0		23.0		26.3		23.0				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	7.3	17.0		19.0		38.0		19.0				
Max Q Clear Time (g_c+I1), s	3.6	2.9		0.0		2.3		21.0				
Green Ext Time (p_c), s	0.7	0.0		0.0		0.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	32.6
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	428	4	301	37	457	0	0	532	34
Future Volume (veh/h)	0	0	0	428	4	301	37	457	0	0	532	34
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				1678	1678	1678	1678	1678	1678	0	1678	1678
Adj Flow Rate, veh/h				468	0	0	40	497	0	0	578	0
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				15	15	15	15	15	15	0	15	15
Cap, veh/h				1400	0		174	1136		0	2259	
Arrive On Green				0.29	0.00	0.00	0.39	0.39	0.00	0.00	0.39	0.00
Sat Flow, veh/h				4793	0	2844	101	2902	2502	0	6006	1422
Grp Volume(v), veh/h				468	0	0	284	253	0	0	578	0
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1553	1450	1251	0	1443	1422
Q Serve(g_s), s				2.3	0.0	0.0	0.0	3.9	0.0	0.0	2.1	0.0
Cycle Q Clear(g_c), s				2.3	0.0	0.0	3.8	3.9	0.0	0.0	2.1	0.0
Prop In Lane				1.00		1.00	0.14		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1400	0		742	568		0	2259	
V/C Ratio(X)				0.33	0.00		0.38	0.45		0.00	0.26	
Avail Cap(c_a), veh/h				4066	0		2247	2096		0	4387	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				8.5	0.0	0.0	6.8	6.9	0.0	0.0	6.3	0.0
Incr Delay (d2), s/veh				0.1	0.0	0.0	0.1	0.2	0.0	0.0	0.0	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				0.6	0.0	0.0	0.8	0.7	0.0	0.0	0.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				8.6	0.0	0.0	6.9	7.1	0.0	0.0	6.3	0.0
LnGrp LOS				A	A		A	A		A	A	
Approach Vol, veh/h					468	A		537	A		578	A
Approach Delay, s/veh					8.6			7.0			6.3	
Approach LOS					A			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	17.7		17.7		13.0			
Change Period (Y+Rc), s	5.7		5.7		5.1			
Max Green Setting (Gmax), s	44.3		23.3		24.9			
Max Q Clear Time (g_c+I1), s	5.9		4.1		4.3			
Green Ext Time (p_c), s	1.3		1.7		1.7			

Intersection Summary	
HCM 6th Ctrl Delay	7.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [NBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	159	513	26	8	192	94	20	6	15	194	2	185
Future Volume (veh/h)	159	513	26	8	192	94	20	6	15	194	2	185
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	189	611	31	10	229	112	24	7	18	231	2	220
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	225	943	421	36	567	253	77	61	158	284	465	394
Arrive On Green	0.14	0.30	0.30	0.02	0.18	0.18	0.05	0.15	0.15	0.18	0.28	0.28
Sat Flow, veh/h	1598	3188	1422	1598	3188	1422	1598	416	1069	1598	1678	1422
Grp Volume(v), veh/h	189	611	31	10	229	112	24	0	25	231	2	220
Grp Sat Flow(s),veh/h/ln	1598	1594	1422	1598	1594	1422	1598	0	1485	1598	1678	1422
Q Serve(g_s), s	7.8	11.3	1.1	0.4	4.3	4.7	1.0	0.0	1.0	9.4	0.1	8.9
Cycle Q Clear(g_c), s	7.8	11.3	1.1	0.4	4.3	4.7	1.0	0.0	1.0	9.4	0.1	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	225	943	421	36	567	253	77	0	219	284	465	394
V/C Ratio(X)	0.84	0.65	0.07	0.27	0.40	0.44	0.31	0.00	0.11	0.81	0.00	0.56
Avail Cap(c_a), veh/h	225	1608	717	213	1584	707	213	0	361	631	846	717
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	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	20.7	17.1	32.4	24.5	24.7	31.0	0.0	24.9	26.6	17.6	20.9
Incr Delay (d2), s/veh	23.7	1.1	0.1	4.0	0.7	1.7	2.3	0.0	0.3	5.6	0.0	1.8
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	4.2	3.8	0.3	0.2	1.5	1.6	0.4	0.0	0.4	3.8	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	21.7	17.2	36.4	25.2	26.4	33.2	0.0	25.2	32.2	17.7	22.6
LnGrp LOS	D	C	B	D	C	C	C	A	C	C	B	C
Approach Vol, veh/h		831			351			49			453	
Approach Delay, s/veh		28.4			25.9			29.2			27.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.0	26.4	17.5	15.4	16.0	18.5	8.8	24.2
Change Period (Y+Rc), s	6.5	6.5	5.5	5.5	6.5	6.5	5.5	5.5
Max Green Setting (Gmax), s	9.6	34.0	26.6	16.4	9.5	33.5	9.0	34.0
Max Q Clear Time (g_c+I1), s	2.4	13.3	11.4	3.0	9.8	6.7	3.0	10.9
Green Ext Time (p_c), s	0.0	4.2	0.8	0.0	0.0	2.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	725	1	4	263	25	2	0	1	14	0	1
Future Volume (veh/h)	16	725	1	4	263	25	2	0	1	14	0	1
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	19	873	1	5	317	30	2	0	1	17	0	1
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	726	1105	1	384	995	94	425	0	202	425	0	202
Arrive On Green	0.59	0.59	0.59	0.59	0.59	0.59	0.14	0.00	0.14	0.14	0.00	0.14
Sat Flow, veh/h	968	1868	2	594	1682	159	1326	0	1485	1326	0	1485
Grp Volume(v), veh/h	19	0	874	5	0	347	2	0	1	17	0	1
Grp Sat Flow(s),veh/h/ln	968	0	1870	594	0	1842	1326	0	1485	1326	0	1485
Q Serve(g_s), s	0.3	0.0	10.5	0.2	0.0	2.8	0.0	0.0	0.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	10.5	10.7	0.0	2.8	0.1	0.0	0.0	0.3	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.09	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	726	0	1106	384	0	1090	425	0	202	425	0	202
V/C Ratio(X)	0.03	0.00	0.79	0.01	0.00	0.32	0.00	0.00	0.00	0.04	0.00	0.00
Avail Cap(c_a), veh/h	1340	0	2291	760	0	2257	967	0	808	967	0	808
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	3.8	0.0	4.6	8.7	0.0	3.0	11.0	0.0	11.0	11.1	0.0	11.0
Incr Delay (d2), s/veh	0.0	0.0	1.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.1	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.8	0.0	5.9	8.7	0.0	3.2	11.0	0.0	11.0	11.2	0.0	11.0
LnGrp LOS	A	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		893			352			3			18	
Approach Delay, s/veh		5.9			3.3			11.0			11.1	
Approach LOS		A			A			B			B	

Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	8.0		21.4		8.0		21.4					
Change Period (Y+Rc), s	4.0		4.0		4.0		4.0					
Max Green Setting (Gmax), s	16.0		36.0		16.0		36.0					
Max Q Clear Time (g_c+I1), s	2.1		12.5		2.3		12.7					
Green Ext Time (p_c), s	0.0		4.9		0.0		1.4					

Intersection Summary												
HCM 6th Ctrl Delay			5.2									
HCM 6th LOS			A									



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	202	533	232	172	199	60
Future Volume (veh/h)	202	533	232	172	199	60
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	222	586	255	189	219	66
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	504	726	312	911	272	82
Arrive On Green	0.28	0.28	0.17	0.49	0.20	0.20
Sat Flow, veh/h	1781	1585	1781	1870	1380	416
Grp Volume(v), veh/h	222	586	255	189	0	285
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1870	0	1796
Q Serve(g_s), s	5.8	16.0	7.8	3.3	0.0	8.6
Cycle Q Clear(g_c), s	5.8	16.0	7.8	3.3	0.0	8.6
Prop In Lane	1.00	1.00	1.00			0.23
Lane Grp Cap(c), veh/h	504	726	312	911	0	354
V/C Ratio(X)	0.44	0.81	0.82	0.21	0.00	0.80
Avail Cap(c_a), veh/h	504	726	400	1191	0	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.6	13.2	22.5	8.3	0.0	21.7
Incr Delay (d2), s/veh	0.6	6.7	10.0	0.1	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	1.4	3.9	1.1	0.0	3.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	17.2	19.9	32.5	8.4	0.0	27.0
LnGrp LOS	B	B	C	A	A	C
Approach Vol, veh/h	808			444	285	
Approach Delay, s/veh	19.2			22.2	27.0	
Approach LOS	B			C	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		34.0		22.5	16.4	17.7
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		36.0		16.0	12.7	16.8
Max Q Clear Time (g_c+I1), s		5.3		18.0	9.8	10.6
Green Ext Time (p_c), s		0.7		0.0	0.3	0.6

Intersection Summary		
HCM 6th Ctrl Delay		21.5
HCM 6th LOS		C



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	26	75	306	0	225	510
Future Volume (veh/h)	26	75	306	0	225	510
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	83	340	0	250	567
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	104	513	435	345	1152
Arrive On Green	0.09	0.09	0.27	0.00	0.19	0.62
Sat Flow, veh/h	419	1200	1870	1585	1781	1870
Grp Volume(v), veh/h	113	0	340	0	250	567
Grp Sat Flow(s),veh/h/ln	1633	0	1870	1585	1781	1870
Q Serve(g_s), s	1.8	0.0	4.3	0.0	3.5	4.5
Cycle Q Clear(g_c), s	1.8	0.0	4.3	0.0	3.5	4.5
Prop In Lane	0.26	0.73		1.00	1.00	
Lane Grp Cap(c), veh/h	142	0	513	435	345	1152
V/C Ratio(X)	0.79	0.00	0.66	0.00	0.73	0.49
Avail Cap(c_a), veh/h	970	0	1249	1059	925	2498
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	12.1	0.0	8.7	0.0	10.2	2.9
Incr Delay (d2), s/veh	9.6	0.0	1.5	0.0	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.3	0.0	1.2	0.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	21.6	0.0	10.2	0.0	13.1	3.2
LnGrp LOS	C	A	B	A	B	A
Approach Vol, veh/h	113		340			817
Approach Delay, s/veh	21.6		10.2			6.2
Approach LOS	C		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	9.2	11.4				20.6	6.3
Change Period (Y+Rc), s	4.0	4.0				4.0	4.0
Max Green Setting (Gmax), s	14.0	18.0				36.0	16.0
Max Q Clear Time (g_c+I1), s	5.5	6.3				6.5	3.8
Green Ext Time (p_c), s	0.6	1.0				2.6	0.3

Intersection Summary	
HCM 6th Ctrl Delay	8.6
HCM 6th LOS	A



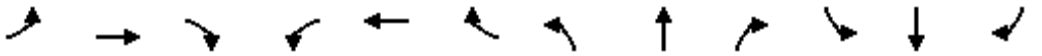
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	48	0	233	0	20	24	492	25	0
Future Volume (veh/h)	0	0	0	48	0	233	0	20	24	492	25	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	0	0	0	54	0	262	0	22	27	553	28	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	470	0	145	23	329	0	73	89	655	1044	0
Arrive On Green	0.00	0.00	0.00	0.25	0.00	0.25	0.00	0.10	0.10	0.37	0.56	0.00
Sat Flow, veh/h	0	1870	0	176	93	1309	0	764	938	1781	1870	0
Grp Volume(v), veh/h	0	0	0	316	0	0	0	0	49	553	28	0
Grp Sat Flow(s),veh/h/ln	0	1870	0	1578	0	0	0	0	1702	1781	1870	0
Q Serve(g_s), s	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	1.1	12.0	0.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	1.1	12.0	0.3	0.0
Prop In Lane	0.00		0.00	0.17		0.83	0.00		0.55	1.00		0.00
Lane Grp Cap(c), veh/h	0	470	0	497	0	0	0	0	162	655	1044	0
V/C Ratio(X)	0.00	0.00	0.00	0.64	0.00	0.00	0.00	0.00	0.30	0.84	0.03	0.00
Avail Cap(c_a), veh/h	0	712	0	698	0	0	0	0	648	890	1825	0
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)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	14.7	0.0	0.0	0.0	0.0	17.7	12.2	4.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.0	5.6	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.4	4.6	0.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	16.0	0.0	0.0	0.0	0.0	18.7	17.7	4.2	0.0
LnGrp LOS	A	A	A	B	A	A	A	A	B	B	A	A
Approach Vol, veh/h		0			316			49			581	
Approach Delay, s/veh		0.0			16.0			18.7			17.1	
Approach LOS					B			B			B	

Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	9.5	8.0		14.6		27.5		14.6				
Change Period (Y+Rc), s	4.0	4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s	21.0	16.0		16.0		41.0		16.0				
Max Q Clear Time (g_c+I1), s	11.8	3.1		0.0		2.3		9.8				
Green Ext Time (p_c), s	1.5	0.1		0.0		0.1		1.0				

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Kimley»Horn

F. Cumulative Conditions Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1393	381	919	0	468	0	0	1066	700
Future Volume (veh/h)	0	0	0	1393	381	919	0	468	0	0	1066	700
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				1678	1678	1678	0	1678	0	0	1678	1678
Adj Flow Rate, veh/h				1288	528	0	0	468	0	0	1066	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				15	15	15	0	15	0	0	15	15
Cap, veh/h				1570	785		0	961	0	0	1741	
Arrive On Green				0.49	0.47	0.00	0.00	0.30	0.00	0.00	0.30	0.00
Sat Flow, veh/h				3196	1678	2844	0	3355	0	0	6006	1422
Grp Volume(v), veh/h				1288	528	0	0	468	0	0	1066	0
Grp Sat Flow(s),veh/h/ln				1598	1678	1422	0	1594	0	0	1443	1422
Q Serve(g_s), s				16.1	11.5	0.0	0.0	5.6	0.0	0.0	7.4	0.0
Cycle Q Clear(g_c), s				16.1	11.5	0.0	0.0	5.6	0.0	0.0	7.4	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1570	785		0	961	0	0	1741	
V/C Ratio(X)				0.82	0.67		0.00	0.49	0.00	0.00	0.61	
Avail Cap(c_a), veh/h				1773	891		0	3013	0	0	2869	
HCM Platoon Ratio				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	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				10.2	9.7	0.0	0.0	13.4	0.0	0.0	14.0	0.0
Incr Delay (d2), s/veh				2.7	1.4	0.0	0.0	0.1	0.0	0.0	0.1	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				4.6	3.4	0.0	0.0	1.7	0.0	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				12.8	11.0	0.0	0.0	13.5	0.0	0.0	14.2	0.0
LnGrp LOS				B	B		A	B	A	A	B	
Approach Vol, veh/h					1816	A		468			1066	A
Approach Delay, s/veh					12.3			13.5			14.2	
Approach LOS					B			B			B	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		19.8				19.8		27.0				
Change Period (Y+Rc), s		5.7				5.7		5.1				
Max Green Setting (Gmax), s		44.3				23.3		24.9				
Max Q Clear Time (g_c+I1), s		7.6				9.4		18.1				
Green Ext Time (p_c), s		2.3				4.7		3.8				

Intersection Summary		
HCM 6th Ctrl Delay	13.1	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	0	204	0	0	0	0	392	981	0	1557	0
Future Volume (veh/h)	126	0	204	0	0	0	0	392	981	0	1557	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	84	0	249				0	392	981	0	1557	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	187	0	334				0	3316	1812	0	3316	0
Arrive On Green	0.12	0.00	0.12				0.00	0.72	0.72	0.00	0.72	0.00
Sat Flow, veh/h	1598	0	2844				0	4731	2502	0	4882	0
Grp Volume(v), veh/h	84	0	249				0	392	981	0	1557	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1527	1251	0	1527	0
Q Serve(g_s), s	3.3	0.0	5.8				0.0	1.8	12.1	0.0	9.7	0.0
Cycle Q Clear(g_c), s	3.3	0.0	5.8				0.0	1.8	12.1	0.0	9.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	187	0	334				0	3316	1812	0	3316	0
V/C Ratio(X)	0.45	0.00	0.75				0.00	0.12	0.54	0.00	0.47	0.00
Avail Cap(c_a), veh/h	467	0	831				0	3316	1812	0	3316	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	28.0	0.0	29.1				0.0	2.8	4.3	0.0	3.9	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.3				0.0	0.1	1.2	0.0	0.5	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	1.3	0.0	1.9				0.0	0.4	2.2	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.6	0.0	30.3				0.0	2.9	5.4	0.0	4.4	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		333						1373			1557	
Approach Delay, s/veh		29.9						4.7			4.4	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	13.1	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	14.1	7.8	11.7
Green Ext Time (p_c), s	5.0	0.1	10.8

Intersection Summary	
HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	25	257	874	85	299	77	322	360	219	1092	31
Future Volume (veh/h)	33	25	257	874	85	299	77	322	360	219	1092	31
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1870	1870	1678	1678	1870	1870	1870	1678	1870	1678
Adj Flow Rate, veh/h	33	25	257	874	85	299	77	322	360	219	1092	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	2	2	15	15	2	2	2	15	2	15
Cap, veh/h	107	200	189	945	546	462	113	1177	924	208	1191	476
Arrive On Green	0.07	0.12	0.12	0.27	0.33	0.33	0.06	0.33	0.33	0.07	0.34	0.34
Sat Flow, veh/h	1598	1678	1585	3456	1678	1419	1781	3554	2790	3100	3554	1422
Grp Volume(v), veh/h	33	25	257	874	85	299	77	322	360	219	1092	31
Grp Sat Flow(s),veh/h/ln	1598	1678	1585	1728	1678	1419	1781	1777	1395	1550	1777	1422
Q Serve(g_s), s	2.6	1.8	16.0	33.0	4.8	24.1	5.7	8.9	13.3	9.0	39.5	2.0
Cycle Q Clear(g_c), s	2.6	1.8	16.0	33.0	4.8	24.1	5.7	8.9	13.3	9.0	39.5	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	200	189	945	546	462	113	1177	924	208	1191	476
V/C Ratio(X)	0.31	0.12	1.36	0.93	0.16	0.65	0.68	0.27	0.39	1.05	0.92	0.07
Avail Cap(c_a), veh/h	107	200	189	1031	588	498	120	1246	978	208	1246	499
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	59.5	52.8	59.0	47.4	32.1	38.6	61.5	33.0	34.4	62.5	42.8	30.3
Incr Delay (d2), s/veh	1.6	0.3	191.6	13.0	0.1	2.6	13.8	0.1	0.3	76.8	10.5	0.1
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	1.1	0.8	16.3	15.4	1.9	8.5	3.0	3.9	4.4	5.8	19.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	53.0	250.6	60.3	32.2	41.2	75.3	33.1	34.7	139.3	53.3	30.3
LnGrp LOS	E	D	F	E	C	D	E	C	C	F	D	C
Approach Vol, veh/h		315			1258			759			1342	
Approach Delay, s/veh		215.0			53.9			38.1			66.8	
Approach LOS		F			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.4	43.6	23.0	15.5	51.9	16.0	50.6
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	9.0	47.0	40.0	16.0	9.0	47.0	9.0	47.0
Max Q Clear Time (g_c+I1), s	11.0	15.3	35.0	18.0	7.7	41.5	4.6	26.1
Green Ext Time (p_c), s	0.0	3.9	1.7	0.0	0.0	3.4	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	69.2
HCM 6th LOS	E



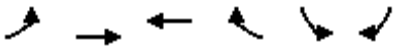
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	48	33	19	438	346	163	176	80	127	68	269
Future Volume (veh/h)	213	48	33	19	438	346	163	176	80	127	68	269
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	213	48	33	19	438	346	163	176	80	127	68	269
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	226	206	175	466	495	420	194	515	224	156	341	304
Arrive On Green	0.14	0.12	0.12	0.29	0.30	0.30	0.12	0.24	0.24	0.10	0.21	0.21
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	2160	942	1598	1594	1422
Grp Volume(v), veh/h	213	48	33	19	438	346	163	128	128	127	68	269
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	1594	1508	1598	1594	1422
Q Serve(g_s), s	10.7	2.1	1.3	0.7	20.2	18.4	8.1	5.4	5.7	6.3	2.8	14.9
Cycle Q Clear(g_c), s	10.7	2.1	1.3	0.7	20.2	18.4	8.1	5.4	5.7	6.3	2.8	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.62	1.00		1.00
Lane Grp Cap(c), veh/h	226	206	175	466	495	420	194	380	359	156	341	304
V/C Ratio(X)	0.94	0.23	0.19	0.04	0.88	0.82	0.84	0.34	0.36	0.82	0.20	0.88
Avail Cap(c_a), veh/h	226	531	450	466	531	450	206	380	359	206	369	329
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	34.6	32.2	18.1	20.6	27.3	26.7	34.9	25.6	25.8	36.0	26.2	31.0
Incr Delay (d2), s/veh	43.9	0.8	0.7	0.0	16.1	11.9	24.4	0.7	0.9	16.9	0.4	23.2
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	6.6	0.8	0.6	0.2	9.5	7.3	4.4	2.1	2.1	3.1	1.1	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.5	33.0	18.8	20.7	43.4	38.6	59.3	26.4	26.6	52.9	26.6	54.2
LnGrp LOS	E	C	B	C	D	D	E	C	C	D	C	D
Approach Vol, veh/h		294			803			419			464	
Approach Delay, s/veh		64.3			40.8			39.3			49.8	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	15.8	11.9	24.1	15.5	29.8	13.9	22.1
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	4.5	* 26	10.5	* 19	11.5	25.7	10.5	* 19
Max Q Clear Time (g_c+I2), s	2.7	4.1	8.3	7.7	12.7	22.2	10.1	16.9
Green Ext Time (p_c), s	0.0	0.4	0.1	1.4	0.0	1.8	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	46.1
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	234	775	66	15	28
Future Volume (veh/h)	21	234	775	66	15	28
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	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	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	21	234	775	66	15	28
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	39	972	844	715	511	455
Arrive On Green	0.02	0.56	0.48	0.48	0.31	0.31
Sat Flow, veh/h	1668	1752	1752	1485	1668	1485
Grp Volume(v), veh/h	21	234	775	66	15	28
Grp Sat Flow(s),veh/h/ln	1668	1752	1752	1485	1668	1485
Q Serve(g_s), s	1.0	5.5	32.9	1.9	0.5	1.1
Cycle Q Clear(g_c), s	1.0	5.5	32.9	1.9	0.5	1.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	39	972	844	715	511	455
V/C Ratio(X)	0.54	0.24	0.92	0.09	0.03	0.06
Avail Cap(c_a), veh/h	175	972	844	715	511	455
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.35	0.35	1.00	1.00
Uniform Delay (d), s/veh	38.6	9.1	19.3	11.2	19.4	19.6
Incr Delay (d2), s/veh	9.8	0.5	7.1	0.1	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	2.0	13.6	0.6	0.2	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.4	9.7	26.3	11.3	19.5	19.9
LnGrp LOS	D	A	C	B	B	B
Approach Vol, veh/h		255	841		43	
Approach Delay, s/veh		12.8	25.1		19.8	
Approach LOS		B	C		B	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	50.9			5.9	45.0	29.1
Change Period (Y+Rc), s	6.5			4.0	6.5	4.6
Max Green Setting (Gmax), s	44.4			8.4	32.0	24.5
Max Q Clear Time (g_c+I1), s	7.5			3.0	34.9	3.1
Green Ext Time (p_c), s	1.5			0.0	0.0	0.1

Intersection Summary		
HCM 6th Ctrl Delay		22.2
HCM 6th LOS		C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	155	93	80	929	22	38	32	10	87	1	49
Future Volume (veh/h)	77	155	93	80	929	22	38	32	10	87	1	49
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	77	155	93	80	929	22	38	32	10	87	1	49
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	97	597	358	100	985	23	58	385	172	109	487	217
Arrive On Green	0.06	0.54	0.54	0.06	0.54	0.54	0.03	0.12	0.12	0.07	0.15	0.15
Sat Flow, veh/h	1668	1095	657	1668	1820	43	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	77	0	248	80	0	951	38	32	10	87	1	49
Grp Sat Flow(s),veh/h/ln	1668	0	1752	1668	0	1863	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	3.9	0.0	6.5	4.1	0.0	41.4	1.9	0.7	0.5	4.4	0.0	2.5
Cycle Q Clear(g_c), s	3.9	0.0	6.5	4.1	0.0	41.4	1.9	0.7	0.5	4.4	0.0	2.5
Prop In Lane	1.00		0.38	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	97	0	954	100	0	1008	58	385	172	109	487	217
V/C Ratio(X)	0.80	0.00	0.26	0.80	0.00	0.94	0.66	0.08	0.06	0.80	0.00	0.23
Avail Cap(c_a), veh/h	112	0	1016	106	0	1062	108	755	337	122	782	349
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	0.0	10.4	40.1	0.0	18.6	41.2	34.1	34.0	39.8	31.5	32.6
Incr Delay (d2), s/veh	28.5	0.0	0.1	32.0	0.0	15.5	12.0	0.1	0.1	27.7	0.0	0.5
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	2.4	0.0	2.4	2.5	0.0	20.1	1.0	0.3	0.2	2.6	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	0.0	10.6	72.1	0.0	34.0	53.2	34.2	34.2	67.5	31.5	33.1
LnGrp LOS	E	A	B	E	A	C	D	C	C	E	C	C
Approach Vol, veh/h		325			1031			80			137	
Approach Delay, s/veh		24.3			37.0			43.2			55.0	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	15.8	9.2	51.8	7.0	18.5	9.5	51.5
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	6.3	19.6	5.5	* 50	5.6	20.3	5.8	* 49
Max Q Clear Time (g_c+I1), s	5.4	2.7	6.1	8.5	3.9	4.5	5.9	43.4
Green Ext Time (p_c), s	0.0	0.1	0.0	1.7	0.0	0.1	0.0	3.4

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	82	174	463	1569	1154	343
Future Volume (veh/h)	82	174	463	1569	1154	343
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	174	463	1569	1154	343
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	268	238	529	3415	1547	480
Arrive On Green	0.15	0.15	0.30	0.67	0.30	0.30
Sat Flow, veh/h	1781	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	82	174	463	1569	1154	343
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1585
Q Serve(g_s), s	2.4	6.1	14.3	8.5	11.8	11.2
Cycle Q Clear(g_c), s	2.4	6.1	14.3	8.5	11.8	11.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	268	238	529	3415	1547	480
V/C Ratio(X)	0.31	0.73	0.88	0.46	0.75	0.71
Avail Cap(c_a), veh/h	952	847	706	4269	1892	587
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	22.0	23.5	19.4	4.6	18.2	18.0
Incr Delay (d2), s/veh	0.6	4.3	9.4	0.1	1.3	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.3	6.7	1.9	4.3	4.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.6	27.8	28.8	4.7	19.5	21.2
LnGrp LOS	C	C	C	A	B	C
Approach Vol, veh/h	256			2032	1497	
Approach Delay, s/veh	26.1			10.2	19.9	
Approach LOS	C			B	B	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		44.6		13.4	21.2	23.4
Change Period (Y+Rc), s		5.8		* 4.7	4.0	5.8
Max Green Setting (Gmax), s		48.5		* 31	23.0	21.5
Max Q Clear Time (g_c+I1), s		10.5		8.1	16.3	13.8
Green Ext Time (p_c), s		16.5		0.8	0.9	3.8

Intersection Summary	
HCM 6th Ctrl Delay	15.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	74	313	1990	28	116	1218
Future Volume (veh/h)	74	313	1990	28	116	1218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	313	1990	28	116	1218
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	414	368	2480	770	147	3184
Arrive On Green	0.23	0.23	0.49	0.49	0.08	0.62
Sat Flow, veh/h	1781	1585	5274	1585	1781	5274
Grp Volume(v), veh/h	74	313	1990	28	116	1218
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1585	1781	1702
Q Serve(g_s), s	2.4	13.7	23.9	0.7	4.6	8.6
Cycle Q Clear(g_c), s	2.4	13.7	23.9	0.7	4.6	8.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	414	368	2480	770	147	3184
V/C Ratio(X)	0.18	0.85	0.80	0.04	0.79	0.38
Avail Cap(c_a), veh/h	759	675	2631	817	171	3403
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	22.4	26.7	15.8	9.8	32.7	6.8
Incr Delay (d2), s/veh	0.2	5.5	1.8	0.0	18.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.5	8.6	0.2	2.7	2.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.6	32.3	17.5	9.8	51.4	6.9
LnGrp LOS	C	C	B	A	D	A
Approach Vol, veh/h	387		2018			1334
Approach Delay, s/veh	30.4		17.4			10.7
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.0	41.2				51.2	21.6
Change Period (Y+Rc), s	4.0	5.8				5.8	4.7
Max Green Setting (Gmax), s	7.0	37.5				48.5	31.0
Max Q Clear Time (g_c+I1), s	5.6	25.9				10.6	15.7
Green Ext Time (p_c), s	0.0	9.5				11.5	1.2

Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B



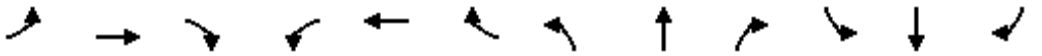
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	3	17	204	1	410	127	1697	20	250	1019	48
Future Volume (veh/h)	7	3	17	204	1	410	127	1697	20	250	1019	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	3	17	204	1	410	127	1697	20	250	1019	48
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	139	118	240	374	317	160	2119	658	286	2578	800
Arrive On Green	0.01	0.07	0.07	0.13	0.20	0.20	0.09	0.41	0.41	0.16	0.50	0.50
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	7	3	17	204	1	410	127	1697	20	250	1019	48
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	0.4	0.1	0.9	10.5	0.0	12.4	6.6	27.4	0.4	12.9	11.6	1.5
Cycle Q Clear(g_c), s	0.4	0.1	0.9	10.5	0.0	12.4	6.6	27.4	0.4	12.9	11.6	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	139	118	240	374	317	160	2119	658	286	2578	800
V/C Ratio(X)	0.44	0.02	0.14	0.85	0.00	1.29	0.79	0.80	0.03	0.87	0.40	0.06
Avail Cap(c_a), veh/h	104	695	589	284	883	749	331	2336	725	348	2578	800
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	46.5	40.4	40.8	39.8	30.2	16.4	42.0	24.1	5.7	38.6	14.4	11.9
Incr Delay (d2), s/veh	18.2	0.1	0.6	18.7	0.0	138.9	8.6	1.9	0.0	18.4	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.4	5.8	0.0	16.6	3.2	10.9	0.3	7.0	4.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	40.5	41.4	58.6	30.2	155.3	50.6	26.1	5.7	57.0	14.5	11.9
LnGrp LOS	E	D	D	E	C	F	D	C	A	E	B	B
Approach Vol, veh/h		27			615			1844			1317	
Approach Delay, s/veh		47.3			123.0			27.5			22.5	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	44.9	16.7	11.7	12.5	53.4	4.8	23.5
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	10.4	* 43	15.0	* 35	17.5	44.0	5.5	* 45
Max Q Clear Time (g_c+I1), s	14.9	29.4	12.5	2.9	8.6	13.6	2.4	14.4
Green Ext Time (p_c), s	0.2	9.7	0.1	0.0	0.2	8.8	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1021	9	1367	0	697	0	0	1456	88
Future Volume (veh/h)	0	0	0	1021	9	1367	0	697	0	0	1456	88
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				1678	1678	1678	0	1678	0	0	1678	1678
Adj Flow Rate, veh/h				1027	0	0	0	697	0	0	1456	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				15	15	15	0	15	0	0	15	15
Cap, veh/h				1596	0		0	1330	0	0	2408	
Arrive On Green				0.33	0.00	0.00	0.00	0.42	0.00	0.00	0.42	0.00
Sat Flow, veh/h				4793	0	2844	0	3355	0	0	6006	1422
Grp Volume(v), veh/h				1027	0	0	0	697	0	0	1456	0
Grp Sat Flow(s),veh/h/ln				1598	0	1422	0	1594	0	0	1443	1422
Q Serve(g_s), s				7.1	0.0	0.0	0.0	6.3	0.0	0.0	7.6	0.0
Cycle Q Clear(g_c), s				7.1	0.0	0.0	0.0	6.3	0.0	0.0	7.6	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1596	0		0	1330	0	0	2408	
V/C Ratio(X)				0.64	0.00		0.00	0.52	0.00	0.00	0.60	
Avail Cap(c_a), veh/h				3210	0		0	3637	0	0	3463	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.0	0.0	0.0	0.0	8.4	0.0	0.0	8.8	0.0
Incr Delay (d2), s/veh				0.3	0.0	0.0	0.0	0.1	0.0	0.0	0.1	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				1.9	0.0	0.0	0.0	1.5	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				11.3	0.0	0.0	0.0	8.6	0.0	0.0	8.9	0.0
LnGrp LOS				B	A		A	A	A	A	A	
Approach Vol, veh/h					1027	A		697			1456	A
Approach Delay, s/veh					11.3			8.6			8.9	
Approach LOS					B			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	21.9		21.9		16.9			
Change Period (Y+Rc), s	5.7		5.7		5.1			
Max Green Setting (Gmax), s	44.3		23.3		24.9			
Max Q Clear Time (g_c+I1), s	8.3		9.6		9.1			
Green Ext Time (p_c), s	3.6		6.6		2.8			

Intersection Summary		
HCM 6th Ctrl Delay	9.6	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	0	86	0	0	0	0	538	1946	0	1485	0
Future Volume (veh/h)	182	0	86	0	0	0	0	538	1946	0	1485	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	209	0	57				0	538	1946	0	1485	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	425	0	189				0	3433	1875	0	3433	0
Arrive On Green	0.13	0.00	0.13				0.00	0.75	0.75	0.00	0.75	0.00
Sat Flow, veh/h	3196	0	1422				0	4731	2502	0	4882	0
Grp Volume(v), veh/h	209	0	57				0	538	1946	0	1485	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1527	1251	0	1527	0
Q Serve(g_s), s	4.1	0.0	2.5				0.0	2.3	51.0	0.0	8.2	0.0
Cycle Q Clear(g_c), s	4.1	0.0	2.5				0.0	2.3	51.0	0.0	8.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	425	0	189				0	3433	1875	0	3433	0
V/C Ratio(X)	0.49	0.00	0.30				0.00	0.16	1.04	0.00	0.43	0.00
Avail Cap(c_a), veh/h	986	0	439				0	3433	1875	0	3433	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.4	0.0	26.6				0.0	2.4	8.5	0.0	3.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.3				0.0	0.1	31.3	0.0	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	1.5	0.0	0.8				0.0	0.4	15.1	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	27.0				0.0	2.5	39.8	0.0	3.6	0.0
LnGrp LOS	C	A	C				A	A	F	A	A	A
Approach Vol, veh/h		266						2484			1485	
Approach Delay, s/veh		27.5						31.7			3.6	
Approach LOS		C						C			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	13.0	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	53.0	6.1	10.2
Green Ext Time (p_c), s	0.0	0.1	10.1

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



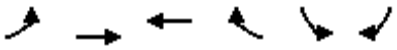
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	550	372	169	200	286	49	366	61	506	728	353
Future Volume (veh/h)	338	550	372	169	200	286	49	366	61	506	728	353
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	338	550	372	169	200	286	49	366	61	506	728	353
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	327	574	457	167	406	315	80	441	73	487	865	419
Arrive On Green	0.20	0.34	0.32	0.10	0.24	0.22	0.05	0.16	0.15	0.30	0.42	0.40
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	2738	452	1598	2082	1008
Grp Volume(v), veh/h	338	550	372	169	200	286	49	212	215	506	557	524
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	1594	1596	1598	1594	1496
Q Serve(g_s), s	24.5	38.4	28.8	12.5	12.3	23.5	3.6	15.4	15.7	36.5	37.6	37.8
Cycle Q Clear(g_c), s	24.5	38.4	28.8	12.5	12.3	23.5	3.6	15.4	15.7	36.5	37.6	37.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.28	1.00		0.67
Lane Grp Cap(c), veh/h	327	574	457	167	406	315	80	257	257	487	662	622
V/C Ratio(X)	1.03	0.96	0.81	1.01	0.49	0.91	0.61	0.82	0.84	1.04	0.84	0.84
Avail Cap(c_a), veh/h	327	574	457	167	406	315	87	259	260	487	662	622
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	47.6	38.6	37.4	53.6	39.1	45.5	55.8	48.6	48.9	41.6	31.4	32.0
Incr Delay (d2), s/veh	58.9	27.4	11.3	73.3	1.3	29.2	10.6	19.7	21.3	51.4	9.9	10.5
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	14.8	19.4	11.4	8.3	5.1	10.8	1.7	7.5	7.8	21.1	16.0	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.6	66.0	48.6	127.0	40.4	74.7	66.4	68.3	70.3	93.0	41.3	42.5
LnGrp LOS	F	E	D	F	D	E	E	E	E	F	D	D
Approach Vol, veh/h		1260			655			476			1587	
Approach Delay, s/veh		71.8			77.7			69.0			58.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	44.3	39.0	22.5	26.0	32.3	8.5	53.0
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	10.0	38.5	35.0	* 18	22.0	26.5	5.0	* 48
Max Q Clear Time (g_c+I1), s	14.5	40.4	38.5	17.7	26.5	25.5	5.6	39.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.3	0.0	5.4

Intersection Summary	
HCM 6th Ctrl Delay	67.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	1050	497	57	67	100
Future Volume (veh/h)	50	1050	497	57	67	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	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	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	54	1141	540	62	73	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10
Cap, veh/h	83	1012	848	718	526	468
Arrive On Green	0.05	0.58	0.48	0.48	0.31	0.31
Sat Flow, veh/h	1668	1752	1752	1485	1668	1485
Grp Volume(v), veh/h	54	1141	540	62	73	109
Grp Sat Flow(s),veh/h/ln	1668	1752	1752	1485	1668	1485
Q Serve(g_s), s	2.5	46.2	18.4	1.8	2.5	4.3
Cycle Q Clear(g_c), s	2.5	46.2	18.4	1.8	2.5	4.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	83	1012	848	718	526	468
V/C Ratio(X)	0.65	1.13	0.64	0.09	0.14	0.23
Avail Cap(c_a), veh/h	177	1012	848	718	526	468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.80	0.80	1.00	1.00
Uniform Delay (d), s/veh	37.3	16.9	15.4	11.1	19.6	20.3
Incr Delay (d2), s/veh	0.8	58.9	2.9	0.2	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	32.1	7.4	0.6	1.0	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.1	75.8	18.3	11.3	20.2	21.4
LnGrp LOS	D	F	B	B	C	C
Approach Vol, veh/h		1195	602		182	
Approach Delay, s/veh		74.1	17.6		20.9	
Approach LOS		E	B		C	

Timer - Assigned Phs	2			5	6	8
Phs Duration (G+Y+Rc), s	50.9			7.5	43.4	29.1
Change Period (Y+Rc), s	6.5			4.0	6.5	4.6
Max Green Setting (Gmax), s	44.4			8.0	32.0	24.5
Max Q Clear Time (g_c+I1), s	48.2			4.5	20.4	6.3
Green Ext Time (p_c), s	0.0			0.0	2.9	0.5

Intersection Summary		
HCM 6th Ctrl Delay		52.0
HCM 6th LOS		D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	267	376	344	138	164	107	93	61	86	378	345	408
Future Volume (veh/h)	267	376	344	138	164	107	93	61	86	378	345	408
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	267	376	344	138	164	107	93	61	86	378	345	408
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	299	378	346	155	353	230	113	434	194	398	1002	447
Arrive On Green	0.18	0.42	0.42	0.09	0.33	0.33	0.07	0.13	0.13	0.24	0.30	0.30
Sat Flow, veh/h	1668	899	823	1668	1057	689	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	267	0	720	138	0	271	93	61	86	378	345	408
Grp Sat Flow(s),veh/h/ln	1668	0	1722	1668	0	1746	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	21.2	0.0	56.5	11.1	0.0	16.6	7.5	2.2	7.3	30.3	11.0	35.9
Cycle Q Clear(g_c), s	21.2	0.0	56.5	11.1	0.0	16.6	7.5	2.2	7.3	30.3	11.0	35.9
Prop In Lane	1.00		0.48	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	0	724	155	0	583	113	434	194	398	1002	447
V/C Ratio(X)	0.89	0.00	0.99	0.89	0.00	0.46	0.82	0.14	0.44	0.95	0.34	0.91
Avail Cap(c_a), veh/h	428	0	724	155	0	583	146	525	234	406	1043	465
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	0.0	39.3	60.8	0.0	35.7	62.4	52.3	54.4	50.8	37.0	45.7
Incr Delay (d2), s/veh	15.6	0.0	32.1	42.2	0.0	0.6	23.9	0.1	1.6	31.7	0.2	21.9
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	10.2	0.0	30.0	6.5	0.0	7.2	3.9	0.9	2.8	16.1	4.5	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.0	0.0	71.5	103.0	0.0	36.3	86.3	52.4	56.0	82.5	37.2	67.6
LnGrp LOS	E	A	E	F	A	D	F	D	E	F	D	E
Approach Vol, veh/h		987			409			240			1131	
Approach Delay, s/veh		71.1			58.8			66.9			63.3	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.4	21.7	16.6	61.0	13.2	44.8	28.3	49.3
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	33.0	19.6	12.6	* 56	11.9	40.7	34.3	* 34
Max Q Clear Time (g_c+I2), s	12.3	9.3	13.1	58.5	9.5	37.9	23.2	18.6
Green Ext Time (p_c), s	0.1	0.4	0.0	0.0	0.0	1.1	0.6	1.4

Intersection Summary	
HCM 6th Ctrl Delay	65.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	273	562	305	1615	1725	92
Future Volume (veh/h)	273	562	305	1615	1725	92
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	273	562	305	1615	1725	92
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	627	558	297	2854	1776	551
Arrive On Green	0.35	0.35	0.17	0.56	0.35	0.35
Sat Flow, veh/h	1781	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	273	562	305	1615	1725	92
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1585
Q Serve(g_s), s	10.6	31.7	15.0	18.4	29.9	3.6
Cycle Q Clear(g_c), s	10.6	31.7	15.0	18.4	29.9	3.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	627	558	297	2854	1776	551
V/C Ratio(X)	0.44	1.01	1.03	0.57	0.97	0.17
Avail Cap(c_a), veh/h	627	558	297	2854	1776	551
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	22.3	29.1	37.5	12.8	28.9	20.3
Incr Delay (d2), s/veh	0.5	39.7	59.5	0.3	15.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	29.1	11.3	6.5	14.1	1.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.8	68.9	97.0	13.1	44.0	20.5
LnGrp LOS	C	F	F	B	D	C
Approach Vol, veh/h	835			1920	1817	
Approach Delay, s/veh	53.8			26.4	42.8	
Approach LOS	D			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		54.3		35.7	19.0	35.3
Change Period (Y+Rc), s		5.8		* 4.7	4.0	5.8
Max Green Setting (Gmax), s		48.5		* 31	15.0	29.5
Max Q Clear Time (g_c+I1), s		20.4		33.7	17.0	31.9
Green Ext Time (p_c), s		14.9		0.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT	
Lane Configurations							
Traffic Volume (veh/h)	206	100	1917	302	300	1900	
Future Volume (veh/h)	206	100	1917	302	300	1900	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870	
Adj Flow Rate, veh/h	206	100	1917	302	300	1900	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Percent Heavy Veh, %	2	2	2	2	2	2	
Cap, veh/h	280	250	2504	777	344	3761	
Arrive On Green	0.16	0.16	0.49	0.49	0.19	0.74	
Sat Flow, veh/h	1781	1585	5274	1585	1781	5274	
Grp Volume(v), veh/h	206	100	1917	302	300	1900	
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1585	1781	1702	
Q Serve(g_s), s	8.3	4.3	23.1	9.0	12.3	11.8	
Cycle Q Clear(g_c), s	8.3	4.3	23.1	9.0	12.3	11.8	
Prop In Lane	1.00	1.00		1.00	1.00		
Lane Grp Cap(c), veh/h	280	250	2504	777	344	3761	
V/C Ratio(X)	0.73	0.40	0.77	0.39	0.87	0.51	
Avail Cap(c_a), veh/h	748	666	2653	823	404	4080	
HCM Platoon Ratio	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	
Uniform Delay (d), s/veh	30.3	28.6	15.7	12.1	29.5	4.2	
Incr Delay (d2), s/veh	3.7	1.0	1.3	0.3	16.6	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.7	1.6	8.3	3.0	6.6	2.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	34.0	29.6	17.0	12.4	46.1	4.3	
LnGrp LOS	C	C	B	B	D	A	
Approach Vol, veh/h	306		2219			2200	
Approach Delay, s/veh	32.6		16.4			10.0	
Approach LOS	C		B			A	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	18.6	41.0				59.6	15.9
Change Period (Y+Rc), s	4.0	5.8				5.8	4.7
Max Green Setting (Gmax), s	17.1	37.4				58.5	31.0
Max Q Clear Time (g_c+I1), s	14.3	25.1				13.8	10.3
Green Ext Time (p_c), s	0.3	10.1				23.6	0.9

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	322	285	172	3	343	177	1572	179	368	1884	47
Future Volume (veh/h)	244	322	285	172	3	343	177	1572	179	368	1884	47
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	322	285	172	3	343	177	1572	179	368	1884	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	481	407	195	433	367	192	1658	515	359	2138	664
Arrive On Green	0.13	0.26	0.26	0.11	0.23	0.23	0.11	0.32	0.32	0.20	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	244	322	285	172	3	343	177	1572	179	368	1884	47
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	20.0	23.0	24.2	14.2	0.2	31.6	14.6	44.7	12.8	30.0	50.6	2.6
Cycle Q Clear(g_c), s	20.0	23.0	24.2	14.2	0.2	31.6	14.6	44.7	12.8	30.0	50.6	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	481	407	195	433	367	192	1658	515	359	2138	664
V/C Ratio(X)	1.02	0.67	0.70	0.88	0.01	0.93	0.92	0.95	0.35	1.02	0.88	0.07
Avail Cap(c_a), veh/h	239	481	407	216	449	380	192	1658	515	359	2138	664
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	64.4	49.6	50.1	65.3	44.0	56.0	65.8	49.0	38.2	59.4	39.8	25.9
Incr Delay (d2), s/veh	63.1	3.6	5.3	30.5	0.0	29.5	44.0	12.0	0.4	53.9	4.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	11.3	10.3	8.1	0.1	15.6	9.0	20.8	5.1	18.9	21.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.5	53.2	55.3	95.8	44.0	85.5	109.8	61.1	38.6	113.3	44.5	25.9
LnGrp LOS	F	D	E	F	D	F	F	E	D	F	D	C
Approach Vol, veh/h		851			518			1928			2299	
Approach Delay, s/veh		75.2			88.7			63.4			55.1	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	52.3	20.2	42.2	20.0	66.3	24.0	38.5
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	30.0	46.5	18.0	* 37	16.0	60.5	20.0	* 35
Max Q Clear Time (g_c+I2), s	32.0	46.7	16.2	26.2	16.6	52.6	22.0	33.6
Green Ext Time (p_c), s	0.0	0.0	0.1	2.3	0.0	6.6	0.0	0.2

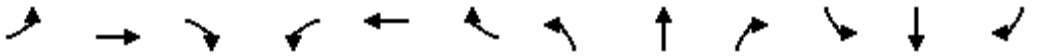
Intersection Summary	
HCM 6th Ctrl Delay	64.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Kimley»Horn

G. Cumulative Plus Project Conditions Synchro Outputs



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1446	381	919	1	470	0	0	1105	700
Future Volume (veh/h)	0	0	0	1446	381	919	1	470	0	0	1105	700
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				1332	541	0	1	470	0	0	1105	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				1579	791		75	954	0	0	1762	
Arrive On Green				0.49	0.47	0.00	0.31	0.31	0.00	0.00	0.31	0.00
Sat Flow, veh/h				3196	1678	2844	1	3200	0	0	6006	1422
Grp Volume(v), veh/h				1332	541	0	253	218	0	0	1105	0
Grp Sat Flow(s),veh/h/ln				1598	1678	1422	1675	1450	0	0	1443	1422
Q Serve(g_s), s				17.5	12.2	0.0	0.0	6.0	0.0	0.0	8.0	0.0
Cycle Q Clear(g_c), s				17.5	12.2	0.0	6.0	6.0	0.0	0.0	8.0	0.0
Prop In Lane				1.00		1.00	0.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1579	791		586	443	0	0	1762	
V/C Ratio(X)				0.84	0.68		0.43	0.49	0.00	0.00	0.63	
Avail Cap(c_a), veh/h				1717	863		1599	1328	0	0	2779	
HCM Platoon Ratio				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	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				10.6	10.0	0.0	13.7	13.7	0.0	0.0	14.4	0.0
Incr Delay (d2), s/veh				3.6	1.7	0.0	0.2	0.3	0.0	0.0	0.1	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				5.2	3.7	0.0	2.0	1.7	0.0	0.0	2.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				14.2	11.7	0.0	13.9	14.1	0.0	0.0	14.6	0.0
LnGrp LOS				B	B		B	B	A	A	B	
Approach Vol, veh/h					1873	A		471			1105	A
Approach Delay, s/veh					13.5			14.0			14.6	
Approach LOS					B			B			B	

Timer - Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		20.5				20.5		27.9				
Change Period (Y+Rc), s		5.7				5.7		5.1				
Max Green Setting (Gmax), s		44.3				23.3		24.9				
Max Q Clear Time (g_c+I1), s		8.0				10.0		19.5				
Green Ext Time (p_c), s		1.9				4.8		3.3				

Intersection Summary		
HCM 6th Ctrl Delay	13.9	
HCM 6th LOS	B	

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	0	222	0	0	0	0	395	984	0	1649	0
Future Volume (veh/h)	126	0	222	0	0	0	0	395	984	0	1649	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	84	0	267				0	395	984	0	1649	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	194	0	346				0	3301	1803	0	3301	0
Arrive On Green	0.12	0.00	0.12				0.00	0.72	0.72	0.00	0.72	0.00
Sat Flow, veh/h	1598	0	2844				0	4731	2502	0	4882	0
Grp Volume(v), veh/h	84	0	267				0	395	984	0	1649	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1527	1251	0	1527	0
Q Serve(g_s), s	3.3	0.0	6.2				0.0	1.8	12.4	0.0	10.8	0.0
Cycle Q Clear(g_c), s	3.3	0.0	6.2				0.0	1.8	12.4	0.0	10.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	194	0	346				0	3301	1803	0	3301	0
V/C Ratio(X)	0.43	0.00	0.77				0.00	0.12	0.55	0.00	0.50	0.00
Avail Cap(c_a), veh/h	465	0	827				0	3301	1803	0	3301	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.9	0.0	29.1				0.0	2.9	4.4	0.0	4.2	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.4				0.0	0.1	1.2	0.0	0.5	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	1.3	0.0	2.1				0.0	0.4	2.3	0.0	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	0.0	30.5				0.0	3.0	5.6	0.0	4.7	0.0
LnGrp LOS	C	A	C				A	A	A	A	A	A
Approach Vol, veh/h		351						1379			1649	
Approach Delay, s/veh		30.0						4.8			4.7	
Approach LOS		C						A			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	13.4	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	14.4	8.2	12.8
Green Ext Time (p_c), s	5.0	0.1	11.7

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	25	257	880	85	305	77	322	464	319	1092	31
Future Volume (veh/h)	33	25	257	880	85	305	77	322	464	319	1092	31
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1870	1870	1678	1678	1870	1870	1870	1678	1870	1678
Adj Flow Rate, veh/h	33	25	257	880	85	305	77	322	464	319	1092	31
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	2	2	15	15	2	2	2	15	2	15
Cap, veh/h	107	200	189	949	548	464	113	1176	923	208	1189	476
Arrive On Green	0.07	0.12	0.12	0.27	0.33	0.33	0.06	0.33	0.33	0.07	0.33	0.33
Sat Flow, veh/h	1598	1678	1585	3456	1678	1419	1781	3554	2790	3100	3554	1422
Grp Volume(v), veh/h	33	25	257	880	85	305	77	322	464	319	1092	31
Grp Sat Flow(s),veh/h/ln	1598	1678	1585	1728	1678	1419	1781	1777	1395	1550	1777	1422
Q Serve(g_s), s	2.6	1.8	16.0	33.3	4.8	24.8	5.7	9.0	17.9	9.0	39.7	2.0
Cycle Q Clear(g_c), s	2.6	1.8	16.0	33.3	4.8	24.8	5.7	9.0	17.9	9.0	39.7	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	107	200	189	949	548	464	113	1176	923	208	1189	476
V/C Ratio(X)	0.31	0.13	1.36	0.93	0.16	0.66	0.68	0.27	0.50	1.54	0.92	0.07
Avail Cap(c_a), veh/h	107	200	189	1029	587	496	119	1243	976	208	1243	497
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	59.7	52.9	59.2	47.4	32.1	38.8	61.6	33.1	36.1	62.7	42.9	30.4
Incr Delay (d2), s/veh	1.6	0.3	192.9	13.3	0.1	2.9	14.0	0.1	0.4	264.0	10.7	0.1
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	1.1	0.8	16.4	15.6	1.9	8.7	3.0	3.9	6.0	11.2	19.1	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.3	53.2	252.1	60.7	32.2	41.7	75.6	33.2	36.5	326.7	53.6	30.5
LnGrp LOS	E	D	F	E	C	D	E	C	D	F	D	C
Approach Vol, veh/h		315			1270			863			1442	
Approach Delay, s/veh		216.3			54.2			38.8			113.5	
Approach LOS		F			D			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	51.5	43.9	23.0	15.5	52.0	16.0	50.9
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	9.0	47.0	40.0	16.0	9.0	47.0	9.0	47.0
Max Q Clear Time (g_c+I1), s	11.0	19.9	35.3	18.0	7.7	41.7	4.6	26.8
Green Ext Time (p_c), s	0.0	4.3	1.6	0.0	0.0	3.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	85.9
HCM 6th LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	252	33	20	450	346	163	176	98	136	68	269
Future Volume (veh/h)	213	252	33	20	450	346	163	176	98	136	68	269
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	213	252	33	20	450	346	163	176	98	136	68	269
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	224	313	265	368	501	425	194	466	247	165	341	304
Arrive On Green	0.14	0.19	0.19	0.23	0.30	0.30	0.12	0.23	0.23	0.10	0.21	0.21
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	2012	1068	1598	1594	1422
Grp Volume(v), veh/h	213	252	33	20	450	346	163	138	136	136	68	269
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	1594	1486	1598	1594	1422
Q Serve(g_s), s	10.8	11.8	1.1	0.8	21.1	18.5	8.2	5.9	6.4	6.8	2.9	15.0
Cycle Q Clear(g_c), s	10.8	11.8	1.1	0.8	21.1	18.5	8.2	5.9	6.4	6.8	2.9	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	224	313	265	368	501	425	194	369	344	165	341	304
V/C Ratio(X)	0.95	0.80	0.12	0.05	0.90	0.81	0.84	0.37	0.40	0.82	0.20	0.89
Avail Cap(c_a), veh/h	224	526	446	368	526	446	205	369	344	205	366	326
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	34.9	31.9	14.6	24.6	27.5	26.6	35.2	26.5	26.6	36.0	26.4	31.2
Incr Delay (d2), s/veh	45.9	6.8	0.3	0.1	18.1	11.3	24.7	0.9	1.1	19.2	0.4	23.7
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	6.8	5.0	0.5	0.3	10.1	7.3	4.4	2.3	2.3	3.5	1.1	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.8	38.6	14.9	24.6	45.6	37.9	59.9	27.4	27.7	55.1	26.9	55.0
LnGrp LOS	F	D	B	C	D	D	E	C	C	E	C	D
Approach Vol, veh/h		498			816			437			473	
Approach Delay, s/veh		55.1			41.9			39.6			51.0	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.7	21.1	12.5	23.7	15.5	30.3	13.9	22.2
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	14.5	* 26	10.5	* 19	11.5	25.7	10.5	* 19
Max Q Clear Time (g_c+I2), s	12.8	13.8	8.8	8.4	12.8	23.1	10.2	17.0
Green Ext Time (p_c), s	0.0	1.5	0.1	1.5	0.0	1.4	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	46.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	420	46	145	781	66	7	0	4	15	0	28
Future Volume (veh/h)	21	420	46	145	781	66	7	0	4	15	0	28
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1870	1870	1752	1752	1870	1870	1870	1752	1870	1752
Adj Flow Rate, veh/h	21	420	50	158	781	66	8	0	4	15	0	28
Peak Hour Factor	1.00	1.00	0.92	0.92	1.00	1.00	0.92	0.92	0.92	1.00	0.92	1.00
Percent Heavy Veh, %	10	10	2	2	10	10	2	2	2	10	2	10
Cap, veh/h	39	1877	894	120	2045	912	15	0	117	83	0	183
Arrive On Green	0.02	0.56	0.56	0.07	0.61	0.61	0.01	0.00	0.07	0.05	0.00	0.12
Sat Flow, veh/h	1668	3328	1585	1781	3328	1485	1781	0	1585	1668	0	1585
Grp Volume(v), veh/h	21	420	50	158	781	66	8	0	4	15	0	28
Grp Sat Flow(s),veh/h/ln	1668	1664	1585	1781	1664	1485	1781	0	1585	1668	0	1585
Q Serve(g_s), s	1.0	5.0	1.1	5.4	9.5	1.4	0.4	0.0	0.2	0.7	0.0	1.3
Cycle Q Clear(g_c), s	1.0	5.0	1.1	5.4	9.5	1.4	0.4	0.0	0.2	0.7	0.0	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	39	1877	894	120	2045	912	15	0	117	83	0	183
V/C Ratio(X)	0.54	0.22	0.06	1.31	0.38	0.07	0.55	0.00	0.03	0.18	0.00	0.15
Avail Cap(c_a), veh/h	104	1877	894	120	2045	912	89	0	476	83	0	476
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.6	8.7	7.9	37.3	7.8	6.2	39.5	0.0	34.4	36.4	0.0	31.9
Incr Delay (d2), s/veh	11.1	0.3	0.1	188.3	0.5	0.2	28.8	0.0	0.1	4.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.5	0.4	8.5	2.7	0.4	0.3	0.0	0.1	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.8	9.0	8.0	225.6	8.3	6.4	68.4	0.0	34.5	41.1	0.0	32.2
LnGrp LOS	D	A	A	F	A	A	E	A	C	D	A	C
Approach Vol, veh/h		491			1005			12			43	
Approach Delay, s/veh		10.6			42.4			57.1			35.3	
Approach LOS		B			D			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	51.6	8.0	10.5	5.9	55.6	4.7	13.8
Change Period (Y+Rc), s	4.5	6.5	4.0	4.6	4.0	6.5	4.0	4.6
Max Green Setting (Gmax), s	5.4	27.0	4.0	24.0	5.0	27.9	4.0	24.0
Max Q Clear Time (g_c+I1), s	7.4	7.0	2.7	2.2	3.0	11.5	2.4	3.3
Green Ext Time (p_c), s	0.0	2.5	0.0	0.0	0.0	4.7	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	370	69	0	992	0	7
Future Vol, veh/h	370	69	0	992	0	7
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, %	2	2	2	2	2	2
Mvmt Flow	402	75	0	1078	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	239
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	762
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	762
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	762	-	-	-
HCM Lane V/C Ratio	0.01	-	-	-
HCM Control Delay (s)	9.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	260	117	0	986	6	0
Future Volume (veh/h)	260	117	0	986	6	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	283	127	0	1072	127	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2149	959	4	2149	9999	9999
Arrive On Green	0.60	0.60	0.00	0.60	0.17	0.17
Sat Flow, veh/h	3647	1585	1781	1896	5908	4462592
Grp Volume(v), veh/h	283	127	0	1072	127	1
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	1.6	1.6	0.0	8.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	1.6	0.0	8.0	0.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2149	959	4	2149	9999	9036544
V/C Ratio(X)	0.13	0.13	0.00	0.50	0.00	0.00
Avail Cap(c_a), veh/h	2149	959	151	2149	9999	9036544
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	4.0	4.0	0.0	5.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.3	0.0	0.2	0.0	0.0
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	0.4	0.0	1.3	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.1	4.3	0.0	5.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	410			1072	128	
Approach Delay, s/veh	4.2			5.5	0.0	
Approach LOS	A			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	0.0	35.0		12.1		35.0
Change Period (Y+Rc), s	4.0	6.5		4.0		6.5
Max Green Setting (Gmax), s	4.0	28.5		18.0		36.5
Max Q Clear Time (g_c+I1), s	0.0	3.6		2.0		10.0
Green Ext Time (p_c), s	0.0	2.3		0.3		7.9

Intersection Summary		
HCM 6th Ctrl Delay		4.7
HCM 6th LOS		A



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	159	93	80	994	22	38	32	10	87	1	129
Future Volume (veh/h)	84	159	93	80	994	22	38	32	10	87	1	129
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	84	159	93	80	994	22	38	32	10	87	1	129
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	105	617	361	100	1000	22	57	371	165	109	474	212
Arrive On Green	0.06	0.56	0.56	0.06	0.55	0.55	0.03	0.11	0.11	0.07	0.14	0.14
Sat Flow, veh/h	1668	1107	647	1668	1823	40	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	84	0	252	80	0	1016	38	32	10	87	1	129
Grp Sat Flow(s),veh/h/ln	1668	0	1754	1668	0	1863	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	4.5	0.0	6.7	4.3	0.0	48.6	2.0	0.8	0.5	4.6	0.0	7.3
Cycle Q Clear(g_c), s	4.5	0.0	6.7	4.3	0.0	48.6	2.0	0.8	0.5	4.6	0.0	7.3
Prop In Lane	1.00		0.37	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	0	977	100	0	1022	57	371	165	109	474	212
V/C Ratio(X)	0.80	0.00	0.26	0.80	0.00	0.99	0.67	0.09	0.06	0.80	0.00	0.61
Avail Cap(c_a), veh/h	108	0	978	102	0	1022	104	726	324	117	752	335
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.5	0.0	10.3	41.7	0.0	20.1	42.9	35.8	35.7	41.4	33.0	36.2
Incr Delay (d2), s/veh	32.6	0.0	0.1	33.9	0.0	26.5	12.7	0.1	0.2	29.6	0.0	2.8
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	2.8	0.0	2.4	2.7	0.0	26.3	1.0	0.3	0.2	2.8	0.0	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	0.0	10.4	75.6	0.0	46.6	55.6	35.9	35.9	71.0	33.0	39.0
LnGrp LOS	E	A	B	E	A	D	E	D	D	E	C	D
Approach Vol, veh/h		336			1096			80			217	
Approach Delay, s/veh		26.3			48.8			45.2			51.8	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	15.8	9.4	54.8	7.1	18.6	10.2	54.0
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	6.3	19.6	5.5	* 50	5.6	20.3	5.8	* 49
Max Q Clear Time (g_c+I1), s	6.6	2.8	6.3	8.7	4.0	9.3	6.5	50.6
Green Ext Time (p_c), s	0.0	0.1	0.0	1.7	0.0	0.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	176	502	1569	1154	369
Future Volume (veh/h)	84	176	502	1569	1154	369
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	176	502	1569	1154	369
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	267	237	560	3469	1532	476
Arrive On Green	0.15	0.15	0.31	0.68	0.30	0.30
Sat Flow, veh/h	1781	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	84	176	502	1569	1154	369
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1585
Q Serve(g_s), s	2.6	6.5	16.5	8.7	12.6	13.0
Cycle Q Clear(g_c), s	2.6	6.5	16.5	8.7	12.6	13.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	267	237	560	3469	1532	476
V/C Ratio(X)	0.31	0.74	0.90	0.45	0.75	0.78
Avail Cap(c_a), veh/h	899	800	667	4031	1787	555
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	23.3	25.0	20.1	4.6	19.4	19.6
Incr Delay (d2), s/veh	0.7	4.5	13.3	0.1	1.6	5.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.3	8.2	2.0	4.7	5.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	24.0	29.5	33.4	4.7	21.0	25.5
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	260			2071	1523	
Approach Delay, s/veh	27.7			11.6	22.1	
Approach LOS	C			B	C	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		47.5		13.9	23.3	24.2
Change Period (Y+Rc), s		5.8		* 4.7	4.0	5.8
Max Green Setting (Gmax), s		48.5		* 31	23.0	21.5
Max Q Clear Time (g_c+I1), s		10.7		8.5	18.5	15.0
Green Ext Time (p_c), s		16.5		0.8	0.8	3.4

Intersection Summary		
HCM 6th Ctrl Delay	16.9	
HCM 6th LOS	B	

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	74	313	2029	28	116	1220
Future Volume (veh/h)	74	313	2029	28	116	1220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	313	2029	28	116	1220
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	413	368	2489	773	147	3190
Arrive On Green	0.23	0.23	0.49	0.49	0.08	0.62
Sat Flow, veh/h	1781	1585	5274	1585	1781	5274
Grp Volume(v), veh/h	74	313	2029	28	116	1220
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1585	1781	1702
Q Serve(g_s), s	2.4	13.8	24.8	0.7	4.7	8.6
Cycle Q Clear(g_c), s	2.4	13.8	24.8	0.7	4.7	8.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	413	368	2489	773	147	3190
V/C Ratio(X)	0.18	0.85	0.82	0.04	0.79	0.38
Avail Cap(c_a), veh/h	754	671	2614	811	170	3381
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	22.5	26.9	16.0	9.8	33.0	6.8
Incr Delay (d2), s/veh	0.2	5.6	2.0	0.0	18.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	5.5	8.9	0.2	2.7	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.7	32.5	18.0	9.8	51.9	6.9
LnGrp LOS	C	C	B	A	D	A
Approach Vol, veh/h	387		2057			1336
Approach Delay, s/veh	30.6		17.9			10.8
Approach LOS	C		B			B

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	10.1	41.5				51.6	21.7
Change Period (Y+Rc), s	4.0	5.8				5.8	4.7
Max Green Setting (Gmax), s	7.0	37.5				48.5	31.0
Max Q Clear Time (g_c+I1), s	6.7	26.8				10.6	15.8
Green Ext Time (p_c), s	0.0	8.9				11.5	1.2

Intersection Summary	
HCM 6th Ctrl Delay	16.7
HCM 6th LOS	B



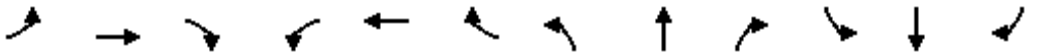
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	3	17	204	1	433	127	1713	20	251	1020	48
Future Volume (veh/h)	7	3	17	204	1	433	127	1713	20	251	1020	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	3	17	204	1	433	127	1713	20	251	1020	48
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	138	117	240	373	316	160	2124	659	287	2586	803
Arrive On Green	0.01	0.07	0.07	0.13	0.20	0.20	0.09	0.42	0.42	0.16	0.51	0.51
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	7	3	17	204	1	433	127	1713	20	251	1020	48
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	0.4	0.1	1.0	10.6	0.0	12.5	6.6	27.9	0.4	13.0	11.7	1.5
Cycle Q Clear(g_c), s	0.4	0.1	1.0	10.6	0.0	12.5	6.6	27.9	0.4	13.0	11.7	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	138	117	240	373	316	160	2124	659	287	2586	803
V/C Ratio(X)	0.44	0.02	0.15	0.85	0.00	1.37	0.79	0.81	0.03	0.87	0.39	0.06
Avail Cap(c_a), veh/h	104	692	586	282	879	745	329	2325	722	346	2586	803
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	46.7	40.6	41.0	40.0	30.3	16.5	42.2	24.3	5.7	38.8	14.4	11.9
Incr Delay (d2), s/veh	18.2	0.1	0.6	19.0	0.0	173.0	8.6	2.0	0.0	18.7	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.1	0.4	5.8	0.0	19.5	3.3	11.1	0.3	7.1	4.3	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.9	40.7	41.6	59.0	30.3	189.5	50.8	26.3	5.8	57.5	14.5	11.9
LnGrp LOS	E	D	D	E	C	F	D	C	A	E	B	B
Approach Vol, veh/h		27			638			1860			1319	
Approach Delay, s/veh		47.5			147.5			27.8			22.6	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	45.2	16.7	11.7	12.5	53.7	4.8	23.6
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	10.4	* 43	15.0	* 35	17.5	44.0	5.5	* 45
Max Q Clear Time (g_c+I1), s	15.0	29.9	12.6	3.0	8.6	13.7	2.4	14.5
Green Ext Time (p_c), s	0.2	9.5	0.1	0.0	0.2	8.8	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1023	9	1367	3	705	0	0	1458	88
Future Volume (veh/h)	0	0	0	1023	9	1367	3	705	0	0	1458	88
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				1678	1678	1678	1678	1678	0	0	1678	1678
Adj Flow Rate, veh/h				1029	0	0	3	705	0	0	1458	0
Peak Hour Factor				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %				15	15	15	15	15	0	0	15	15
Cap, veh/h				1597	0		94	1300	0	0	2408	
Arrive On Green				0.33	0.00	0.00	0.42	0.42	0.00	0.00	0.42	0.00
Sat Flow, veh/h				4793	0	2844	3	3191	0	0	6006	1422
Grp Volume(v), veh/h				1029	0	0	379	329	0	0	1458	0
Grp Sat Flow(s),veh/h/ln				1598	0	1422	1667	1450	0	0	1443	1422
Q Serve(g_s), s				7.1	0.0	0.0	0.0	6.7	0.0	0.0	7.7	0.0
Cycle Q Clear(g_c), s				7.1	0.0	0.0	6.6	6.7	0.0	0.0	7.7	0.0
Prop In Lane				1.00		1.00	0.01		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				1597	0		789	605	0	0	2408	
V/C Ratio(X)				0.64	0.00		0.48	0.54	0.00	0.00	0.61	
Avail Cap(c_a), veh/h				3205	0		1962	1652	0	0	3458	
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				11.0	0.0	0.0	8.5	8.5	0.0	0.0	8.8	0.0
Incr Delay (d2), s/veh				0.3	0.0	0.0	0.2	0.3	0.0	0.0	0.1	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				1.9	0.0	0.0	1.7	1.5	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				11.3	0.0	0.0	8.7	8.8	0.0	0.0	8.9	0.0
LnGrp LOS				B	A		A	A	A	A	A	
Approach Vol, veh/h					1029	A		708			1458	A
Approach Delay, s/veh					11.3			8.8			8.9	
Approach LOS					B			A			A	

Timer - Assigned Phs	2		6		8			
Phs Duration (G+Y+Rc), s	21.9		21.9		17.0			
Change Period (Y+Rc), s	5.7		5.7		5.1			
Max Green Setting (Gmax), s	44.3		23.3		24.9			
Max Q Clear Time (g_c+I1), s	8.7		9.7		9.1			
Green Ext Time (p_c), s	3.2		6.6		2.8			

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	182	0	86	0	0	0	0	549	1951	0	1489	0
Future Volume (veh/h)	182	0	86	0	0	0	0	549	1951	0	1489	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	1678	1678	1678				0	1678	1678	0	1678	0
Adj Flow Rate, veh/h	209	0	57				0	549	1951	0	1489	0
Peak Hour Factor	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15				0	15	15	0	15	0
Cap, veh/h	425	0	189				0	3433	1875	0	3433	0
Arrive On Green	0.13	0.00	0.13				0.00	0.75	0.75	0.00	0.75	0.00
Sat Flow, veh/h	3196	0	1422				0	4731	2502	0	4882	0
Grp Volume(v), veh/h	209	0	57				0	549	1951	0	1489	0
Grp Sat Flow(s),veh/h/ln	1598	0	1422				0	1527	1251	0	1527	0
Q Serve(g_s), s	4.1	0.0	2.5				0.0	2.3	51.0	0.0	8.2	0.0
Cycle Q Clear(g_c), s	4.1	0.0	2.5				0.0	2.3	51.0	0.0	8.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	425	0	189				0	3433	1875	0	3433	0
V/C Ratio(X)	0.49	0.00	0.30				0.00	0.16	1.04	0.00	0.43	0.00
Avail Cap(c_a), veh/h	986	0	439				0	3433	1875	0	3433	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	27.4	0.0	26.6				0.0	2.4	8.5	0.0	3.2	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.3				0.0	0.1	32.1	0.0	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	1.5	0.0	0.8				0.0	0.4	15.3	0.0	1.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.7	0.0	27.0				0.0	2.5	40.6	0.0	3.6	0.0
LnGrp LOS	C	A	C				A	A	F	A	A	A
Approach Vol, veh/h		266						2500			1489	
Approach Delay, s/veh		27.5						32.3			3.6	
Approach LOS		C						C			A	

Timer - Assigned Phs	2	4	6
Phs Duration (G+Y+Rc), s	55.0	13.0	55.0
Change Period (Y+Rc), s	5.7	5.1	5.7
Max Green Setting (Gmax), s	49.3	19.9	49.3
Max Q Clear Time (g_c+I1), s	53.0	6.1	10.2
Green Ext Time (p_c), s	0.0	0.1	10.1

Intersection Summary	
HCM 6th Ctrl Delay	21.9
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	50	94	777	41	333	141	974	598	251	1194	26
Future Volume (veh/h)	52	50	94	777	41	333	141	974	598	251	1194	26
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1870	1870	1678	1678	1870	1870	1870	1678	1870	1678
Adj Flow Rate, veh/h	52	50	94	777	41	333	141	974	598	251	1194	26
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	2	2	15	15	2	2	2	15	2	15
Cap, veh/h	113	124	163	940	461	390	178	1390	1092	310	1390	556
Arrive On Green	0.07	0.07	0.10	0.27	0.27	0.27	0.10	0.39	0.39	0.10	0.39	0.39
Sat Flow, veh/h	1598	1678	1585	3456	1678	1419	1781	3554	2790	3100	3554	1422
Grp Volume(v), veh/h	52	50	94	777	41	333	141	974	598	251	1194	26
Grp Sat Flow(s),veh/h/ln	1598	1678	1585	1728	1678	1419	1781	1777	1395	1550	1777	1422
Q Serve(g_s), s	3.7	3.4	6.8	25.3	2.2	26.6	9.3	27.5	19.9	9.5	36.9	1.4
Cycle Q Clear(g_c), s	3.7	3.4	6.8	25.3	2.2	26.6	9.3	27.5	19.9	9.5	36.9	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	124	163	940	461	390	178	1390	1092	310	1390	556
V/C Ratio(X)	0.46	0.40	0.58	0.83	0.09	0.85	0.79	0.70	0.55	0.81	0.86	0.05
Avail Cap(c_a), veh/h	113	245	278	1183	700	592	178	1483	1164	310	1483	593
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	53.4	53.0	51.2	41.0	32.3	41.2	52.7	30.6	28.3	52.8	33.4	22.6
Incr Delay (d2), s/veh	2.9	2.1	3.2	4.0	0.1	7.6	20.9	1.4	0.5	14.6	5.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	1.5	2.8	10.9	0.9	9.8	5.2	11.9	6.4	4.3	16.6	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.3	55.1	54.4	45.0	32.4	48.8	73.6	32.0	28.7	67.4	38.5	22.6
LnGrp LOS	E	E	D	D	C	D	E	C	C	E	D	C
Approach Vol, veh/h		196			1151			1713			1471	
Approach Delay, s/veh		55.1			45.6			34.3			43.1	
Approach LOS		E			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	50.9	36.6	16.3	16.0	50.9	16.0	36.9
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Max Green Setting (Gmax), s	9.0	47.0	38.0	18.0	9.0	47.0	9.0	47.0
Max Q Clear Time (g_c+I1), s	11.5	29.5	27.3	8.8	11.3	38.9	5.7	28.6
Green Ext Time (p_c), s	0.0	9.2	2.3	0.3	0.0	5.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	40.9
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	559	372	173	230	288	49	366	62	506	728	353
Future Volume (veh/h)	338	559	372	173	230	288	49	366	62	506	728	353
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	338	559	372	173	230	288	49	366	62	506	728	353
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	327	574	457	167	406	314	80	440	74	487	866	419
Arrive On Green	0.20	0.34	0.32	0.10	0.24	0.22	0.05	0.16	0.15	0.30	0.42	0.40
Sat Flow, veh/h	1598	1678	1422	1598	1678	1422	1598	2731	458	1598	2082	1008
Grp Volume(v), veh/h	338	559	372	173	230	288	49	212	216	506	557	524
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1598	1678	1422	1598	1594	1595	1598	1594	1496
Q Serve(g_s), s	24.5	39.4	28.8	12.5	14.4	23.7	3.6	15.4	15.7	36.5	37.6	37.8
Cycle Q Clear(g_c), s	24.5	39.4	28.8	12.5	14.4	23.7	3.6	15.4	15.7	36.5	37.6	37.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.67
Lane Grp Cap(c), veh/h	327	574	457	167	406	314	80	257	257	487	663	622
V/C Ratio(X)	1.03	0.97	0.81	1.04	0.57	0.92	0.61	0.83	0.84	1.04	0.84	0.84
Avail Cap(c_a), veh/h	327	574	457	167	406	314	87	259	260	487	663	622
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	47.7	38.9	37.4	53.7	39.9	45.6	55.8	48.6	49.0	41.7	31.4	32.0
Incr Delay (d2), s/veh	59.0	31.0	11.3	80.1	2.3	30.5	10.6	19.8	21.5	51.5	9.8	10.5
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	14.8	20.3	11.4	8.6	6.0	11.0	1.7	7.5	7.8	21.1	16.0	15.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.7	69.8	48.7	133.7	42.2	76.1	66.4	68.4	70.4	93.1	41.3	42.5
LnGrp LOS	F	E	D	F	D	E	E	E	E	F	D	D
Approach Vol, veh/h		1269			691			477			1587	
Approach Delay, s/veh		73.5			79.2			69.1			58.2	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.0	44.3	39.0	22.5	26.0	32.3	8.5	53.0
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	10.0	38.5	35.0	* 18	22.0	26.5	5.0	* 48
Max Q Clear Time (g_c+I1), s	14.5	41.4	38.5	17.7	26.5	25.7	5.6	39.8
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	0.3	0.0	5.3

Intersection Summary	
HCM 6th Ctrl Delay	67.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1058	2	9	509	57	24	0	13	67	0	100
Future Volume (veh/h)	50	1058	2	9	509	57	24	0	13	67	0	100
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1870	1870	1752	1752	1870	1870	1870	1752	1870	1752
Adj Flow Rate, veh/h	54	1150	2	10	553	62	26	0	14	73	0	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	2	2	10	10	2	2	2	10	2	10
Cap, veh/h	83	1813	827	111	1896	846	39	0	191	98	0	235
Arrive On Green	0.05	0.54	0.52	0.06	0.57	0.57	0.02	0.00	0.12	0.06	0.00	0.16
Sat Flow, veh/h	1668	3328	1585	1781	3328	1485	1781	0	1585	1668	0	1585
Grp Volume(v), veh/h	54	1150	2	10	553	62	26	0	14	73	0	109
Grp Sat Flow(s),veh/h/ln	1668	1664	1585	1781	1664	1485	1781	0	1585	1668	0	1585
Q Serve(g_s), s	2.5	19.2	0.0	0.4	6.9	1.5	1.2	0.0	0.6	3.4	0.0	5.0
Cycle Q Clear(g_c), s	2.5	19.2	0.0	0.4	6.9	1.5	1.2	0.0	0.6	3.4	0.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1813	827	111	1896	846	39	0	191	98	0	235
V/C Ratio(X)	0.65	0.63	0.00	0.09	0.29	0.07	0.67	0.00	0.07	0.74	0.00	0.46
Avail Cap(c_a), veh/h	115	1813	827	111	1896	846	89	0	476	98	0	477
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.3	12.7	9.1	35.4	8.9	7.7	38.8	0.0	31.2	37.1	0.0	30.8
Incr Delay (d2), s/veh	8.2	1.7	0.0	0.3	0.4	0.2	17.7	0.0	0.2	26.2	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	6.8	0.0	0.2	2.3	0.5	0.7	0.0	0.2	2.1	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	14.4	9.2	35.7	9.3	7.9	56.5	0.0	31.4	63.2	0.0	32.2
LnGrp LOS	D	B	A	D	A	A	E	A	C	E	A	C
Approach Vol, veh/h		1206			625			40			182	
Approach Delay, s/veh		15.8			9.6			47.7			44.7	
Approach LOS		B			A			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	48.3	8.0	14.2	7.5	50.3	5.8	16.5
Change Period (Y+Rc), s	4.5	6.5	4.0	4.6	4.0	6.5	4.0	* 4.6
Max Green Setting (Gmax), s	5.0	27.4	4.0	24.0	5.0	27.9	4.0	* 24
Max Q Clear Time (g_c+I1), s	2.4	21.2	5.4	2.6	4.5	8.9	3.2	7.0
Green Ext Time (p_c), s	0.0	3.9	0.0	0.0	0.0	3.9	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	17.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1134	4	0	575	0	19
Future Vol, veh/h	1134	4	0	575	0	19
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, %	2	2	2	2	2	2
Mvmt Flow	1233	4	0	625	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	619
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	432
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	432
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	432	-	-	-
HCM Lane V/C Ratio	0.048	-	-	-
HCM Control Delay (s)	13.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1149	4	0	563	12	0
Future Volume (veh/h)	1149	4	0	563	12	0
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1249	4	0	612	4	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	2193	978	6	2193	9999	9999
Arrive On Green	0.62	0.62	0.00	0.62	0.01	0.01
Sat Flow, veh/h	3647	1585	1781	1896	1781	1585
Grp Volume(v), veh/h	1249	4	0	612	4	1
Grp Sat Flow(s),veh/h/ln	1777	1585	1781	1777	1781	1585
Q Serve(g_s), s	5.9	0.0	0.0	2.3	0.0	0.0
Cycle Q Clear(g_c), s	5.9	0.0	0.0	2.3	0.0	0.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2193	978	6	2193	9999	9999
V/C Ratio(X)	0.57	0.00	0.00	0.28	0.00	0.00
Avail Cap(c_a), veh/h	3561	1588	251	3561	16227	16227
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	3.2	2.1	0.0	2.5	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.0	0.1	0.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.4	2.1	0.0	2.6	0.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h	1253			612	5	
Approach Delay, s/veh	3.4			2.6	0.0	
Approach LOS	A			A	A	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	0.0	24.1		4.4		24.1
Change Period (Y+Rc), s	4.0	6.5		4.0		6.5
Max Green Setting (Gmax), s	4.0	28.5		18.0		36.5
Max Q Clear Time (g_c+I1), s	0.0	7.9		2.0		4.3
Green Ext Time (p_c), s	0.0	9.7		0.0		4.7

Intersection Summary			
HCM 6th Ctrl Delay		3.2	
HCM 6th LOS		A	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	389	344	138	168	107	93	61	86	378	345	413
Future Volume (veh/h)	286	389	344	138	168	107	93	61	86	378	345	413
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	286	389	344	138	168	107	93	61	86	378	345	413
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	318	383	339	154	343	218	113	441	197	398	1009	450
Arrive On Green	0.19	0.42	0.41	0.09	0.32	0.32	0.07	0.13	0.13	0.24	0.30	0.30
Sat Flow, veh/h	1668	915	809	1668	1068	680	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	286	0	733	138	0	275	93	61	86	378	345	413
Grp Sat Flow(s),veh/h/ln	1668	0	1725	1668	0	1748	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	22.8	0.0	57.0	11.1	0.0	17.3	7.5	2.2	7.3	30.4	11.0	36.6
Cycle Q Clear(g_c), s	22.8	0.0	57.0	11.1	0.0	17.3	7.5	2.2	7.3	30.4	11.0	36.6
Prop In Lane	1.00		0.47	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	0	722	154	0	561	113	441	197	398	1009	450
V/C Ratio(X)	0.90	0.00	1.01	0.89	0.00	0.49	0.82	0.14	0.44	0.95	0.34	0.92
Avail Cap(c_a), veh/h	427	0	722	154	0	561	146	523	233	405	1039	464
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.8	0.0	39.7	61.1	0.0	37.3	62.6	52.2	54.4	51.0	36.9	45.8
Incr Delay (d2), s/veh	17.8	0.0	37.2	42.9	0.0	0.7	24.1	0.1	1.5	31.9	0.2	22.9
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	11.1	0.0	31.2	6.6	0.0	7.6	3.9	0.9	2.8	16.2	4.5	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	0.0	76.9	104.0	0.0	38.0	86.7	52.3	55.9	82.9	37.1	68.7
LnGrp LOS	E	A	F	F	A	D	F	D	E	F	D	E
Approach Vol, veh/h		1019			413			240			1136	
Approach Delay, s/veh		75.4			60.0			66.9			63.8	
Approach LOS		E			E			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	36.5	22.0	16.6	61.0	13.2	45.2	29.9	47.7
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	32.5	19.6	12.6	* 56	11.9	40.7	34.3	* 34
Max Q Clear Time (g_c+I2), s	32.4	9.3	13.1	59.0	9.5	38.6	24.8	19.3
Green Ext Time (p_c), s	0.1	0.4	0.0	0.0	0.0	0.9	0.6	1.4

Intersection Summary	
HCM 6th Ctrl Delay	67.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	278	570	307	1615	1725	94
Future Volume (veh/h)	278	570	307	1615	1725	94
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	278	570	307	1615	1725	94
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	627	558	297	2854	1776	551
Arrive On Green	0.35	0.35	0.17	0.56	0.35	0.35
Sat Flow, veh/h	1781	1585	1781	5274	5274	1585
Grp Volume(v), veh/h	278	570	307	1615	1725	94
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1585
Q Serve(g_s), s	10.8	31.7	15.0	18.4	29.9	3.7
Cycle Q Clear(g_c), s	10.8	31.7	15.0	18.4	29.9	3.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	627	558	297	2854	1776	551
V/C Ratio(X)	0.44	1.02	1.03	0.57	0.97	0.17
Avail Cap(c_a), veh/h	627	558	297	2854	1776	551
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	22.4	29.1	37.5	12.8	28.9	20.3
Incr Delay (d2), s/veh	0.5	43.5	61.3	0.3	15.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	29.7	11.4	6.5	14.1	1.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	72.6	98.8	13.1	44.0	20.5
LnGrp LOS	C	F	F	B	D	C
Approach Vol, veh/h	848			1922	1819	
Approach Delay, s/veh	56.3			26.8	42.8	
Approach LOS	E			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		54.3		35.7	19.0	35.3
Change Period (Y+Rc), s		5.8		* 4.7	4.0	5.8
Max Green Setting (Gmax), s		48.5		* 31	15.0	29.5
Max Q Clear Time (g_c+I1), s		20.4		33.7	17.0	31.9
Green Ext Time (p_c), s		14.9		0.0	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		38.6
HCM 6th LOS		D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	206	100	1919	302	300	1908
Future Volume (veh/h)	206	100	1919	302	300	1908
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		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	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	206	100	1919	302	300	1908
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	280	250	2505	778	344	3761
Arrive On Green	0.16	0.16	0.49	0.49	0.19	0.74
Sat Flow, veh/h	1781	1585	5274	1585	1781	5274
Grp Volume(v), veh/h	206	100	1919	302	300	1908
Grp Sat Flow(s),veh/h/ln	1781	1585	1702	1585	1781	1702
Q Serve(g_s), s	8.3	4.3	23.2	9.1	12.3	11.9
Cycle Q Clear(g_c), s	8.3	4.3	23.2	9.1	12.3	11.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	280	250	2505	778	344	3761
V/C Ratio(X)	0.73	0.40	0.77	0.39	0.87	0.51
Avail Cap(c_a), veh/h	748	666	2652	823	404	4079
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	30.3	28.6	15.7	12.1	29.6	4.2
Incr Delay (d2), s/veh	3.7	1.0	1.3	0.3	16.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	1.6	8.3	3.0	6.7	2.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.0	29.6	17.0	12.4	46.2	4.3
LnGrp LOS	C	C	B	B	D	A
Approach Vol, veh/h	306		2221			2208
Approach Delay, s/veh	32.6		16.4			10.0
Approach LOS	C		B			A

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	18.6	41.0				59.6	15.9
Change Period (Y+Rc), s	4.0	5.8				5.8	4.7
Max Green Setting (Gmax), s	17.1	37.4				58.5	31.0
Max Q Clear Time (g_c+I1), s	14.3	25.2				13.9	10.3
Green Ext Time (p_c), s	0.3	10.1				23.7	0.9

Intersection Summary	
HCM 6th Ctrl Delay	14.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	322	285	172	3	344	177	1573	179	373	1887	47
Future Volume (veh/h)	244	322	285	172	3	344	177	1573	179	373	1887	47
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	322	285	172	3	344	177	1573	179	373	1887	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	239	481	408	194	434	368	191	1657	514	359	2137	663
Arrive On Green	0.13	0.26	0.26	0.11	0.23	0.23	0.11	0.32	0.32	0.20	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	5106	1585	1781	5106	1585
Grp Volume(v), veh/h	244	322	285	172	3	344	177	1573	179	373	1887	47
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1585
Q Serve(g_s), s	20.0	23.0	24.2	14.2	0.2	31.7	14.7	44.8	12.8	30.0	50.7	2.6
Cycle Q Clear(g_c), s	20.0	23.0	24.2	14.2	0.2	31.7	14.7	44.8	12.8	30.0	50.7	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	481	408	194	434	368	191	1657	514	359	2137	663
V/C Ratio(X)	1.02	0.67	0.70	0.88	0.01	0.93	0.92	0.95	0.35	1.04	0.88	0.07
Avail Cap(c_a), veh/h	239	481	408	215	449	380	191	1657	514	359	2137	663
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	64.4	49.6	50.0	65.4	44.0	56.0	65.8	49.1	38.3	59.4	39.9	25.9
Incr Delay (d2), s/veh	63.3	3.5	5.2	30.5	0.0	29.6	44.1	12.2	0.4	58.0	4.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.3	11.3	10.3	8.1	0.1	15.7	9.0	20.9	5.1	19.3	22.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	53.1	55.2	95.9	44.0	85.7	110.0	61.3	38.7	117.4	44.7	26.0
LnGrp LOS	F	D	E	F	D	F	F	E	D	F	D	C
Approach Vol, veh/h		851			519			1929			2307	
Approach Delay, s/veh		75.2			88.8			63.7			56.1	
Approach LOS		E			F			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	34.0	52.3	20.3	42.3	20.0	66.3	24.0	38.6
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	30.0	46.5	18.0	* 37	16.0	60.5	20.0	* 35
Max Q Clear Time (g_c+I2), s	32.0	46.8	16.2	26.2	16.7	52.7	22.0	33.7
Green Ext Time (p_c), s	0.0	0.0	0.1	2.3	0.0	6.5	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	64.6
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Kimley»Horn

H. Cumulative Plus Project (Mitigated) Conditions Synchro Outputs

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	252	33	20	450	346	163	176	98	136	68	269
Future Volume (veh/h)	213	252	33	20	450	346	163	176	98	136	68	269
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	213	252	33	20	450	346	163	176	98	136	68	269
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	300	444	198	372	957	427	197	558	296	211	354	316
Arrive On Green	0.10	0.14	0.14	0.23	0.30	0.30	0.12	0.28	0.28	0.07	0.22	0.22
Sat Flow, veh/h	3100	3188	1422	1598	3188	1422	1598	2012	1068	3100	1594	1422
Grp Volume(v), veh/h	213	252	33	20	450	346	163	138	136	136	68	269
Grp Sat Flow(s),veh/h/ln	1550	1594	1422	1598	1594	1422	1598	1594	1486	1550	1594	1422
Q Serve(g_s), s	4.8	5.3	1.1	0.7	8.3	16.2	7.2	4.9	5.2	3.1	2.5	13.0
Cycle Q Clear(g_c), s	4.8	5.3	1.1	0.7	8.3	16.2	7.2	4.9	5.2	3.1	2.5	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	300	444	198	372	957	427	197	442	412	211	354	316
V/C Ratio(X)	0.71	0.57	0.17	0.05	0.47	0.81	0.83	0.31	0.33	0.64	0.19	0.85
Avail Cap(c_a), veh/h	496	1140	509	372	1140	509	233	442	412	453	417	372
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	31.5	28.9	15.8	21.4	20.5	23.3	30.8	20.5	20.7	32.6	22.7	26.8
Incr Delay (d2), s/veh	3.1	1.6	0.6	0.1	0.5	9.1	18.6	0.6	0.7	3.3	0.4	16.2
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	1.8	2.0	0.5	0.2	2.8	6.1	3.7	1.8	1.8	1.2	0.9	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	30.5	16.4	21.5	21.0	32.4	49.4	21.1	21.3	35.9	23.1	43.0
LnGrp LOS	C	C	B	C	C	C	D	C	C	D	C	D
Approach Vol, veh/h		498			816			437			473	
Approach Delay, s/veh		31.3			25.8			31.7			38.1	
Approach LOS		C			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.5	15.8	8.9	24.6	11.0	27.4	12.9	20.7
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	11.5	* 26	10.5	* 19	11.5	25.7	10.5	* 19
Max Q Clear Time (g_c+I1), s	2.7	7.3	5.1	7.2	6.8	18.2	9.2	15.0
Green Ext Time (p_c), s	0.0	2.0	0.2	1.6	0.3	3.4	0.1	0.9

Intersection Summary	
HCM 6th Ctrl Delay	30.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	159	93	80	994	22	38	32	10	87	1	129
Future Volume (veh/h)	84	159	93	80	994	22	38	32	10	87	1	129
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	84	159	93	80	994	22	38	32	10	87	1	129
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	105	1084	860	96	1064	844	55	348	155	109	454	203
Arrive On Green	0.06	0.58	0.58	0.06	0.57	0.57	0.03	0.10	0.10	0.07	0.14	0.14
Sat Flow, veh/h	1668	1870	1485	1668	1870	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	84	159	93	80	994	22	38	32	10	87	1	129
Grp Sat Flow(s),veh/h/ln	1668	1870	1485	1668	1870	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	4.8	3.7	2.7	4.5	46.8	0.6	2.2	0.8	0.6	4.9	0.0	7.9
Cycle Q Clear(g_c), s	4.8	3.7	2.7	4.5	46.8	0.6	2.2	0.8	0.6	4.9	0.0	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	1084	860	96	1064	844	55	348	155	109	454	203
V/C Ratio(X)	0.80	0.15	0.11	0.83	0.93	0.03	0.69	0.09	0.06	0.80	0.00	0.64
Avail Cap(c_a), veh/h	110	1184	940	96	1159	920	98	654	292	115	689	307
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	44.2	9.2	9.0	44.6	19.0	9.0	45.8	38.7	38.6	44.1	35.7	39.1
Incr Delay (d2), s/veh	31.8	0.1	0.1	44.0	13.0	0.0	13.9	0.1	0.2	30.6	0.0	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	2.9	1.5	0.8	3.0	22.0	0.2	1.1	0.3	0.2	2.9	0.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.0	9.3	9.1	88.6	32.0	9.0	59.7	38.9	38.8	74.7	35.7	42.4
LnGrp LOS	E	A	A	F	C	A	E	D	D	E	D	D
Approach Vol, veh/h		336			1096			80			217	
Approach Delay, s/veh		25.9			35.7			48.7			55.3	
Approach LOS		C			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.2	15.8	9.5	60.2	7.2	18.9	10.5	59.1
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	6.6	18.8	5.5	* 61	5.6	19.8	6.3	* 59
Max Q Clear Time (g_c+I1), s	6.8	2.8	6.5	5.7	4.2	9.9	6.8	48.8
Green Ext Time (p_c), s	0.0	0.1	0.0	1.3	0.0	0.2	0.0	5.6

Intersection Summary	
HCM 6th Ctrl Delay	36.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	3	17	204	1	433	127	1713	20	251	1020	48
Future Volume (veh/h)	7	3	17	204	1	433	127	1713	20	251	1020	48
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	3	17	204	1	433	127	1713	20	251	1020	48
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	22	122	245	406	344	161	2146	666	334	2295	712
Arrive On Green	0.01	0.09	0.09	0.14	0.22	0.22	0.09	0.42	0.42	0.10	0.45	0.45
Sat Flow, veh/h	1781	243	1379	1781	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	7	0	20	204	1	433	127	1713	20	251	1020	48
Grp Sat Flow(s),veh/h/ln	1781	0	1622	1781	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	0.3	0.0	0.9	8.8	0.0	12.1	5.5	23.1	0.3	5.6	10.9	1.4
Cycle Q Clear(g_c), s	0.3	0.0	0.9	8.8	0.0	12.1	5.5	23.1	0.3	5.6	10.9	1.4
Prop In Lane	1.00		0.85	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	16	0	144	245	406	344	161	2146	666	334	2295	712
V/C Ratio(X)	0.44	0.00	0.14	0.83	0.00	1.26	0.79	0.80	0.03	0.75	0.44	0.07
Avail Cap(c_a), veh/h	124	0	718	270	982	832	255	2325	722	371	2295	712
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	0.00	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	39.0	0.0	33.3	33.2	24.2	15.5	35.2	20.0	4.0	34.8	15.0	12.4
Incr Delay (d2), s/veh	17.5	0.0	0.4	18.0	0.0	122.0	8.3	1.9	0.0	7.5	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	4.9	0.0	15.7	2.7	8.8	0.2	2.6	3.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	0.0	33.7	51.2	24.2	137.4	43.5	21.9	4.1	42.3	15.1	12.4
LnGrp LOS	E	A	C	D	C	F	D	C	A	D	B	B
Approach Vol, veh/h		27			638			1860			1319	
Approach Delay, s/veh		39.6			109.7			23.2			20.2	
Approach LOS		D			F			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.4	39.0	14.9	11.7	11.1	41.3	4.7	21.9
Change Period (Y+Rc), s	5.8	* 5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	8.5	* 36	12.0	* 35	11.3	33.2	5.5	* 42
Max Q Clear Time (g_c+I1), s	7.6	25.1	10.8	2.9	7.5	12.9	2.3	14.1
Green Ext Time (p_c), s	0.1	8.1	0.1	0.1	0.1	7.6	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	36.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	12	15	25	10	214	113	452	98	321	1127	91
Future Volume (veh/h)	24	12	15	25	10	214	113	452	98	321	1127	91
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	24	12	15	25	10	214	113	452	98	321	1127	91
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	44	316	268	89	317	269	141	1054	470	385	1680	522
Arrive On Green	0.03	0.19	0.19	0.03	0.19	0.19	0.09	0.33	0.33	0.12	0.37	0.37
Sat Flow, veh/h	1598	1678	1422	3100	1678	1422	1598	3188	1422	3100	4580	1422
Grp Volume(v), veh/h	24	12	15	25	10	214	113	452	98	321	1127	91
Grp Sat Flow(s),veh/h/ln	1598	1678	1422	1550	1678	1422	1598	1594	1422	1550	1527	1422
Q Serve(g_s), s	0.8	0.3	0.5	0.4	0.3	8.1	3.9	6.2	2.8	5.7	11.6	2.4
Cycle Q Clear(g_c), s	0.8	0.3	0.5	0.4	0.3	8.1	3.9	6.2	2.8	5.7	11.6	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	44	316	268	89	317	269	141	1054	470	385	1680	522
V/C Ratio(X)	0.54	0.04	0.06	0.28	0.03	0.80	0.80	0.43	0.21	0.83	0.67	0.17
Avail Cap(c_a), veh/h	170	893	757	275	863	731	255	1668	744	385	2234	694
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	27.0	18.7	18.8	26.8	18.6	21.8	25.2	14.7	13.6	24.1	15.0	12.1
Incr Delay (d2), s/veh	9.8	0.0	0.1	1.7	0.0	5.3	10.1	0.3	0.2	14.5	0.5	0.2
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	0.4	0.1	0.2	0.2	0.1	2.9	1.8	2.0	0.8	2.7	3.6	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	18.8	18.9	28.5	18.7	27.1	35.4	15.0	13.8	38.7	15.5	12.2
LnGrp LOS	D	B	B	C	B	C	D	B	B	D	B	B
Approach Vol, veh/h		51			249			663			1539	
Approach Delay, s/veh		27.3			26.9			18.3			20.1	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	26.5	5.6	15.3	11.0	24.4	5.6	15.4
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	5.0	27.5	5.0	* 30	7.0	29.5	6.0	* 29
Max Q Clear Time (g_c+I1), s	5.9	13.6	2.4	2.5	7.7	8.2	2.8	10.1
Green Ext Time (p_c), s	0.1	7.0	0.0	0.1	0.0	3.4	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	20.5
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	270	180	200	277	320	284	709	210	217	1139	405
Future Volume (veh/h)	344	270	180	200	277	320	284	709	210	217	1139	405
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	344	270	180	200	277	320	284	709	210	217	1139	405
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	350	721	465	258	416	352	286	1477	364	242	1317	324
Arrive On Green	0.21	0.37	0.37	0.08	0.24	0.24	0.17	0.25	0.25	0.14	0.22	0.22
Sat Flow, veh/h	1668	1939	1252	3237	1752	1485	1668	6026	1485	1668	6026	1485
Grp Volume(v), veh/h	344	230	220	200	277	320	284	709	210	217	1139	405
Grp Sat Flow(s),veh/h/ln	1668	1664	1527	1618	1752	1485	1668	1507	1485	1668	1507	1485
Q Serve(g_s), s	23.9	11.8	12.3	7.1	16.7	24.5	19.8	11.7	14.5	14.9	21.3	25.5
Cycle Q Clear(g_c), s	23.9	11.8	12.3	7.1	16.7	24.5	19.8	11.7	14.5	14.9	21.3	25.5
Prop In Lane	1.00		0.82	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	619	568	258	416	352	286	1477	364	242	1317	324
V/C Ratio(X)	0.98	0.37	0.39	0.78	0.67	0.91	0.99	0.48	0.58	0.90	0.86	1.25
Avail Cap(c_a), veh/h	350	619	568	369	465	394	286	1477	364	242	1317	324
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	45.9	26.7	26.9	52.7	40.3	43.3	48.3	37.7	38.7	49.1	43.9	45.6
Incr Delay (d2), s/veh	43.1	0.4	0.4	6.4	3.1	22.9	51.3	0.2	2.2	32.4	6.3	134.9
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	14.0	4.7	4.6	3.1	7.5	11.1	12.3	4.4	5.5	8.4	8.5	21.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.0	27.1	27.3	59.1	43.4	66.2	99.5	37.9	41.0	81.4	50.2	180.5
LnGrp LOS	F	C	C	E	D	E	F	D	D	F	D	F
Approach Vol, veh/h		794			797			1203			1761	
Approach Delay, s/veh		54.0			56.5			53.0			84.0	
Approach LOS		D			E			D			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.9	34.4	13.3	48.1	24.0	31.3	29.0	32.4
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	26.9	28.6	13.3	* 43	20.0	25.5	24.5	* 31
Max Q Clear Time (g_c+I1), s	16.9	16.5	9.1	14.3	21.8	27.5	25.9	26.5
Green Ext Time (p_c), s	0.0	4.5	0.2	3.0	0.0	0.0	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	65.8
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	600	70	180	1350	10	70	60	130	10	130	10
Future Volume (veh/h)	10	600	70	180	1350	10	70	60	130	10	130	10
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1870	1870	1870	1752	1752	1870	1870	1752	1752
Adj Flow Rate, veh/h	10	600	70	180	1350	10	70	60	130	10	130	10
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	2	2	2	10	10	2	2	10	10
Cap, veh/h	21	1460	425	229	2005	622	210	797	379	23	420	187
Arrive On Green	0.01	0.29	0.29	0.13	0.39	0.39	0.13	0.24	0.24	0.01	0.13	0.13
Sat Flow, veh/h	1668	5106	1485	1781	5106	1585	1668	3328	1585	1781	3328	1485
Grp Volume(v), veh/h	10	600	70	180	1350	10	70	60	130	10	130	10
Grp Sat Flow(s),veh/h/ln	1668	1702	1485	1781	1702	1585	1668	1664	1585	1781	1664	1485
Q Serve(g_s), s	0.3	5.3	2.0	5.4	12.1	0.2	2.1	0.8	3.8	0.3	2.0	0.3
Cycle Q Clear(g_c), s	0.3	5.3	2.0	5.4	12.1	0.2	2.1	0.8	3.8	0.3	2.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	21	1460	425	229	2005	622	210	797	379	23	420	187
V/C Ratio(X)	0.47	0.41	0.16	0.79	0.67	0.02	0.33	0.08	0.34	0.44	0.31	0.05
Avail Cap(c_a), veh/h	150	1950	567	369	2502	777	863	3496	1665	176	2105	939
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	27.2	16.0	14.9	23.4	13.9	10.3	22.1	16.4	17.5	27.2	22.1	21.3
Incr Delay (d2), s/veh	14.9	0.2	0.2	5.9	0.5	0.0	0.9	0.0	0.5	12.5	0.4	0.1
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	0.2	1.9	0.6	2.5	4.1	0.1	0.8	0.3	1.3	0.2	0.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	16.2	15.0	29.3	14.4	10.3	23.0	16.4	18.0	39.7	22.5	21.5
LnGrp LOS	D	B	B	C	B	B	C	B	B	D	C	C
Approach Vol, veh/h		680			1540			260			150	
Approach Delay, s/veh		16.5			16.1			19.0			23.6	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	4.7	18.0	11.1	21.7	11.0	11.7	5.2	27.6
Change Period (Y+Rc), s	4.0	* 4.7	4.0	5.8	4.0	* 4.7	4.5	5.8
Max Green Setting (Gmax), s	5.5	* 58	11.5	21.2	28.7	* 35	5.0	27.2
Max Q Clear Time (g_c+I1), s	2.3	5.8	7.4	7.3	4.1	4.0	2.3	14.1
Green Ext Time (p_c), s	0.0	0.8	0.2	3.7	0.2	0.8	0.0	7.7

Intersection Summary	
HCM 6th Ctrl Delay	16.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	200	183	528	753	106	307	157	418	20	250	13
Future Volume (veh/h)	37	200	183	528	753	106	307	157	418	20	250	13
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	37	200	183	528	753	106	307	157	418	20	250	13
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	62	606	270	631	996	140	397	570	483	39	395	335
Arrive On Green	0.04	0.18	0.18	0.19	0.34	0.34	0.12	0.33	0.33	0.02	0.23	0.23
Sat Flow, veh/h	1668	3328	1485	3237	2930	412	3237	1752	1485	1668	1752	1485
Grp Volume(v), veh/h	37	200	183	528	428	431	307	157	418	20	250	13
Grp Sat Flow(s),veh/h/ln	1668	1664	1485	1618	1664	1678	1618	1752	1485	1668	1752	1485
Q Serve(g_s), s	1.5	3.5	7.7	10.6	15.4	15.4	6.2	4.5	17.8	0.8	8.7	0.5
Cycle Q Clear(g_c), s	1.5	3.5	7.7	10.6	15.4	15.4	6.2	4.5	17.8	0.8	8.7	0.5
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	62	606	270	631	566	570	397	570	483	39	395	335
V/C Ratio(X)	0.60	0.33	0.68	0.84	0.76	0.76	0.77	0.28	0.87	0.52	0.63	0.04
Avail Cap(c_a), veh/h	168	1384	617	721	894	902	432	850	721	144	767	650
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	31.9	24.0	25.7	26.1	19.7	19.8	28.6	16.8	21.3	32.5	23.6	20.4
Incr Delay (d2), s/veh	8.9	0.3	2.9	7.7	2.1	2.1	7.8	0.3	7.3	10.3	1.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	2.8	4.5	5.8	5.8	2.7	1.7	6.6	0.4	3.6	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	24.3	28.6	33.8	21.8	21.8	36.5	17.1	28.7	42.8	25.2	20.4
LnGrp LOS	D	C	C	C	C	C	D	B	C	D	C	C
Approach Vol, veh/h		420			1387			882			283	
Approach Delay, s/veh		27.6			26.4			29.3			26.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.6	27.7	17.1	17.0	12.3	21.0	6.5	27.6
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	5.8	32.7	15.0	* 28	9.0	29.5	6.8	* 36
Max Q Clear Time (g_c+I1), s	2.8	19.8	12.6	9.7	8.2	10.7	3.5	17.4
Green Ext Time (p_c), s	0.0	2.1	0.6	1.8	0.1	1.4	0.0	5.5

Intersection Summary	
HCM 6th Ctrl Delay	27.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



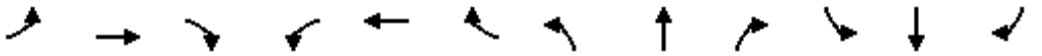
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	13	147	437	142	357	471	1184	130	78	875	284
Future Volume (veh/h)	120	13	147	437	142	357	471	1184	130	78	875	284
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1870	1870	1870	1752	1752	1870	1870	1752	1752
Adj Flow Rate, veh/h	120	13	147	437	142	357	471	1184	130	78	875	284
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	2	2	2	10	10	2	2	10	10
Cap, veh/h	156	439	183	476	1029	459	542	1735	575	161	1157	359
Arrive On Green	0.09	0.12	0.12	0.27	0.29	0.29	0.17	0.36	0.36	0.05	0.24	0.24
Sat Flow, veh/h	1668	3554	1485	1781	3554	1585	3237	4782	1585	3456	4782	1485
Grp Volume(v), veh/h	120	13	147	437	142	357	471	1184	130	78	875	284
Grp Sat Flow(s),veh/h/ln	1668	1777	1485	1781	1777	1585	1618	1594	1585	1728	1594	1485
Q Serve(g_s), s	6.5	0.3	8.9	22.1	2.7	19.1	13.1	19.4	5.3	2.0	15.7	16.6
Cycle Q Clear(g_c), s	6.5	0.3	8.9	22.1	2.7	19.1	13.1	19.4	5.3	2.0	15.7	16.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	439	183	476	1029	459	542	1735	575	161	1157	359
V/C Ratio(X)	0.77	0.03	0.80	0.92	0.14	0.78	0.87	0.68	0.23	0.48	0.76	0.79
Avail Cap(c_a), veh/h	308	1343	561	558	1772	791	594	1936	642	187	1316	409
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	41.0	35.7	39.5	33.0	24.4	30.2	37.6	25.0	20.5	43.1	32.6	32.9
Incr Delay (d2), s/veh	7.7	0.0	7.9	18.6	0.1	2.9	12.3	0.9	0.2	2.2	2.2	9.0
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	3.0	0.1	3.6	11.7	1.1	7.5	6.0	7.2	1.9	0.9	6.2	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.7	35.7	47.4	51.6	24.4	33.1	49.9	25.9	20.7	45.3	34.8	41.9
LnGrp LOS	D	D	D	D	C	C	D	C	C	D	C	D
Approach Vol, veh/h		280			936			1785			1237	
Approach Delay, s/veh		47.4			40.4			31.8			37.1	
Approach LOS		D			D			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.3	39.4	28.8	16.1	19.5	28.2	13.4	31.5
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	* 4.7	* 4.7
Max Green Setting (Gmax), s	5.0	37.5	29.0	* 35	17.0	25.5	* 17	* 46
Max Q Clear Time (g_c+I1), s	4.0	21.4	24.1	10.9	15.1	18.6	8.5	21.1
Green Ext Time (p_c), s	0.0	8.2	0.7	0.5	0.4	3.8	0.2	2.2

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	338	559	372	173	230	288	49	366	62	506	728	353
Future Volume (veh/h)	338	559	372	173	230	288	49	366	62	506	728	353
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678	1678
Adj Flow Rate, veh/h	338	559	372	173	230	288	49	366	62	506	728	353
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	15	15	15	15	15	15	15	15	15	15	15	15
Cap, veh/h	403	619	484	172	581	452	90	569	95	610	725	351
Arrive On Green	0.13	0.37	0.34	0.11	0.35	0.32	0.06	0.21	0.19	0.20	0.35	0.33
Sat Flow, veh/h	3100	1678	1422	1598	1678	1422	1598	2731	458	3100	2082	1008
Grp Volume(v), veh/h	338	559	372	173	230	288	49	212	216	506	557	524
Grp Sat Flow(s),veh/h/ln	1550	1678	1422	1598	1678	1422	1598	1594	1595	1550	1594	1496
Q Serve(g_s), s	9.4	27.9	20.7	9.5	9.2	15.3	2.6	10.8	11.0	13.9	30.8	30.8
Cycle Q Clear(g_c), s	9.4	27.9	20.7	9.5	9.2	15.3	2.6	10.8	11.0	13.9	30.8	30.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.29	1.00		0.67
Lane Grp Cap(c), veh/h	403	619	484	172	581	452	90	332	332	610	555	521
V/C Ratio(X)	0.84	0.90	0.77	1.01	0.40	0.64	0.54	0.64	0.65	0.83	1.00	1.00
Avail Cap(c_a), veh/h	403	621	486	172	583	454	117	357	357	614	555	521
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	37.5	26.4	26.0	39.4	21.9	25.8	40.6	32.0	32.2	34.1	28.8	29.3
Incr Delay (d2), s/veh	14.4	16.9	7.8	70.6	0.6	3.4	5.0	4.1	4.4	9.3	39.0	40.6
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	4.2	12.9	7.7	6.9	3.4	5.4	1.1	4.4	4.6	5.9	17.2	16.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.9	43.3	33.8	110.1	22.5	29.2	45.6	36.1	36.7	43.4	67.8	69.9
LnGrp LOS	D	D	C	F	C	C	D	D	D	D	F	F
Approach Vol, veh/h		1269			691			477			1587	
Approach Delay, s/veh		42.8			47.2			37.3			60.7	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	35.9	19.9	21.6	13.0	33.9	7.5	34.0
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	7.0	30.2	16.0	* 18	9.0	28.2	5.0	* 29
Max Q Clear Time (g_c+I1), s	11.5	29.9	15.9	13.0	11.4	17.3	4.6	32.8
Green Ext Time (p_c), s	0.0	0.2	0.0	1.5	0.0	2.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	389	344	138	168	107	93	61	86	378	345	413
Future Volume (veh/h)	286	389	344	138	168	107	93	61	86	378	345	413
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1752	1870	1752	1752	1870	1752	1752	1752	1752	1752	1752	1752
Adj Flow Rate, veh/h	286	389	344	138	168	107	93	61	86	378	345	413
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	10	2	10	10	2	10	10	10	10	10	10	10
Cap, veh/h	297	538	414	171	397	302	117	530	236	412	1119	499
Arrive On Green	0.18	0.29	0.28	0.10	0.21	0.20	0.07	0.16	0.16	0.25	0.34	0.34
Sat Flow, veh/h	1668	1870	1485	1668	1870	1485	1668	3328	1485	1668	3328	1485
Grp Volume(v), veh/h	286	389	344	138	168	107	93	61	86	378	345	413
Grp Sat Flow(s),veh/h/ln	1668	1870	1485	1668	1870	1485	1668	1664	1485	1668	1664	1485
Q Serve(g_s), s	13.4	14.7	17.1	6.4	6.1	4.9	4.3	1.2	4.1	17.4	6.0	20.1
Cycle Q Clear(g_c), s	13.4	14.7	17.1	6.4	6.1	4.9	4.3	1.2	4.1	17.4	6.0	20.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	297	538	414	171	397	302	117	530	236	412	1119	499
V/C Ratio(X)	0.96	0.72	0.83	0.81	0.42	0.35	0.79	0.12	0.36	0.92	0.31	0.83
Avail Cap(c_a), veh/h	297	730	566	254	682	528	195	901	402	424	1358	605
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	32.1	25.2	26.6	34.6	26.8	26.9	36.0	28.3	29.5	28.8	19.4	24.0
Incr Delay (d2), s/veh	42.3	2.3	7.5	11.1	0.7	0.7	11.3	0.1	0.9	24.2	0.2	7.9
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	8.7	6.6	6.6	3.0	2.7	1.7	2.1	0.5	1.5	9.4	2.3	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.4	27.5	34.1	45.6	27.5	27.6	47.3	28.4	30.5	53.1	19.5	31.9
LnGrp LOS	E	C	C	D	C	C	D	C	C	D	B	C
Approach Vol, veh/h		1019			413			240			1136	
Approach Delay, s/veh		42.9			33.6			36.5			35.2	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.4	16.5	12.1	26.7	9.5	30.4	18.0	20.7
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.5	* 4.7
Max Green Setting (Gmax), s	20.0	19.5	12.0	* 30	9.2	30.3	13.5	* 28
Max Q Clear Time (g_c+I1), s	19.4	6.1	8.4	19.1	6.3	22.1	15.4	8.1
Green Ext Time (p_c), s	0.1	0.5	0.1	2.8	0.0	2.5	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	37.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	244	322	285	172	3	344	177	1573	179	373	1887	47
Future Volume (veh/h)	244	322	285	172	3	344	177	1573	179	373	1887	47
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		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	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	244	322	285	172	3	344	177	1573	179	373	1887	47
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	509	431	199	446	378	187	1909	593	391	1950	605
Arrive On Green	0.15	0.27	0.27	0.11	0.24	0.24	0.10	0.37	0.37	0.11	0.38	0.38
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	244	322	285	172	3	344	177	1573	179	373	1887	47
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	16.8	18.7	19.8	11.8	0.2	26.1	12.2	34.5	9.9	13.3	44.9	2.3
Cycle Q Clear(g_c), s	16.8	18.7	19.8	11.8	0.2	26.1	12.2	34.5	9.9	13.3	44.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	509	431	199	446	378	187	1909	593	391	1950	605
V/C Ratio(X)	0.94	0.63	0.66	0.86	0.01	0.91	0.95	0.82	0.30	0.95	0.97	0.08
Avail Cap(c_a), veh/h	259	569	482	230	539	457	187	1909	593	391	1950	605
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	52.4	39.6	40.0	54.1	36.0	45.8	55.1	35.1	27.4	54.6	37.5	24.4
Incr Delay (d2), s/veh	40.5	1.9	2.9	24.6	0.0	19.7	50.5	3.1	0.3	33.9	13.6	0.1
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	10.4	8.9	8.0	6.6	0.1	12.3	8.1	14.7	3.8	7.6	20.8	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.9	41.6	42.9	78.7	36.0	65.6	105.6	38.2	27.7	88.5	51.1	24.4
LnGrp LOS	F	D	D	E	D	E	F	D	C	F	D	C
Approach Vol, veh/h		851			519			1929			2307	
Approach Delay, s/veh		56.7			69.8			43.4			56.6	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	50.3	17.9	37.7	17.0	51.3	22.0	33.6
Change Period (Y+Rc), s	4.0	5.8	4.0	* 4.7	4.0	5.8	4.0	* 4.7
Max Green Setting (Gmax), s	14.0	44.5	16.0	* 37	13.0	45.5	18.0	* 35
Max Q Clear Time (g_c+I1), s	15.3	36.5	13.8	21.8	14.2	46.9	18.8	28.1
Green Ext Time (p_c), s	0.0	6.1	0.1	2.6	0.0	0.0	0.0	0.7

Intersection Summary	
HCM 6th Ctrl Delay	53.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Kimley»Horn

I. Truck Queuing Analysis

Truck Entry Queuing with 3 lanes (no bypass lane)

Hour	Arrivals	Cumulative Arrivals	Departures	Cumulative Departures	Queue	Length
-60	0	0	0	0	0	0
-30	6	6	10	6	0	0
0	6	12	10	12	0	0
30	20	32	10	22	10	750
60	20	52	10	32	20	1500
90	14	66	10	42	24	1800
120	14	80	10	52	28	2100
150	10	90	10	62	28	2100
180	10	100	10	72	28	2100

Truck Entry Queuing with 2 lanes plus bypass lane

Hour	Arrivals	Cumulative Arrivals	Departures	Cumulative Departures	Queue	Length
-60	0	0	0	0	0	0
-30	5	5	10	5	0	0
0	5	10	10	10	0	0
30	15	25	10	20	5	375
60	15	40	10	30	10	750
90	10	50	10	40	10	750
120	10	60	10	50	10	750
150	8	68	10	60	8	600
180	8	76	10	70	6	450

Kimley»Horn

J. Old Schulte Road Merge Simtraffic Analysis

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	154	70	61	35	28	250	226	86	66	62	150	46
Average Queue (ft)	73	17	11	4	6	131	97	35	11	11	64	7
95th Queue (ft)	134	51	37	19	22	216	196	68	39	36	127	29
Link Distance (ft)		364	364			1325	1325			655		1033
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			300	380			380	435		280	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	SB
Directions Served	R
Maximum Queue (ft)	131
Average Queue (ft)	55
95th Queue (ft)	107
Link Distance (ft)	1033
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Bend

Movement	WB	WB
Directions Served	T	
Maximum Queue (ft)	232	122
Average Queue (ft)	30	11
95th Queue (ft)	148	69
Link Distance (ft)	364	364
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	159	101	97	35	49	264	231	73	53	59	154	53
Average Queue (ft)	72	39	32	4	6	133	91	36	13	11	64	6
95th Queue (ft)	140	82	76	19	29	217	181	64	42	37	129	28
Link Distance (ft)		364	364			1325	1325			655		1033
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			300	380			380	435		280	
Storage Blk Time (%)												
Queuing Penalty (veh)												

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	SB
Directions Served	R
Maximum Queue (ft)	132
Average Queue (ft)	51
95th Queue (ft)	101
Link Distance (ft)	1033
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Bend

Movement	WB	WB
Directions Served	T	
Maximum Queue (ft)	304	143
Average Queue (ft)	42	13
95th Queue (ft)	174	71
Link Distance (ft)	364	364
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	EB	EB	EB	EB	WB	WB	WB	WB	NB	NB	SB	SB
Directions Served	L	T	T	R	L	T	T	R	L	TR	L	T
Maximum Queue (ft)	189	132	128	29	41	269	216	88	61	43	147	42
Average Queue (ft)	80	45	43	3	6	136	96	38	14	11	65	5
95th Queue (ft)	148	99	94	17	26	218	189	69	44	35	121	23
Link Distance (ft)		364	364			1325	1325			655		1033
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	300			300	380			380	435		280	
Storage Blk Time (%)						0						
Queuing Penalty (veh)						0						

Intersection: 6: Old Schulte Road & Iron Horse Parkway

Movement	SB
Directions Served	R
Maximum Queue (ft)	133
Average Queue (ft)	55
95th Queue (ft)	107
Link Distance (ft)	1033
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 15: Bend

Movement	WB	WB
Directions Served	T	
Maximum Queue (ft)	309	270
Average Queue (ft)	39	18
95th Queue (ft)	165	100
Link Distance (ft)	364	364
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 0

APPENDIX G

Water Supply Assessment

FINAL REPORT | DECEMBER 2021

Tracy Costco Depot Project
Water Supply Assessment

PREPARED FOR

City of Tracy

PREPARED BY

WEST YOST
Water. Engineered.

Tracy Costco Depot Project
Water Supply Assessment

Prepared for

City of Tracy

Project No. 487-60-19-17



Project Manager: Elizabeth T. Drayer, PE	12-20-21 Date
QA/QC Review: Amy W. Kwong, PE	12-20-21 Date

WEST YOST
Water. Engineered.

FINAL REPORT | DECEMBER 2021

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
af	Acre-feet
af/yr	Acre-Feet Per Year
ASR	Aquifer Storage and Recovery
BBID	Byron Bethany Irrigation District
BCID	Banta Carbona Irrigation District
bgs	Below Ground Surface
Water Code	California Water Code
CASGEM	California Statewide Groundwater Elevation Monitoring
CEQA	California Environmental Quality Act
City	City of Tracy
CSD	County Services District
CVP	Central Valley Project
DDW	SWRCB Division of Drinking Water
DMC	Delta-Mendota Canal
DOF	California Department of Finance
DWR	California Department of Water Resources
EIR	Environmental Impact Report
ETo	Evapotranspiration
GMO	City of Tracy Growth Management Ordinance
gpm	Gallons Per Minute
GSA	Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWMP	Groundwater Management Plan
JJWTP	John Jones Water Treatment Plant
K/J/C	Kennedy/Jenks/Chilton
LAFCo	Local Agency Formation Commission
M&I	Municipal and Industrial
mgd	Million gallons per day
mg/L	Milligrams Per Liter
MOA	Memorandum of Agreement
msl	Mean Sea Level
NEI	Northeast Industrial
NEPA	National Environmental Policy Act
PPBP	Patterson Pass Business Park
Proposed Project	Proposed Tracy Costco Depot Project
RGA	Residential Growth Allotment
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCADA	Supervisory Control and Data Acquisition
SCWSP	South County Water Supply Project

Semitropic WSD	Semitropic Water Storage District
SGMA	Sustainable Groundwater Management Act
SOI	Sphere of Influence
SSJID	South San Joaquin Irrigation District
SWP	State Water Project
SWRCB	State Water Resources Control Board
SWRU	Stored Water Recovery Unit
TDS	Total Dissolved Solids
TM	Technical Memorandum
UAFW	Unaccounted for Water
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
WSA	Water Supply Assessment
WSID	West Side Irrigation District
WSMP Update	Water System Master Plan Update (October 2021 Draft Report)
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

Purpose of Water Supply Assessment

The purpose of this Water Supply Assessment (WSA) is to perform the evaluation required by California Water Code sections 10910 through 10915, as established by Senate Bill 610 (SB 610), in connection with the City of Tracy's (City) proposed Tracy Costco Depot Project (Proposed Project). This WSA evaluates the adequacy of the City's total projected water supplies, including existing water supplies and future planned water supplies, to meet the City's existing and projected future water demands, including those future water demands associated with the Proposed Project, under all hydrologic conditions (Normal Years, Single Dry Years, and Multiple Dry Years).

Since the Proposed Project does not meet the definition of a residential subdivision, this WSA does not include the requirements of California Government Code section 66473.7(a)(1), as established by SB 221 in 2001.

Proposed Project Overview

The Proposed Project is located at 16000 West Schulte Road in unincorporated San Joaquin County, California. The project site is within the Tracy Sphere of Influence (SOI) and is immediately adjacent to the Tracy city limits to the north of the site. The Assessor's Parcel Number (APNs) for the project site is 2019-230-020. The project site totals approximately 103 acres of undeveloped land previously used for agricultural purposes. The elevation of the site ranges from approximately 148 feet to 187 feet above mean sea level (msl). The Proposed Project would include the construction and subsequent operation of two Costco warehouse buildings (543,326 square feet and 1,201,726 square feet, respectively) totaling approximately 1,745,052 square feet. The Proposed Project would also include circulation, parking, and utility improvements.

The Proposed Project meets the definition of a "Project" per California Water Code sections 10910 through 10915, as established by SB 610 in 2001, thus requiring the preparation of this WSA.

Potable and Recycled Water Demands and Supply Availability

Projected water demands for buildout of the Proposed Project total approximately 158 acre-feet per year (af/yr) of which about approximately 114 af/yr is industrial demand, approximately 29 af/yr is irrigation demand, and approximately 15 af/yr is unaccounted-for water.

It is anticipated that the Proposed Project, if approved by the City, would be served from the City's existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned

Since recycled water infrastructure may not be initially available to deliver recycled water to the Proposed Project, potable water supplies may be used in the interim period before recycled water becomes available to meet the non-potable water demands associated with the initial phases of the Proposed Project.

Proponents of the Proposed Project are expected to provide their proportionate share of required funding to the City for the acquisition, treatment and delivery of treated potable and recycled water supplies to the Proposed Project area.

Pursuant to California Water Code Section 10910(c)(4), and based on the technical analyses described in this WSA, this WSA demonstrates that the City's existing and additional planned future water supplies are sufficient during normal years. However, during a single dry year or a multiple dry year period, the City may experience a water supply shortfall. To close the gap between supply and demand, the City will need to implement its Water Shortage Contingency Plan to reduce water demands and rely more heavily on groundwater and proposed future supply projects.

As described in this WSA and the City's 2020 Urban Water Management Plan (UWMP), these findings are primarily due to projected reduced reliability of the City's Central Valley Project (CVP) supplies and South San Joaquin Irrigation District (SSJID) supplies in dry years. As noted in Section 6.5 of this WSA, the reliability of the City's surface water supply from SSJID has been significantly impacted by the 2018 Bay-Delta Water Quality Control Plan. Normal year allocations of the City's water supply from SSJID are assumed to be 100 percent of the City's contractual entitlement; however, water supply may be 56 to 76 percent of contractual entitlement during any single dry year, and 56 to 100 percent of contractual entitlement during multiple dry years. The water supply projections in single dry and multiple dry years include uncertainties that are summarized in Section 7.2.

Determination of Water Supply Sufficiency

As described in Section 7, water demand within the City's water service area is not expected to exceed the City's supplies at Buildout under normal hydrologic conditions if the City is able to fully implement its future planned projects, which include Aquifer Storage and Recovery Program Expansion, Recycled Water Distribution Network and Exchange Program for additional Central Valley Project water supplies, and recycled water distribution for non-potable use. During a single dry year or a multiple dry year period, the City must depend more heavily on water conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. Investments in wet year water supplies will also be needed to refill storage in Semitropic and expand the City's ASR program. Delays in implementing the proposed future water supply projects could result in greater water supply shortages and the need for additional water conservation to meet demands.

The dry year shortfalls are based on water supply and demand projections with numerous uncertainties and the situation is dynamic as discussed in Section 7 of the 2020 UWMP and Section 7 of this WSA. The City continues to work on strategies and actions to address the projected water supply shortfall. The City's strategies and actions include the implementation of demand management measures as part of its water conservation program, consideration of net neutral policies to improve water use efficiency community-wide, and implementation of the future water supply projects described above and in this WSA.

1.0 INTRODUCTION

1.1 Legal Requirement for Water Supply Assessment

California Senate Bill 610 (SB 610) amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 sought to promote more collaborative planning between local water suppliers and cities and counties. It requires detailed information regarding water availability to be provided to the city and county decision-makers prior to approval of specified large development projects. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet existing demands, anticipated demands from approved projects and tentative maps, and the demands of proposed projects.

SB 610 amended California Water Code sections 10910 through 10915 (inclusive) to require land use lead agencies to:

- Identify any public water purveyor that may supply water for a proposed development project; and
- Request a Water Supply Assessment (WSA) from the identified water purveyor.

The purpose of the WSA is to demonstrate the sufficiency of the purveyor's water supplies to satisfy the water demands of the proposed project, while still meeting the water purveyor's existing and planned future uses. Water Code sections 10910 through 10915 delineate the specific information that must be included in the WSA.

1.2 Need for and Purpose of Water Supply Assessment

The purpose of this WSA is to perform the evaluation required by Water Code sections 10910 through 10915 in connection with the City of Tracy's (City) proposed Tracy Costco Depot Project (Proposed Project). It is not to reserve water, or to function as a "will serve" letter or any other form of commitment to supply water (see Water Code section 10914). The provision of water service will continue to be undertaken in a manner consistent with applicable City policies and procedures, consistent with existing law.

1.3 Water Supply Assessment Preparation, Format and Organization

The format of this WSA is intended to follow Water Code sections 10910 through 10915 to clearly delineate compliance with the specific requirements for a WSA. The WSA includes the following sections:

- Section 1: Introduction
- Section 2: Description of Proposed Project
- Section 3: Required Determinations
- Section 4: City of Tracy Water Service Area
- Section 5: City of Tracy Water Demands
- Section 6: City of Tracy Water Supplies
- Section 7: Determination of Water Supply Sufficiency Based on the Requirements of SB 610
- Section 8: Water Supply Assessment Approval Process
- Section 9: References

Relevant citations of Water Code sections 10910 through 10915 are included throughout this WSA in *italics* to demonstrate compliance with the specific requirements of SB 610.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 Proposed Project Location

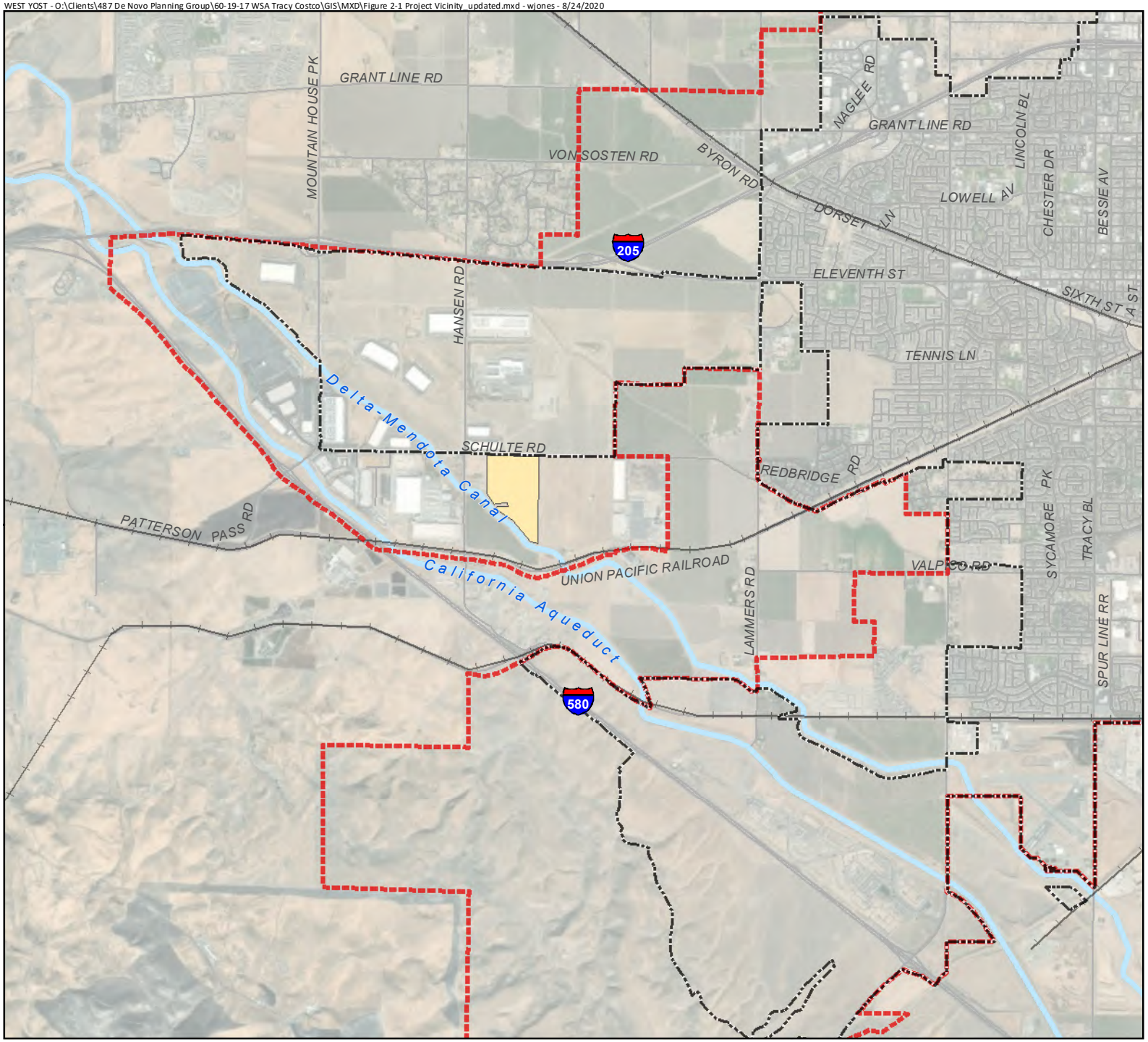
The Proposed Project is located in the City of Tracy's (City) Sphere of Influence (SOI) and includes approximately 103 acres of land located at 16000 West Schulte Road in unincorporated San Joaquin County, California (see Figure 2-1). A proposed site plan for the Proposed Project is shown on Figure 2-2. If approved, the Proposed Project area would be annexed into the City.

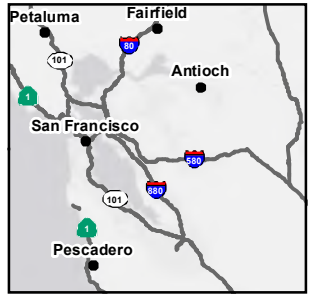
The Proposed Project area has a City land use designation of "Industrial" and is surrounded by existing and future warehouse distribution and other industrial uses to the north (within the Cordes Ranch Specific Plan Area, located in the City of Tracy), vacant agricultural land within unincorporated San Joaquin County to the east, the Delta Mendota Canal and agricultural land within unincorporated San Joaquin County to the south, and a rural residence, CalFire station, and Delta Mendota Canal to the west (within unincorporated San Joaquin County).

2.2 Proposed Land Uses and Acreages

The Proposed Project would include the construction and subsequent operation of two Costco warehouse buildings (543,326 square feet [sf] and 1,201,726 sf, respectively) totaling approximately 1,745,052 sf on the 103-acre project site. The Proposed Project would also include the required circulation, parking, and utility improvements. Proposed land uses for the Proposed Project include 87.6 acres for industrial use and 15.4 acres for irrigation use.

WEST YOST - O:\Clients\487 De Novo Planning Group\60-19-17 WSA Tracy Costco\GIS\MXD\Figure 2-1 Project Vicinity_updated.mxd - wjones - 8/24/2020





N

0 2,500 5,000

Scale in Feet

Costco Depot Approximate Property Area

City Limit

Sphere of Influence

TRACY

WEST YOST

Figure 2-1

Project Vicinity

City of Tracy
Water Supply Assessment
Costco Depot

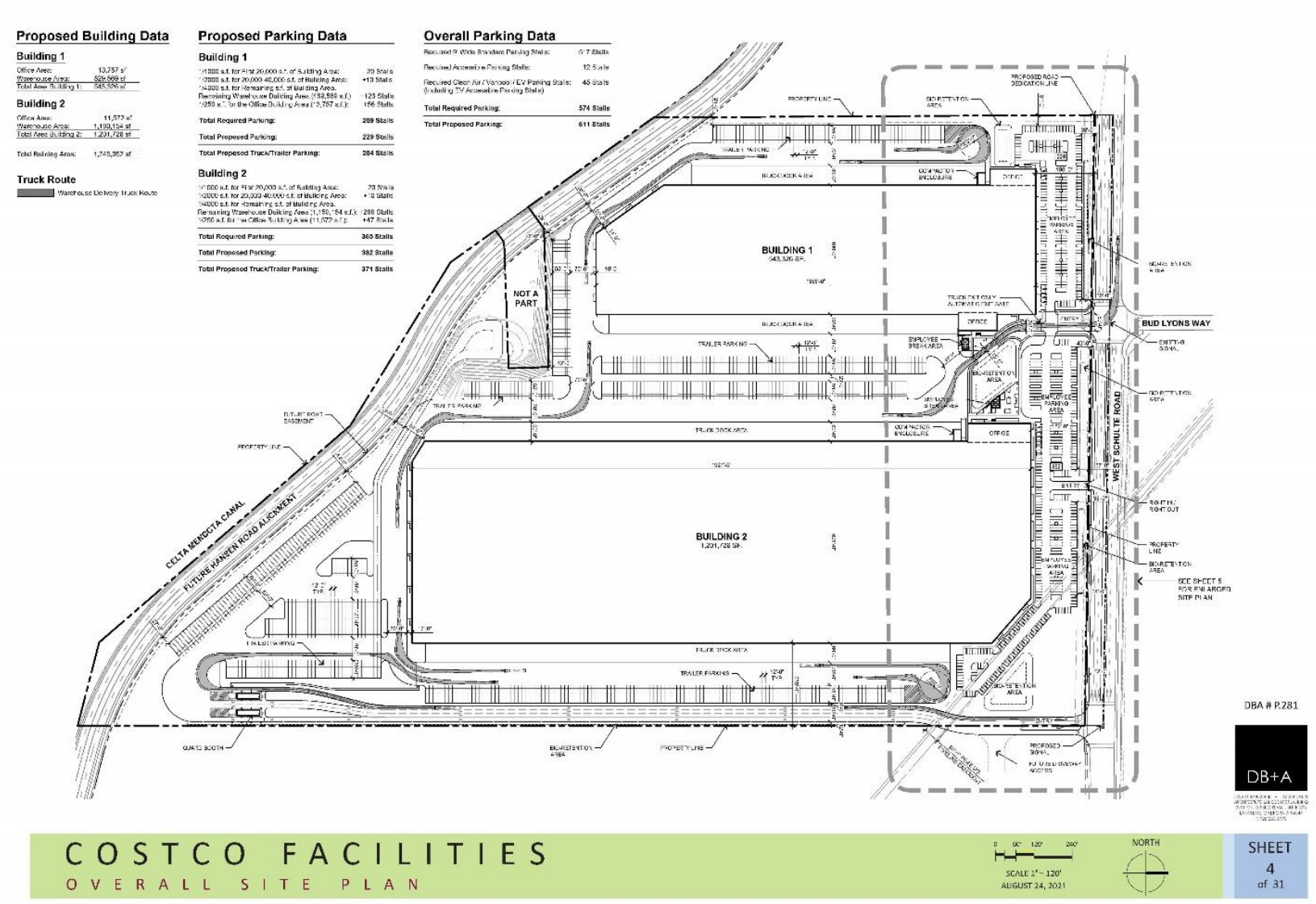


Figure 2-2. Site Plan

2.3 Projected Water Demand

Water demand for the Proposed Project has been estimated based on water use assumptions from the City's WSMP Update. Table 2-1 below contains a summary of the Proposed Project's water use factors and projected potable water use. Potable water was assumed to be used to meet all the Proposed Project's water demands. This is because until recycled water infrastructure is constructed, potable water supplies may be used to meet non-potable water demands within the Proposed Project area.

Table 2-1. Estimated Annual Water Demand for the Proposed Project

Land Use Designation	Total Area, gross acres[(a)]	Potable Water Use Area, acres[(b)]	Landscaped Area, acres[(c)]	Unit Potable Water Use Factors[(d)], af/ac/yr	Annual Potable Water Use, af/yr
Industrial	103.0	87.6	-	1.3	114
Irrigation Demand	—	—	15.4	1.9	29
UAFW[(e)]	—	—	—	—	15
Total	**103.0**	**87.6**	**15.4**	—	**158**

(a) Data provided by City staff.
(b) Consistent with assumptions in the WSMP Update (October 2021 Draft Report); 85 percent of gross acres are assumed to use potable water.
(c) Consistent with assumptions in the WSMP Update; 15 percent of gross acres are assumed to be landscaped.
(d) Based on the WSMP Update.
(e) Unaccounted-for water (UAFW) is equal to 9.6 percent.

As shown above, projected water demands for buildout of the Proposed Project total approximately 158 af/yr of which about approximately 114 af/yr is industrial demand, approximately 29 af/yr is irrigation demand, and approximately 15 af/yr is unaccounted-for water.

As described further in Section 3.4, the proposed project's water demand was included in the City's 2020 UWMP as a future projected water demand.

2.4 Projected Water Supply

Water demands for the Proposed Project will be served using the City's existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

> *Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

Proponents of the Proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

Recycled water infrastructure will need to be constructed to deliver recycled water supplies to the Proposed Project. The City's Water System Master Plan, currently being updated, herein referred to as the WSMP Update, included recommended capital improvement projects for the development of the

City's recycled water system. In 2015, the City was awarded a Proposition 84 grant from the California Department of Water Resources (DWR) to fund construction of recycled water distribution facilities. Construction of these facilities is nearly complete. In March 2019, the City received an amended order from the State Water Resources Control Board (SWRCB) approving the change in place of use of its treated wastewater. The order allows for the City to change the point of discharge and place of use of treated wastewater by a reduction in discharge to Old River and use the treated wastewater for industrial and irrigation purposes within the service areas of the City's SOI, Byron Bethany Irrigation District (BBID) within the City's SOI, and West Side Irrigation District (WSID).

3.0 REQUIRED DETERMINATIONS

3.1 Does SB 610 apply to the Proposed Project?

10910 (a) Any city or county that determines that a project, as defined in Section 10912, is subject to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code) under Section 21080 of the Public Resources Code shall comply with this part.

10912 (a) "Project" means any of the following:

(1) A proposed residential development of more than 500 dwelling units.

(2) A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.

(3) A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

(4) A proposed hotel or motel, or both, having more than 500 rooms.

(5) A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.

(6) A mixed-use project that includes one or more of the projects specified in this subdivision.

(7) A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling unit project.

Based on the following facts, SB 610 does apply to the Proposed Project.

- The City of Tracy has determined that the Proposed Project is subject to the California Environmental Quality Act (CEQA) and that an Environmental Impact Report (EIR) is required.
- The Proposed Project, with more than 40 acres of industrial land use, meets the definition of a "Project" as specified in Water Code section 10912(a) paragraph (5) as defined for an industrial development.

The Proposed Project has not been the subject of a previously adopted WSA and has not been included in an adopted WSA for a larger project. Therefore, according to Water Code section 10910(a), a WSA is required for the Proposed Project.

3.2 Does SB 221 apply to the Proposed Project?

In 2001, SB 221 amended State law to require that approval by a city or county of certain residential subdivisions requires an affirmative written verification of sufficient water supply. Per California Government Code section 66473.7(a)(1), a subdivision means a proposed residential development of more than 500 dwelling units. As the Proposed Project does not include residential development, it is not subject to the requirements of SB 221.

3.3 Who is the Identified Public Water System?

> *10910(b) The city or county, at the time that it determines whether an environmental impact report, a negative declaration, or a mitigated negative declaration is required for any project subject to the California Environmental Quality Act pursuant to Section 21080.1 of the Public Resources Code, shall identify any water system that is, or may become as a result of supplying water to the project identified pursuant to this subdivision, a public water system, as defined by Section 10912, that may supply water for the project*
>
> *10912 (c) "Public water system" means a system for the provision of piped water to the public for human consumption that has 3,000 or more service connections…*

As shown on Figure 2-1, the Proposed Project is located within the City's General Plan Sphere of Influence (SOI), just outside of the Tracy City Limits. The City's water system service area includes all areas within the City Limits and the General Plan SOI as they are annexed into the City. Therefore, the City is the identified public water system for the Proposed Project.

3.4 Does the City have an adopted Urban Water Management Plan (UWMP) and does the UWMP include the projected water demand for the Proposed Project?

> *10910(c)(1) The city or county, at the time it makes the determination required under Section 21080.1 of the Public Resources Code, shall request each public water system identified pursuant to subdivision (b) to determine whether the projected water demand associated with a proposed project was included as part of the most recently adopted urban water management plan adopted pursuant to Part 2.6 (commencing with Section 10610).*

The City's most recently adopted UWMP (2020 UWMP) was adopted by the Tracy City Council in June 2021 and is incorporated by reference into this WSA[1]. The 2020 UWMP included water demand projections for current water demands within the City (baseline demand) and anticipated water demands associated with future development projects and planning areas within the City's SOI through 2045. The Proposed Project was included in the demand projections as a future service area in the 2020 UWMP.

The City's ability to meet the projected water demands for the Proposed Project, as defined in the 2020 UWMP, is described in Section 7 of this WSA.

[1] City of Tracy 2020 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., June 2021.

4.0 CITY OF TRACY WATER SERVICE AREA

4.1 Water Service Area

The City of Tracy is located in San Joaquin County, California, about 68 miles south of Sacramento and 60 miles east of San Francisco. The existing incorporated area of the City encompasses approximately 22 square miles. The City's General Plan includes the area outside of the City limits that the City expects to annex and urbanize in the future. It is the expected physical limit of the City based on the most current information. During the City's recent General Plan update process and in response to Local Agency Formation Commission (LAFCo) policies established in 2007, revisions to the City's SOI were made to more accurately reflect locations where the City may grow in the future and locations where no urban growth is expected. The recently adopted revised SOI encompasses an area of approximately 42 square miles and is 20 square miles larger than the current City limits.

The City's water service area is coterminous with the City limits. As future developments within the SOI, but outside the City Limits, are approved, they will be annexed into the City and served by the City water system. Figure 2-1 illustrates the current City Limits and the SOI. The Proposed Project is located outside the City's existing City Limits, but within the SOI.

4.2 Population

The State of California Department of Finance (DOF) population estimate for the City as of January 1, 2020 was 95,931 people[2]. In 2020, the City also served 118 residences in the Larch Clover County Services District (CSD), and the average persons per household factor was 3.51 (per DOF). Therefore, the City's total population served in 2020 was estimated to be 96,345.

Future population projections for the City are described in the 2020 UWMP and are summarized as follows. Population growth was rapid in the City over the 15-year period of 1990 through 2005, with the City growing by 139 percent. Between 2005 and 2020, however, growth has slowed relative to historical rates; population increased approximately 68 percent during this 15-year period. The reduction in growth rate has likely been caused by a combination of economic forces, such as the economic downturn of 2008 through 2011, and measures taken by the City to limit growth. In 1987, the City adopted a residential Growth Management Ordinance (GMO), which was amended in 2000 by the voter-initiative Measure A. The objective of the GMO and Measure A is to achieve a steady and orderly growth rate that allows for the adequate provision of services and community facilities and includes a balance of housing opportunities. Under the GMO, builders must obtain a Residential Growth Allotment (RGA) to secure a residential building permit. The GMO limits the number of RGAs and building permits to an average of 600 housing units per year for market-rate housing, with a maximum of 750 units in any single year, although there are exceptions for affordable housing and certain active adult residential uses (General Plan, 2011).

The population estimates for 2020 through 2045 presented in the 2020 UWMP are projected using the methodology used in the City's WSMP Update, which is currently in draft form. It incorporates assumptions about the number of dwelling units for each proposed development and planning area at

[2] State of California, Department of Finance, Report E-5 Population Estimates for Cities, Counties, and the State, 2011-2020, with 2010 Benchmark, released May 1, 2020.

buildout, an assumed number of people per dwelling unit (people/du), and the timing of planned development over this time frame.

Table 4-1 shows the City's projected population in five-year increments to the year 2045.

Table 4-1. City of Tracy Historical and Projected Population

Population	Year	Population
Historical	1990	32,827
	1995	44,906
	2000	57,298
	2005	78,613
	2010	83,312
	2015	85,707
	2020	96,345
Projected	2025	109,900
	2030	120,367
	2035	130,833
	2040	141,300
	2045	166,700

Source: City of Tracy 2020 UWMP, Table 3-1 Current and Projected Service Area Population, June 2021; includes residents served by the City in the Larch Clover CSD.

4.3 Climate

Spring, summer, and fall are generally hot in the City, with temperatures often reaching over 100 degrees Fahrenheit on summer days. The City's winters are usually mild, although the dense "Tule fog" can last for weeks. Annual rainfall averages 9.9 inches and is generally confined to the wet season from late October to early May. The average reference evapotranspiration (ETo) for the region is 48.4 inches.

Table 4-2 summarizes the City's average ETo, temperature, and rainfall data.

Table 4-2. City of Tracy Climate Data

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual Total or Average
Average ET_o, inches	1.0	1.5	2.9	4.5	6.1	7.3	7.9	6.7	5.3	3.2	1.3	0.7	48.4
Average Maximum Temperature, °F	54.1	61.0	66.7	73.1	80.7	88.0	93.6	92.1	87.9	78.5	64.9	54.7	74.6
Average Minimum Temperature, °F	36.7	40.0	42.6	45.5	50.4	55.2	57.1	55.7	53.9	48.7	42.1	36.6	47.0
Average Rainfall, inches	1.9	1.7	1.4	0.8	0.5	0.1	0.0	0.1	0.2	0.5	1.1	1.6	9.9

Source: City of Tracy 2020 UWMP, Table 3-3 Climate Characteristics, June 2021.

5.0 CITY OF TRACY WATER DEMANDS

> *10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f), and (g).*

The descriptions provided below for the City's water demands have been taken, for the most part, from the 2020 UWMP, which was adopted in June 2021. Supplemental information from other available reports has been included to provide the most recent data available and to meet the specific requirements of SB 610.

5.1 Historical and Existing Water Demand

The City's water demand has increased significantly in the last 30 years. In 1986, the City's water demand was 8,104 af/yr and by 2007 the City's water demand had increased to 19,176 af/yr. In recent years, the City's water demand has decreased as a result of the economic downturn of 2008 through 2011 and water use reductions in response to recent drought conditions. Water demands have rebounded (increased) somewhat in recent years with the end of drought conditions and increased development activity. Table 5-1 shows the City's water demand (based on water production) from 2012 to 2020.

Table 5-1. Historical Potable Water Demand

Condition	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total Water Demand, af/yr	18,052	18,587	16,213	14,041	15,360	18,160	17,420	17,672	19,527

Source: City of Tracy 2020 UWMP, Table 4-2 Current and Historical Potable Water Demand and Population, June 2021.

5.2 Future Water Demand

The City's water demand is anticipated to continue to increase as approved projects build out and new developments are approved and constructed in accordance with the City's General Plan within the City's water service area. However, as discussed above, the rate of growth within the City's water service area has slowed as a result of the GMO and the slow economic recovery from the economic downturn between 2008 and 2011. Hence, water demands are not anticipated to increase as rapidly as they have in past years. Buildout for the City is not anticipated within the planning horizon of this WSA. However, in the 2020 UWMP and for the purposes of this WSA, buildout is assumed to occur in 2045 to be conservative in the water reliability analysis.

The 2020 UWMP projected water demands are shown in Table 5-2. The City's projected future water demand was determined based on adopted potable water use factors for various land uses, which were developed based on historical metered water use data, and anticipated timing of future development projects. Buildout of the Proposed Project is included in the 2025 (near-term) water demand projection. A detailed explanation of the adopted demand projection methodology is provided in the City's WSMP Update.

The water demand projections include consideration for reduced future water use as a result of new building codes, improved water use efficiency, and implementation of water conservation measures. The projections also include savings from passive conservation which refers to water savings resulting from actions and activities that do not depend on direct financial assistance or educational programs from the City. These savings result primarily from: (1) the natural replacement of existing plumbing fixtures with water-efficient models required under current plumbing code standards, and (2) the installation of water-efficient fixtures and equipment in new buildings and retrofits as required under CALGreen Building Code Standards.

Table 5-2. Projected Water Demand

Condition	2025	2030	2035	2040	2045
Potable Water Demand, af/yr	20,509	23,100	25,738	28,403	33,079
Recycled Water Demand, af/yr	1,000	2,067	3,133	4,200	6,300
Total Water Demand, af/yr	**21,509**	**25,167**	**28,871**	**32,603**	**39,379**

Source: City of Tracy 2020 UWMP, Table 4-8 Gross Water Use, June 2021.

5.3 Dry Year Water Demand

The City currently has a water conservation program in place, as described in Chapter 9 of the 2020 UWMP. The projected future water demand presented in Table 5-2 includes continued implementation of the City's existing water conservation program demand management measures and is based on future normal hydrologic years. In the 2020 UWMP, the additional water conservation which may occur in single dry or multiple dry years was not assumed to happen. This was a conservative assumption as additional water conservation would likely occur as a result of the City's implementation of additional water conservation measures as outlined in the City's Water Shortage Contingency Plan[3] in response to multiple dry years or other water supply shortages. The City's Water Shortage Contingency Plan includes shortage response actions to reduce water demand and manage supply for water shortage conditions of up to and greater than 50 percent.

As shown in Table 5-1, the City's 2015 demand was significantly lower than 2014 demand in response to the Governor's April 2015 Executive Order B-29-15 mandating 25 percent water conservation statewide. To reduce water use by 25 percent statewide, the SWRCB adopted a regulation which placed each urban water supplier into one of eight tiers which were assigned a conservation standard, ranging between 4 percent and 36 percent. Each month, the SWRCB compared every urban water suppliers' water use with their use for the same month in 2013 to determine if they were on track for meeting their conservation standard. The City was initially placed into Tier 7 with a water conservation standard of 28 percent as compared to 2013 use (the City's conservation standard was reduced to 25 percent in early 2016).

In response, City Council authorized the implementation and amendment of the City's Phase III and IV water restrictions in June 2015 (as defined in Chapter 11.28 of the Tracy Municipal Code) to meet SWRCB emergency drought regulations described above. The City's water conservation efforts and results are an example of the City's ability to implement its Water Shortage Contingency Plan and reduce water

[3] The City's Water Shortage Contingency Plan is incorporated into the Water Management Chapter of the Tracy Municipal Code Chapter 11.28 and Appendix H of the City's 2020 UWMP.

demands in the event of an emergency water supply shortage. In May 2016, the City's water demand was 32.6 percent less than in May 2013, and the City's cumulative savings from June 2015 to May 2016 was 27.2 percent as compared to 2013, indicating the responsiveness of the City's residents to the call for water conservation[4].

As described above, in the 2012-2016 statewide drought, the City met (exceeded) its water conservation goals of 25 percent. For purposes of this WSA and to be conservative, the City assumes that dry year potable water demand is the same as normal year demand.

[4] SWRCB May 2016 Supplier Conservation Compliance (data from June 21, 2016), SWRCB Water Conservation Portal – Conservation Reporting.

6.0 CITY OF TRACY WATER SUPPLIES

10910(c)(2) If the projected water demand associated with the proposed project was accounted for in the most recently adopted urban water management plan, the public water system may incorporate the requested information from the urban water management plan in preparing the elements of the assessment required to comply with subdivisions (d), (e), (f) and (g).

10910(d)(1) The assessment required by this section shall include an identification of any existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and a description of the quantities of water received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts

10910(d)(2) An identification of existing water supply entitlements, water rights, or water service contracts held by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall be demonstrated by providing information related to all of the following:

(A) Written contracts or other proof of entitlement to an identified water supply.

(B) Copies of a capital outlay program for financing the delivery of a water supply that has been adopted by the public water system.

(C) Federal, state, and local permits for construction of necessary infrastructure associated with delivering the water supply.

(D) Any necessary regulatory approvals that are required in order to be able to convey or deliver the water supply.

10910(e) If no water has been received in prior years by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), under the existing water supply entitlements, water rights, or water service contracts, the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract-holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has identified as a source of water supply within its water supply assessments.

The Proposed Project, if approved by the City, is anticipated to be served from City's existing and future portfolio of water supplies. The inclusion of existing and planned future water supplies is specifically allowed by the Water Code:

Water Code section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).

The water supply for the Proposed Project will have the same water supply reliability and water quality as the water supply available to the City's other existing and future water customers. Proponents of the Proposed Project will provide their proportionate share of required funding to the City for the acquisition and delivery of treated potable and recycled water supplies to the Proposed Project area.

The water supplies needed to serve the Proposed Project (together with existing water demands and planned future uses) are predominantly described in the 2020 UWMP. Therefore, the descriptions provided below for the City's water supplies have been taken, for the most part, from the 2020 UWMP, which was adopted in June 2021. Supplemental information from other available reports, including the City's WSMP Update, has also been included to provide the most recent data available and to meet the specific requirements of SB 610.

6.1 Existing Potable Water Supplies

The City currently receives water from the following sources:

- Untreated surface water from the Central Valley Project (CVP) via the Delta-Mendota Canal (DMC) (treated at the City's John Jones Water Treatment Plant);
- Surface water from the Stanislaus River via the South County Water Supply Project (SCWSP) (delivered by the South San Joaquin Irrigation District [SSJID]);
- Groundwater pumped from nine groundwater wells located within the City; and,
- Untreated surface water from the BBID pre-1914 rights (treated at the City's John Jones Water Treatment Plant).

Also, the City has entered into an agreement with the Semitropic Water Storage District for storage of water supplies for use in dry years and has implemented an Aquifer Storage and Recovery (ASR) Program to allow for injection of surface water supplies into the underlying groundwater basin for storage and later extraction.

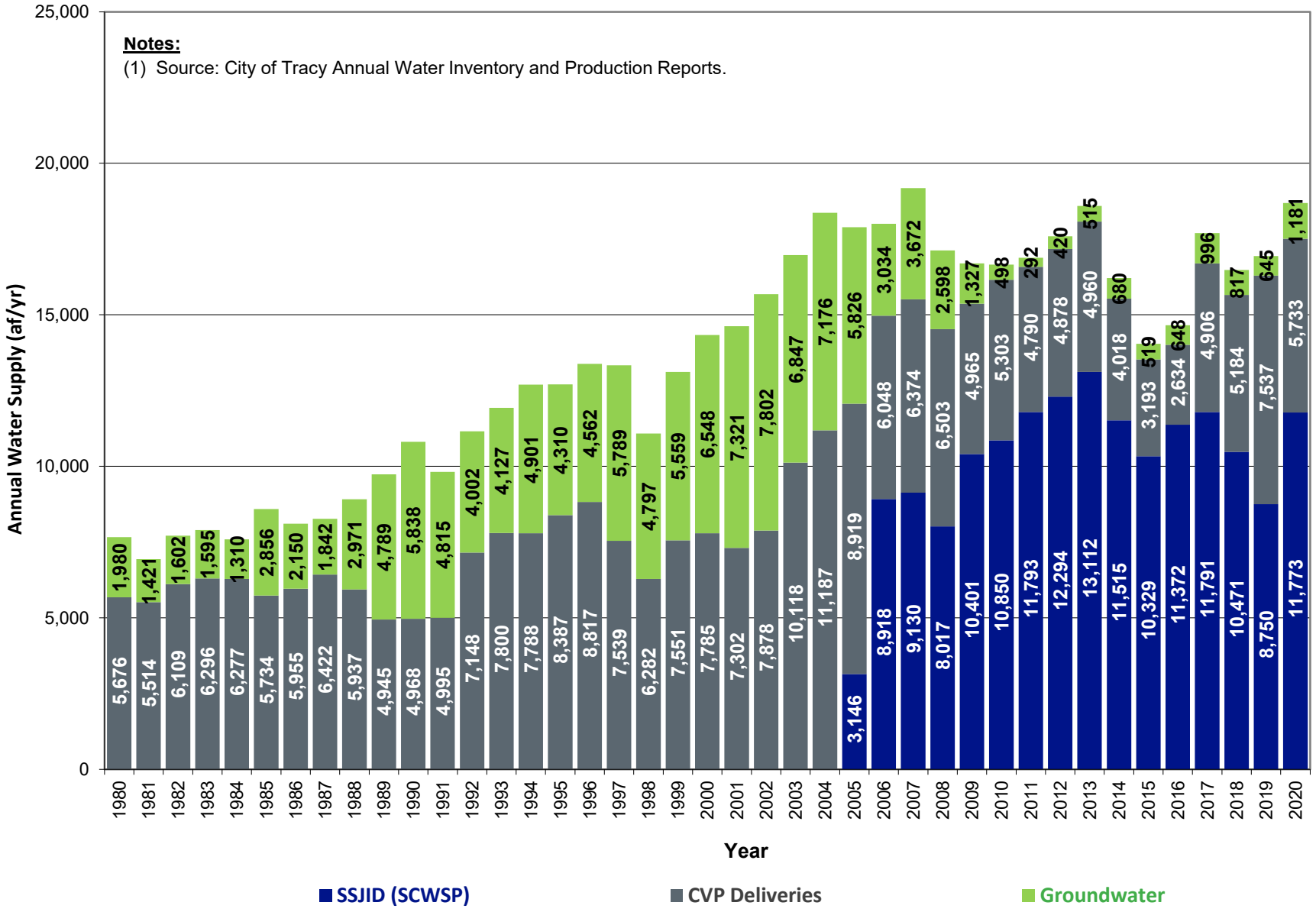
Each of these existing supplies is described below. Summary tables listing the City's existing and additional planned future water supplies, and historical and anticipated future quantities, are provided in Section 6.5, following the discussion of the City's additional planned future water supplies. Figure 6-1 shows the City's historical use of these existing water supplies.

6.1.1 Central Valley Project Water via the Delta-Mendota Canal

The City has contractual entitlements for Central Valley Project (CVP) water as detailed below. In the aggregate, the City's contractual entitlement to the municipal and industrial (M&I) reliability CVP water and assignments of agricultural (Ag) reliability water CVP water from BCID and WSID are referred to as the City's "Existing Contract" with the United States Bureau of Reclamation (USBR). The total quantity of CVP water available to the City under its Existing Contract is 20,000 af/yr (10,000 af/yr of M&I-reliability water and 10,000 af/yr of Ag-reliability water).

The City's CVP water supplies are treated at the City's John Jones Water Treatment Plant (JJWTP), which was originally constructed in 1979, expanded in 1988, and then expanded again in 2008. The JJWTP is located just north of the DMC in the southern portion of the City. With the latest plant expansion, the current treatment capacity of the JJWTP is 30 million gallons per day (mgd) which is sufficient to treat all of the City's CVP water supplies.

Figure 6-1. City of Tracy Historical Potable Water Supplies



The City also treats and serves CVP water purchased by others. Over the period 2010 through 2018, an average of approximately 630 af/yr of water from the Plain View Water District's (now BBID's) USBR allocation was treated at the JJWTP and delivered to the Patterson Pass Business Park through the City's water distribution system. A comparable quantity of BBID water is anticipated to be treated and delivered annually to the Patterson Pass Business Park in the future. Neither the water supply nor the demand for Patterson Pass Business Park are included in the City supply and demand estimates because the water supply is BBID's, not the City's, and the City only provides water treatment, delivery and billing services on a contractual basis for the Patterson Pass Business Park; the City does not manage either the supply or the demand.

6.1.1.1 Municipal and Industrial Reliability Contract

In July 1974, the City entered into a 40-year contract with the United States Bureau of Reclamation (USBR) for an annual entitlement of 10,000 af/yr of surface water from the CVP via the DMC. The original USBR contract expired in 2014; however, since December 2013, the City and USBR have entered into a series of two-year interim renewal contracts to provide water service to the City while the terms of the long-term contract renewal were negotiated. In November 2021, the Tracy City Council approved a new long-term contract with USBR which became effective on December 1, 2021. The new contract is for 20,000 af/yr, which aggregates the City's M&I-reliability supplies and Ag-reliability supplies (discussed below) from the CVP. The new contract does not have a termination date and would continue as long as water is available and delivered.

6.1.1.2 Agricultural Reliability Contract

In 2004, the USBR approved the assignment of 5,000 af/yr of Ag-reliability CVP contract entitlement to the City from the Banta Carbona Irrigation District (BCID). Concurrently, the USBR approved the assignment of 2,500 af/yr of Ag-reliability CVP contract entitlement water to the City from WSID, with the option to purchase an additional 2,500 af/yr of CVP contract entitlement from the WSID. In December 2013, the City and WSID approved the additional assignment in which the City's current assignment of WSID CVP water is 5,000 af/yr.

6.1.1.3 South-of-Delta Allocations

The City's CVP water supplies are subject to allocations determined by the USBR for 'South-of-Delta' contractors. Historical M&I and Ag allocations for the CVP water supplies are summarized in Table 6-1. Based on the historical record, the City's long-term average allocation of CVP water pursuant to the contract is anticipated to be at least 85 percent of the total entitlement. However, due to recent environmental concerns in the Delta and potential future impacts due to climate change, the normal year reliability of CVP water was assumed to be 75 percent in the 2020 UWMP. In addition, the City conservatively estimated that it will receive 50 percent of its Ag-reliability contractual entitlement in normal water years.[5]

During dry years, a CVP M&I contractor is typically eligible for a minimum shortage allocation equal to 75 percent of adjusted historical use. Per the CVP M&I Water Shortage Allocation Plan, the minimum shortage allocation may be reduced further when the allocation of Ag-reliability water in that year is reduced below 25 percent of contract entitlement. The component of the City's CVP supply that carries

[5] City of Tracy 2020 UWMP, June 2021, Section 7.1.2.1.

Ag-reliability is subject to more significant reductions and is much more dependent on yearly hydrologic conditions than the City's M&I-reliability allocation.

Table 6-1. Historical Allocations for USBR Central Valley Project Water Supplies

Year	M&I Allocation for South of Delta Contractors (% of contract supply unless otherwise noted)	Ag Allocation for South of Delta Contractors (% of contract supply unless otherwise noted)
2005	100	85
2006	100	100
2007	75	50
2008	75	40
2009	60	10
2010	75	45
2011	100	80
2012	75	40
2013	70	20
2014	50	0
2015	Public health and safety needs or 25 percent of historical use, whichever is greater	0
2016	55 percent of historical use	5
2017	100 percent of contract amount	100
2018	Public health and safety needs or 75 percent of historical use, whichever is greater	50
2019	100 percent of historical use	75
2020	Public health and safety needs or 70 percent of historical use, whichever is greater	20

6.1.1.4 CVP Water Supply Reliability

In February 2017, new guidelines and procedures went into effect associated with the updated CVP Municipal and Industrial Water Shortage Policy. In general, the policy provides for the following:

- When M&I contractor allocations are at 100 percent, the allocation of M&I water will be based on Contract Total.
- When M&I contractor allocations are below 100 percent, the allocation of M&I water will be based on a contractor's historical use of CVP M&I water.
- An M&I contractor's historical use will be determined by calculating the average quantity of CVP water put to beneficial use within the service area during the last three years of water deliveries that were unconstrained by the availability of CVP water.

The City's reliability assumptions in the 2020 UWMP are sufficiently conservative to adhere to the 2017 guidelines. The City's CVP water single dry year reliability is based on adjusted historical use and provided in its 2020 UWMP, and are assumed as 25 percent for M&I CVP water, and 0 percent for Ag CVP water.

Similarly, the City's CVP water multiple dry year reliability is based on adjusted historical use and provided in its 2020 UWMP and are assumed as 40 percent for M&I CVP water, and 0 percent for Ag CVP water.

6.1.2 Surface Water from BBID Pre-1914 Water Rights

Part of the proposed Tracy Hills Specific Plan area was annexed into the BBID and is entitled to water service from BBID, using BBID's pre-1914 appropriative water rights. This water is delivered to the City via the DMC and is treated at the City's JJWTP before delivery to the Tracy Hills Specific Plan area. The City anticipates that up to 4,500 af/yr of pre-1914 water rights water could be provided by BBID on a year-round basis to serve the Tracy Hills Specific Plan in the BBID service area. However, the volume of water available to the City through this agreement is limited to the demand in the BBID service area portion of the Tracy Hills Specific Plan. The projected potable water demand in this area is estimated to be 3,330 af/yr at Buildout. Because the water supply is based on pre-1914 appropriative rights, the supply is considered to be firm and well-established.

6.1.3 Stanislaus River Water

The City receives Stanislaus River water, in partnership with the cities of Manteca, Lathrop and Escalon, and the SSJID. This partnership constructed the South County Water Supply Project (SCWSP), which consists of the 36 mgd Nick C. DeGroot Water Treatment Plant (DGWTP) near Woodward Reservoir in Stanislaus County and a transmission pipeline to deliver treated surface water to each city. The water supply source for the SCWSP is based on SSJID's senior pre-1914 appropriative water rights to the Stanislaus River, coupled with an agreement with the USBR to store water in New Melones Reservoir.

As part of the SCWSP, the City was initially allocated up to 10,000 af/yr of water based upon SSJID's senior water rights. In 2006, the City entered into a temporary contract with Escalon to purchase Escalon's allocation of 2,015 af/yr of SCWSP supply until Escalon constructs the necessary infrastructure to convey the SCWSP water.[6] In August 2013, SSJID and the Cities of Tracy and Lathrop approved a Lathrop-Tracy Purchase, Sale and Amendment Agreement for the sale of a portion of the City of Lathrop's SCWSP supply and capacity to the City of Tracy. The agreement provides the City with an additional 1,120 af/yr of SCWSP supply and 2 mgd of SCWSP capacity. Thus, the City's current contractual amount of SCWSP water is 13,135 af/yr in total. Once the agreement with Escalon sunsets (anticipated to occur in 2025), the City's contractual allocation will be reduced to 11,120 af/yr. This additional SCWSP supply has the same reliability as the City's original SCWSP supplies.

Treated water deliveries from the SCWSP commenced in July 2005, and deliveries have been essentially uninterrupted since then (see Figure 6-1). Although the City full allocation was available in first few years, deliveries to the City were less than its allocation because the full allocation was not needed. However, in some years since 2009 the City has actually received more than its allocation.

Due to the seniority of the water rights underling the SCWSP, SSJID's pre-1914 appropriative rights to Stanislaus River water, the City has historically assigned a high reliability to SCWSP water. However, in December 2018, the SWRCB released amendments to the Water Quality Control Plan for the San Francisco/Sacramento-San Joaquin Delta Estuary (Bay-Delta Plan Amendment) which included significant changes and could result in significant surface water cutbacks. In its 2020 UWMP, SSJID presented a water reliability analysis assuming that the Bay-Delta Plan Amendment will not be

[6] Escalon Amendment to Tracy- SSJID Water Supply Development Agreement, March 2006.

implemented given its uncertainties. As an SSJID retail agency customer, the City relies on SSJID for the reliability projections for the Stanislaus River water supply. Consistent with SSJID's approach, the City's 2020 UWMP assumes that the Bay-Delta Plan Amendment will not be implemented. However, to fully assess the potential impacts of the Bay-Delta Plan Amendment and better plan for the potential shortfalls, the City conducted a parallel set of reliability analyses assuming that the Bay-Delta Plan Amendment will be implemented and included it as Appendix G of its 2020 UWMP.[7] Uncertainties regarding dry year supply projections are discussed in Section 7.2.

Consistent with the City's 2020 UWMP and for the purposes of this WSA, the City is assumed to receive 100 percent of its SCWSP contractual entitlement in normal years. In future dry years, the City assumed that allocations would be based on the City's contractual entitlement, rather than consumption in a given year. In single dry years, the City expects to receive 76 percent of its SCWSP water supply allocation during 2025, 2030, and 2035 and 56 percent during 2040 and 2045, based on information received from SSJID. In multiple dry years, the City expects to receive 56 to 100 percent of its SCWSP water supply allocation, depending on hydrological conditions. In addition, SCWSP water transferred from Escalon is assumed to be unavailable after 2025.

The anticipated availability and reliability of the SCWSP supply under normal years, single dry years and multiple dry years may be revised based on updated evaluations in conjunction with resolutions of issues associated with the Bay-Delta Plan Amendment. Further, SSJID anticipates the likelihood that more water will be available for local purposes in 2040 based on more efficient water management and urban development displacing irrigated agricultural land uses.[8]

6.1.4 Groundwater

> *10910(f) If a water supply for a proposed project includes groundwater, the following additional information shall be included in the water supply assessment.*
>
> *10910(f)(1) A review of any information contained in the urban water management plan relevant to the identified water supply for the proposed project.*
>
> *10910(f)(2) A description of any groundwater basin or basins from which the proposed project will be supplied. For those basins for which a court or the board has adjudicated the rights to pump groundwater, a copy of the order or decree adopted by the court or the board and a description of the amount of groundwater the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), has the legal right to pump under the order or decree. For basins that have not been adjudicated, information as to whether the department has identified the basin or basins as overdrafted or has projected that the basin will become overdrafted if present management conditions continue, in the most current bulletin of the department that characterizes the condition of the groundwater basin, and a detailed description by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), of the efforts being undertaken in the basin or basins to eliminate the long-term overdraft condition.*
>
> *10910(f)(3) A detailed description and analysis of the amount and location of groundwater pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), for the past five years from any groundwater basin from which the proposed project will be supplied. The*

[7] City of Tracy 2020 UWMP, June 2021, Section 7.1.1.3.

[8] City of Tracy 2020 UWMP, June 2021, Section 7.1.1.2.

description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

A detailed description and analysis of the amount and location of groundwater that is projected to be pumped by the public water system, or the city or county if either is required to comply with this part pursuant to subdivision (b), from any basin from which the proposed project will be supplied. The description and analysis shall be based on information that is reasonably available, including, but not limited to, historical use records.

10910(f)(4) An analysis of the sufficiency of the groundwater from the basin or basins from which the proposed project will be supplied to meet the projected water demand associated with the proposed project.

A water assessment shall not be required to include the information required by this paragraph if the public water system determines, as part of the review required by paragraph (1), that the sufficiency of groundwater necessary to meet the initial and projected water demand associated with the project was addressed in the description and analysis required by paragraph (4) of subdivision (b) of Section 10631.

The City's surface water supply is supplemented by local groundwater. The City overlies a portion of the San Joaquin Valley Groundwater Basin-Tracy Subbasin (Tracy Subbasin). The City currently operates nine groundwater wells, with a total extraction capacity of about 18,300 gallons per minute (gpm), or 26 mgd (GEI, 2015). Four wells (Production Wells 1, 2, 3 and 4) are located near the City's JJWTP and pump directly into the JJWTP clearwells, where the groundwater is blended with treated surface water. The other wells (Lincoln Well, Lewis Manor Well (Well 5), Park and Ride Well (Well 6), Ball Park Well (Well 7) and Well 8) are located throughout the City and pump water directly into the distribution system after disinfection. The City's newest well, Well 8, located near the intersection of Tracy Boulevard and 6th Street, was designed as an ASR well, and has been put into service as an ASR well as permitted by the Central Valley Regional Water Quality Control Board. The City's ASR use is described in Section 6.1.5.

6.1.4.1 Basin Description

The City overlies the Tracy Subbasin (Basin; Department of Water Resources [DWR] 5-22.15) of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is not adjudicated, and it is not in a condition of critical overdraft.

The following section describes the Tracy Subbasin, including its water-bearing formations, water levels, and water quality. Much of the following information has been incorporated from the 2020 UWMP. Except where noted, the description of the subbasin is based largely on information provided in the 2003 DWR Bulletin 118, in which the groundwater basin description was last updated in January 2006. The Tracy Subbasin is designated as a medium priority basin under DWR's 2019 Phase 2 Basin Prioritization (DWR, 2019a).

The Tracy Subbasin covers an area of approximately 373 square miles. It is bounded on the northwest by the Old River south to the tri-county confluence point and on the south by the Clifton Forebay where it then follows the Contra Costa-Alameda County line to the foothills of the Coastal Range mountains. The northeast boundary follows the San Joaquin River south to the San Joaquin County Line with a slight jog to include the City of Lathrop on the west side of the river. The southern border of the Subbasin generally follows the San Joaquin-Stanislaus County line, with some irregular areas belonging to the Delta-Mendota Subbasin to the south. The western border follows the Coastal Range foothills from the San Joaquin-Stanislaus County line; north to the Contra Costa-Alameda County line. The Subbasin is a mix of Delta islands (mostly agriculture) and waterways along with urban and agricultural communities on the southern edge.[9]

Adjacent to the Tracy Subbasin are the Eastern San Joaquin Subbasin to the east, the Delta-Mendota Subbasin to the south, and the Sacramento Valley Groundwater Basin to the north. The three subbasins, not including the Sacramento Valley Groundwater Basin, are part of the San Joaquin Valley Groundwater Basin. The San Joaquin River and one of its major west side tributaries, Corral Hollow Creek, provide drainage from the Tracy Subbasin. The San Joaquin River flows northward into the Sacramento and San Joaquin Delta and discharges into San Francisco Bay.

The Tracy Subbasin is comprised of continental deposits of Late Tertiary to Quaternary age. These deposits include the Tulare Formation, Older Alluvium, Flood Basin Deposits, and Younger Alluvium. The cumulative thickness of these deposits increases from a few hundred feet near the Coast Range foothills on the west to about 3,000 feet along the eastern margin of the subbasin.

Each of these formations is described below.

- The Tulare Formation is exposed in the Coast Range foothills along the western margin of the subbasin and dips eastward toward the axis of the San Joaquin Valley. The Tulare Formation is approximately 1,400 feet thick and consists of semi-consolidated, poorly sorted, discontinuous deposits of clay, silt, and gravel. The Corcoran Clay occurs near the top of the Tulare Formation and confines the underlying fresh water deposits. The eastern limit of the Corcoran Clay is near the eastern boundary of the subbasin. The Tulare Formation is moderately permeable, with most of the larger agricultural, municipal, and industrial wells completed below the Corcoran Clay and capable of producing up to about 3,000 gpm. Smaller, domestic wells are typically completed above the Corcoran Clay, where the groundwater is often of poor quality. Specific yield values for the Tulare Formation in the San Joaquin Valley and Delta area range from 7 to 10 percent.
- The Older Alluvium is approximately 150 feet thick and consists of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans during the Pliocene and Pleistocene eras. The Older Alluvium is widely exposed between the Coast Range foothills and the Delta and is moderately to locally highly permeable.

[9] GEI, 2020. Draft Tracy Subbasin Groundwater Sustainability Plan, Chapters 1-3, June 23, 2020.

6.1.4.2 Groundwater Management

6.1.4.2.1 Pre-SGMA Groundwater Management

Prior to the passage of the Sustainable Groundwater Management Act (SGMA) in 2014, the 1992 Groundwater Management Act, Assembly Bill (AB) 3030, established provisions by which local water agencies could develop and implement Groundwater Management Plans (GWMP). GWMPs are generally designed to prevent local and regional aquifer overdraft, which reduces available groundwater resources and which, under certain conditions, can lead to degradation of water quality and to land subsidence.

The City, BBID, Banta-Carbona Irrigation District (BCID), and San Joaquin County formed a Groundwater Advisory Committee to facilitate the development of a regional GWMP for the Tracy Subbasin. The planning area of the Tracy GWMP encompassed the portion of the Tracy Subbasin underlying San Joaquin County. The Tracy GWMP was adopted in 2007 and is available on the San Luis & Delta-Mendota Water Authority website:
http://sldmwa.org/OHTDocs/pdf_documents/Groundwater/GroundwaterManagementPlanNorthernApproved11_2011.pdf

The key results of the Tracy GWMP included the following:

- Developed a general consensus among stakeholders regarding the characterization of the area's water problems, current and future demands, and groundwater conditions;
- Documented the region's groundwater management goals and establishing basin management objectives to help measure progress in attaining the goals;
- Developed specific solutions and common programs for the basin; and
- Provided an implementation plan to direct future groundwater management activities.

The Tracy GWMP concluded that the Tracy Subbasin is full, but experiences groundwater quality issues in portions of the basin associated with nitrate, boron, sulfate, chloride, and total dissolved solids (TDS). As such, many of the groundwater management options that were recommended focused on creating available storage and managing pumping in order to increase water quality within the Tracy Subbasin.

San Joaquin County is the designated Monitoring Entity under CASGEM for the portion of the Tracy Subbasin underlying the county. However, upon submission of the GSP, the CASGEM program will be superseded by the SGMA monitoring efforts.

6.1.4.2.2 SGMA Groundwater Management

On August 29, 2014, the California Legislature passed comprehensive groundwater legislation contained in SBs 1168 and 1319, and AB 1739, which are collectively referred to as SGMA. This legislation was signed by Governor Brown on September 16, 2014 and it became effective on January 1, 2015. The legislative intent of SGMA is to provide sustainable management of groundwater basins, enhance local management of groundwater, establish minimum standards for sustainable groundwater management, and provide local groundwater agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater.

The Tracy Subbasin is designated by DWR as a medium priority basin (DWR, 2019a). As such, the Tracy Subbasin is subject to the requirements of SGMA, which include the formation of a one or more

Groundwater Sustainability Agencies (GSAs) and the development and implementation of one or more Groundwater Sustainability Plans (GSPs) by January 31, 2022. If the statutory deadline is not met for GSP development and/or implementation, the State has the authority to intervene and manage groundwater within non-compliant subbasins. SGMA requires that adopted GSPs result in sustainable groundwater management which avoids undesirable results.

The Tracy Subbasin contained areas of San Joaquin, Contra Costa and Alameda Counties. The Banta-Carbona Irrigation District, Byron-Bethany Irrigation District, City of Tracy, City of Lathrop, Stewart Tract, West Side Irrigation District, and San Joaquin County are GSAs within the Tracy Subbasin. The GSAs recognize that developing and adopting a single GSP for the subbasin would be the most efficient way of achieving sustainability and preventing State intervention into local groundwater management.

Working with San Joaquin County and the Tracy Subbasin GSAs, a Memorandum of Agreement (MOA) has been developed for the development of the San Joaquin County GSP for the Tracy Subbasin. Under the terms of the MOA, San Joaquin County is designated as the lead entity to enter into an agreement with the City of Brentwood to coordinate the allocation of grant funds.

The City, BCID, BBID[10], City of Lathrop, San Joaquin County, and Stewart Tract are the six GSAs formed in the Tracy Subbasin and are working cooperatively to develop a single GSP. The Tracy Subbasin GSAs were awarded a DWR grant to develop the GSP. Pursuant to the Grant Agreement, each GSA designated an appointee to form the GSP Coordination Committee, and the San Joaquin County was appointed as the Grant Administrator. The Grant Administrator or any two appointees may call meetings of the GSP Coordination Committee as needed to in the GSP development process.

The GSP for the Tracy Subbasin has been completed and is currently in the process of being adopted by each of the GSAs. The Tracy City Council adopted the Final GSP on November 16, 2021. The other GSAs are anticipated to adopt the Final GSP in December 2021. The Final GSP must be submitted to DWR by the statutory deadline of January 31, 2022. The Draft Final GSP is available for public review on the Tracy Subbasin website: https://tracysubbasin.org/gsp-chapters/.

As one of the six GSAs that are managing the Tracy Subbasin., the City has been actively involved in GSP development activities and will continue to be involved throughout SGMA implementation. The City has one appointee (and an alternate) on the Tracy Subbasin GSP Coordination Committee, which meets quarterly, and the Technical Committee, which meets monthly.

6.1.4.3 Groundwater Yield

Based on a groundwater study the City completed in 2001 (Bookman-Edmonston, 2001), the City is able to withdraw up to 9,000 af/yr from the Tracy Subbasin on an average annual basis. However, groundwater production is constrained by the City's well production and treatment capacity, as the infrastructure is aging. Production is further limited by the water quality issues of the City's groundwater supplies, including high total dissolved solids (TDS) concentrations, hardness, and potential formation of chloramines. As the Groundwater Sustainability Plan (GSP) for the Tracy Subbasin is developed and implemented, the City's groundwater supply reliability may be revisited.

[10] West Side Irrigation District has officially merged with Byron-Bethany Irrigation District in September 2020, which occurred later than the release of the draft GSP chapters.

A 1990 Kennedy/Jenks/Chilton (K/J/C) study estimated a perennial groundwater yield of 6,700 af/yr in the Tracy Sub-basin within the Tracy Study Area. However, in 2001, to determine if additional groundwater resources were available in the Tracy Study Area, the City conducted an updated groundwater analysis. The Estimated Groundwater Yield Study, prepared by Bookman-Edmonston Engineering provided an evaluation of potential groundwater yield and determined that a 2,300 af/yr increase of the average annual operational groundwater yield above the groundwater yield recommended in the 1990 K/J/C study could be provided within the estimated safe yield of the Tracy Sub-basin in the Tracy Study Area, without adverse impact to groundwater resources or quality in the Tracy Study Area over a 50-year timeframe. This expansion of groundwater usage to 9,000 af/yr would be within the City's estimated 22,000 af/yr share of the aquifer's estimated total safe yield of 28,000 af/yr (total includes City groundwater usage as well as groundwater usage within West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District (now part of the Byron Bethany Irrigation District), and Banta-Carbona Irrigation District). It was also estimated that this expansion of groundwater usage would result in a groundwater level drop of 10 feet but would stabilize at this level.

In 2015, the City hired GEI to perform an assessment on what the effects would be if the City were to pump between 16,000 and 22,000 af/yr for a single year to meet its demands during a drought emergency when no surface water supplies were available. The assessment considered potential impacts on groundwater levels, groundwater quality, and land subsidence. GEI's approach to this assessment was to estimate drawdown beneath the City, including drawdown caused by well interference, under scenarios wherein all of the City's wells were pumped for a single year at rates needed to meet the above stated demands. Drawdown estimates were made using analytical methods and aquifer hydraulic property data from pumping tests performed at two of the City's wells. Results showed that the City does have capacity to pump its wells to meet these single dry year demands, but that drawdown in the City's wells and at locations proximate to the City would exceed that which has been historically observed. GEI (2015) estimated that groundwater levels would recover from their drawdown within approximately seven years.

6.1.4.4 Groundwater Quality

Groundwater quality in the Tracy Subbasin varies spatially and with depth. In general, the northern part of the Tracy Subbasin is characterized by a sodium water type, and the southern part of the Tracy Subbasin is characterized by calcium-sodium water type (Sorenson, 1981). The northern part of the Tracy Subbasin is also characterized by a wide range of anionic water types, including bicarbonate; chloride; and mixed bicarbonate-chloride. Major anions in the southern part of the Tracy Subbasin include sulfate-chloride and bicarbonate-chloride.

There is also a difference between the water quality in the water-bearing zones above the Corcoran Clay (termed the "semi-confined aquifer") and below the Corcoran Clay (termed the "confined aquifer"). Generally, the water quality of the confined aquifer is better than that of the semi-confined aquifer (Stoddard & Associates 1996).

Constituents present at elevated concentrations throughout the Tracy Subbasin in both the semi-confined and confined aquifers include chloride, nitrate, sulfate, and boron. Elevated chloride occurs in several areas near Tracy and along the San Joaquin River. Areas of elevated nitrate occur in the northwestern part of the Tracy Subbasin and in the vicinity of Tracy. Elevated boron occurs over a large portion of the Tracy Subbasin from south of Tracy extending to the northwest side of the Tracy Subbasin. Sulfate concentrations of up to 500 mg/L have been detected in Tracy Subbasin groundwater. The groundwater near Tracy is considered to be very hard (Stoddard & Associates, 1996).

A summary of groundwater quality in the Tracy Subbasin is included in the GSP materials available on the Tracy Subbasin website (https://tracysubbasin.org/). The water quality conditions in groundwater represent conditions for source water, prior to treatment by the City and service to customers.

One water quality concern that the City actively manages is TDS. The City's groundwater supply typically meets the primary maximum contaminant level (MCL) of 1,000 milligrams per liter (mg/L) but frequently exceeds the secondary MCL of 500 mg/L. In 2019, the City's groundwater supply ranged from 386 to 876 mg/L of TDS, with an average concentration of 752 mg/L.[25] Because the TDS concentrations are significantly higher in the groundwater supply than in the City's other water supply sources, in order to meet the secondary MCL in its overall water supply, the City typically scales back its groundwater production from its estimated sustainable yield of 9,000 af/yr, particularly in normal rainfall years.

The City continues to rely on groundwater for peaking, and under drought conditions, it typically increases its groundwater production as needed to meet demands when surface water supplies become more limited. Groundwater quality is not expected to impact the reliability of available water supplies in the 2020 UWMP planning horizon.[11]

6.1.4.5 Historical Groundwater Use

As discussed previously, the City currently operates nine groundwater extraction wells:

- Well 1 (at JJWTP)
- Well 2 (at JJWTP)
- Well 3 (at JJWTP)
- Well 4 (at JJWTP)
- Lincoln Well
- Well 5 (Lewis Manor Well)
- Well 6 (Ball Park Well)
- Well 7 (Park & Ride Well)
- Well 8 (for ASR)

The City's newest well, Well 8, was constructed in January 2004 and was permitted by the California Department of Public Health[12] for use as a municipal production well in September 2010, and was used as an ASR demonstration well during 2011, 2012 and 2013, In November 2013, the City received authorization from the Central Valley Regional Water Quality Control Board (RWQCB) to operate Well 8 as an ASR well.

Historically, groundwater had accounted for up to 50 percent of the City's water supply. Prior to 2001, groundwater extraction in Tracy totaled less than 6,000 af/yr. Between 2001 and 2004, to meet increased demands for water, Tracy began extracting additional groundwater, ranging from 6,878 to 7,717 af/yr. In 2005, groundwater extraction decreased to approximately 6,000 af/yr because: (1) the SCWSP was completed and the City began receiving Stanislaus River water, and (2) rainfall was above normal, meaning that the City received a high percentage of its DMC/CVP contractual entitlements. From 2006 to 2010, groundwater extraction ranged from 3,672 af/yr to 498 af/yr, declining as more water was used from SSJID. The City's groundwater production over the last several years is provided in Table 6-2.

[11] City of Tracy 2020 UWMP, June 2021, Section 7.1.1.8.

[12] As of July 1, 2014, the State's administration of the Drinking Water Program transferred from the State Department of Public Health to the SWRCB Division of Drinking Water (DDW).

Table 6-2. City of Tracy Historical Groundwater Production

Condition	2012[a]	2013[a]	2014[a]	2015[a]	2016[b]	2017[b]	2018[b]	2019[b]	2020[b]
Total Groundwater Production, af/yr	252	515	680	519	648	996	817	645	1,181

(a) Source: City of Tracy 2015 UWMP, Table 5-1 Current and Historical Potable Water Supply, May 2016.
(b) Source: City of Tracy WSMP Update, Table 6-1 Groundwater Volume Pumped, June 2021.

Other groundwater users in the Tracy area include the West Side Irrigation District, Naglee-Burk Irrigation District, Plain View Water District (now the Byron Bethany Irrigation District), and Banta-Carbona Irrigation District. Although current groundwater pumpage by these users was not available for inclusion in this WSA, the 2001 Estimated Groundwater Yield Study, which established the City's estimated groundwater yield of 9,000 af/yr, considered the cumulative groundwater usage in the study area by the City and other users in the Tracy area.

6.1.4.6 Projected Future Groundwater Use

As discussed in Section 6.1.4.3, the City may sustainably pump up to 9,000 af/yr from the local groundwater basin. Since the hard, high TDS groundwater is of lower quality than the City's surface water sources, the City has scaled back its groundwater extraction in most years. However, the City will continue to rely on groundwater for peaking and drought and emergency water supply. Table 6-3 shows the anticipated future groundwater production during a normal year and during dry years.

As can be seen in Table 6-3, the City anticipates that total extraction during a normal year will be 2,500 af/yr through the planning horizon. By reducing groundwater extraction on an average annual basis, the City will: (1) increase the overall quality of its drinking water, thus increasing customer satisfaction and reducing system maintenance and repair caused by the lower-quality groundwater; and (2) recharge the underlying aquifer, effectively increasing the availability of groundwater during a drought or emergency condition (i.e., effectively "banking" groundwater). At the production volumes shown in Table 6-3, the City's groundwater supplies are considered to be 100 percent reliable.

The projected uses of groundwater during droughts shown in Table 6-3 are consistent with the City's Groundwater Management Policy (PMC, 2001). In the event that the City is unable to secure additional high-quality surface water supplies in the future, the City is able to expand groundwater production up to 9,000 af/yr. In the event of a severe water supply shortage or emergency, the City has the ability to increase production dramatically, up to 22,000 af/yr (GEI, 2015).

Table 6-3. City of Tracy Projected Future Groundwater Production in Normal and Dry Years

Condition	2025	2030	2035	2040	2045
Total Groundwater Production During a Normal Year, af/yr[a]	2,500	2,500	2,500	2,500	2,500
Total Groundwater Production During Dry Years, af/yr[b]	4,500	4,500	4,500	4,500	4,500

(a) *Source: City of Tracy 2020 UWMP, Table 7-2 Projected Water Supply in Normal Years, June 2021.*
(b) Source: *City of Tracy 2020 UWMP, Section 7.1.2.2 and Section 7.1.2.3, June 2021.*

6.1.4.7 Groundwater Sufficiency

The 2020 UWMP addressed the sufficiency of the City's groundwater supplies, in conjunction with the City's other existing and additional water supplies, to meet the City's existing and planned future uses[13]. Based on the information provided above and included in the 2020 UWMP, the City's groundwater supply, together with the City's other existing and additional planned future water supplies, is sufficient to meet the water demands of the Proposed Project, in addition to the City's existing uses.

As discussed above, the City's use of groundwater over the last few years has significantly declined, primarily due to the availability of higher-quality surface water supplies from the SCWSP. In the future, although the City can sustainably extract up to 9,000 af/yr of groundwater on a continuous basis, the City's use of groundwater under normal hydrologic conditions is anticipated to be lower, as available higher-quality surface water supplies would be utilized first. As shown in Table 6-3, in the future, assuming normal year hydrologic conditions, annual groundwater use is anticipated to be 2,500 af/yr. This anticipated future groundwater pumpage is significantly below the City's maximum historical groundwater pumpage (see Figure 6-1) and the average annual operational yield of 9,000 af/yr.

- The Flood Basin Deposits occur in the Delta portion of the subbasin and are the distal equivalents of the Tulare Formation and Older and Younger alluvial units. The Flood Basin Deposits consist primarily of silts and clays with occasional interbeds of gravel along the present waterways. Because of their fine-grained nature, the Flood Basin Deposits have low permeability and generally yield low quantities of water to wells. Occasional zones of fresh water are found in the Flood Basin Deposits, but they generally contain poor quality groundwater. The maximum thickness of the Flood Basin Deposits is about 1,400 feet.
- The Younger Alluvium includes those deposits that are currently accumulating, including sediments deposited in the channels of active streams, as well as overbank deposits and terraces of these active streams. The Younger Alluvium, consisting of unconsolidated silt, fine- to medium-grained sand, and gravel, is present to depths of less than 100 feet below ground surface (bgs) along the channel of Corral Hollow Creek. Sand and gravel zones in the Younger Alluvium are highly permeable and, where saturated, yield significant quantities of water to wells.

6.1.5 Aquifer Storage and Recovery

The City has been implementing an ASR Program to store surplus treated surface water in the confined aquifer beneath Tracy and extract that water to meet peak demands or supplement surface water sources during dry years. The City has one former groundwater extraction well, Well 8, which has been operated as an ASR well since 2013 after the successful demonstration of ASR feasibility.[14] Well 8 is located near the intersection of Tracy Boulevard and 6th Street and penetrates the Lower Tulare Formation.

The recharge water source of the City's ASR Program is treated SCWSP water.[15] The City's SCWSP water supply is of exceptionally high water quality, with a TDS concentration of approximately 64 milligrams per

[13] Chapter 6, City of Tracy 2020 Urban Water Management Plan, prepared by Erler & Kalinowski, Inc., June 2021.

[14] Notice of Applicability for General Water Quality Order 2012-0010-DWQ-RB5S-0002, Aquifer Storage and Recovery Program, City of Tracy (Well No. 8), San Joaquin County, dated 13 November 2013.

[15] Per the terms of its agreement with the RWQCB, the City is not permitted to inject treated DMC/CVP at Well 8.

liter (mg/L).[16] Since the TDS concentration of the recharge water source is much lower than that of the Lower Tulare Formation aquifer's native groundwater, operation of the City's ASR Program reduces the localized salinity of the aquifer, resulting in lower TDS content in water supplies extracted from Well 8 than would be expected in the absence of the ASR Program. Additionally, the reduced salinity in groundwater recovered from Well 8 results in lower salt loading at the City's wastewater treatment plant (WWTP), which eventually reduces the salinity of effluent from the WWTP. This helps the City meet its Regional Water Quality Control Board (RWQCB) effluent salinity requirements and provides environmental benefits to the river ecosystems.

Injection of SCWSP water into the ASR well occurs during the winter months (i.e., November through April), when City demands are low. Extraction occurs primarily in the summer months to meet increased demands associated with irrigation needs, and as needed during droughts and water shortage emergencies. It is estimated that between 685 and 915 af/yr of potable water could be injected into the aquifer, assuming a 5-month continuous injection rate of 1.5 to 2.0 mgd at Well 8. The City's strategic plan for ASR operations at Well 8 involves injecting up to 1,000 af/yr over six months during the winter and extracting 75 percent of the injection volume during the following summer. These operations would result in net injection into the Lower Tulare Formation aquifer, which will gradually create a "buffer supply" that the City can utilize in dry years or during water shortage emergencies. In 2020, a net volume of approximately 190 af was injected and stored at Well 8 for the following year.

The City plans to implement its ASR Program stages as new ASR wells are constructed. The ASR supply will be available to meet demands in dry years, thereby increasing the reliability of the City's water supply during drought conditions or water shortage emergencies.

6.1.6 Semitropic Groundwater Storage Bank

The City has acquired the rights to store and recover water in the Semitropic Groundwater Storage Bank (Semitropic) operated by the Semitropic Water Storage District (Semitropic WSD). The Semitropic facilities are located in Kern County alongside the California Aqueduct and the DMC. The first phase of Semitropic was initiated in the early 1990s and established one million acre-feet of storage for a group of agencies referred to as the Original Banking Partners. In response to increased demand for banking capacity, up to 650,000 af of additional storage was created for the Stored Water Recovery Unit (SWRU). When an agency purchases storage capacity in Semitropic, it is able to recover the volume of water it has banked over a period of three consecutive years (i.e., 3,000 af equates to a maximum recovery rate of 1,000 af/yr for three years).

The City originally entered into a pilot agreement with Semitropic WSD in June 2006 for 1,000 af of water storage in Semitropic's SWRU. The pilot agreement was intended to establish the procedures for water deposits and withdrawals by the City and was terminated when the permanent agreement was implemented. In 2012, the City entered into a long-term agreement with Semitropic WSD for up to 10,500 af of storage volume.[17] This storage agreement allows the City to withdraw up to 3,500 af of water annually for three years. To store water in Semitropic, the City withdraws less than its available allocation

[16] City of Tracy 2019 Water Quality Report: https://www.ci.tracy.ca.us/documents/2019_City_of_Tracy_Water_Quality_Report.pdf.

[17] "Agreement Between City of Tracy and Semitropic Water Storage District and Its Improvement Districts for Participation in the Stored Water Recovery Unit of the Semitropic Water Banking and Exchange Program" dated November 2012.

of CVP water from the DMC.This water travels through the DMC where it is diverted by Semitropic and used for local groundwater recharge. When the City wishes to withdraw water that it has banked previously, Semitropic arranges for the City to divert CVP water beyond its allocation from the DMC. This source of water is provided through either an exchange of Semitropic WSD's contractual entitlement to State Water Project (SWP) water or through direct "pump back" of stored groundwater into the California Aqueduct by Semitropic WSD.

Though the City could utilize this supply in any year, it is most valuable during extended drought years when the City's surface water supplies are reduced. The City anticipates that banking water at Semitropic will increase the reliability of the City's water supply and help close the potential future gap between supply and demand during drought conditions or other water supply shortage emergencies. If the City uses water from the Semitropic water bank in any given year, it would manage its supplies during subsequent years such that it could refill the water bank for future use. The City plans to actively maintain storage in Semitropic as feasible.

As of December 2020, the City had 6,887 af of water in storage at Semitropic.

6.2 Additional Planned Future Potable Water Supplies

In addition to the City's existing potable water supplies described above, the City has a number of additional planned future potable water supplies to meet the City's existing and projected future water demands, including those associated with the Proposed Project. The inclusion of planned future water supplies in this WSA is specifically allowed by the Water Code:

> *Water Code Section 10631(b): Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier over the same five-year increments described in subdivision (a).*

The City anticipates implementation of the following projects for additional future potable water supplies:

- ASR Program Expansion
- Recycled Water Distribution Network and Exchange Program for Additional CVP Water Supplies

The City also anticipates increased water supply to meet M&I demands as agricultural land is developed. However, additional water supply through land use conversion has associated constraints that must be resolved.

These additional planned future water supplies are described in further detail below. Summary tables listing the City's existing and additional planned future water supplies, and historical and anticipated future quantities are provided in Section 6.5.

6.2.1 ASR Program Expansion

As described above, the City currently has one ASR well (Well 8) which allows the City to inject excess SCWSP water supplies into the groundwater basin for later extraction when needed. The current injection and extraction capacity is 700 af/yr. The City is planning to expand the ASR program with the installation of additional ASR wells. According to the WSMP Update, the City's ASR Program will be expanded to provide up to 1,000 af/yr of water supplies from the existing and new ASR wells by 2040. The ASR supply will be used to meet demands during dry years, thereby increasing the reliability of the City's water supply

and helping to close the potential gap between supply and demand during drought conditions or water shortage emergencies.

One constraint with the City's ASR Program is that the permit only allows for SCWSP water to be injected. This means that the City has to shut down the JJWTP and the groundwater wells during the injection period so that only SCWSP supplies are being utilized. A potential alternative to avoid this operational restriction, if the City's ASR permit cannot be modified to allow for other water supplies to be injected, would be to construct a dedicated SCWSP water pipeline to the ASR well(s). Future expansion of the ASR program will need to fully evaluate these operational restrictions and potential alternatives.

6.2.2 Recycled Water Distribution Network and Exchange Program for Additional CVP Water Supplies

The City is evaluating indirect reuse of its recycled water through an exchange agreement with the USBR, where a portion of the City's recycled water would be discharged into the DMC, and a like amount of water would be diverted from the DMC for treatment at the JJWTP for potable use. This project is considered an essential part of the City's projected future water supply portfolio as it provides the following multiple benefits:

- Provides for the beneficial use of recycled water;
- Provides an additional potable water supply for the City;
- Improves water supply reliability and reduces the City's dependence on other imported supplies;
- Builds on the existing wastewater and recycled water infrastructure; and
- Reduces salt loading in the Delta as USBR has to release additional water from the New Melones Reservoir to meet Delta salinity standards.

The Recycled Water Distribution Network and Exchange Program would require development of a project description, National Environmental Policy Act (NEPA) / California Environmental Quality Act (CEQA) review, an exchange agreement with the USBR, and design and construction of a new recycled water pipeline to discharge recycled water to the DMC downstream of the City's JJWTP intake. Assuming such a project is implemented, the City expects that it would initially provide an estimated 1,925 af/yr of potable water, and future expansion of the program could be implemented as needed to meet future demands up to 7,500 af/yr. This supply would be 100 percent reliable and would not be subject to drought cutbacks.

6.2.3 Additional Central Valley Project Water Supplies from BBID via the Delta-Mendota Canal

Additional BBID DMC/CVP water supplies may be available to the City as agricultural land is converted to M&I uses. The land area that could potentially provide this additional water supply includes the portion of BBID's service area that falls within the City's planning areas (excluding the BBID Raw Water Service Area 2). Eligible land area is estimated to be approximately 2,600 acres. While the exact quantity of water that would be available is unknown, a contractual entitlement equal to 3.4 af/yr/acre may be available, resulting in a total supply of up to 8,800 af/yr (2,600 acres x 3.4 af/yr/acre).

The additional water supplies would, however, have agricultural reliability similar to the City's Ag reliability CVP supplies described in Section 6.1.1.2 above and would be subject to significant cutbacks in dry years. Agreements between the City and BBID, as well as environmental review, would need to occur before such a transaction could take place.

Because of the uncertainty associated with the availability and reliability of this supply source, especially in dry years, for purposes of the City's 2020 UWMP and this WSA, this future water supply is assumed to be unavailable to the City.

6.3 Additional Planned Future Non-Potable Water Supplies

6.3.1 Recycled Water

The City has invested in infrastructure to produce and deliver recycled water. The City's WWTP has sufficient treatment capacity to produce approximately 9.0 mgd of tertiary-treated recycled water meeting the Title 22 requirements, which can be reused for landscape irrigation and other non-potable uses. The City's current recycled water system consists of a pump station at the WWTP and approximately 7.6 miles of recycled water transmission line from the WWTP west to Lammers Road and south to W. Schulte Road. Currently the only service connection is for the Legacy Fields Sports Complex.

6.3.1.1 Planned Uses Within Service Area

At this time, no recycled water is used within the City's service area. The City is planning to expand the existing recycled water system to serve future development areas, as well as a small number of existing parks and irrigated areas. New developments in the City are required to include recycled water distribution systems in accordance with the City's Recycled and Non-Potable Water Ordinance (Tracy Municipal Code, Chapter 11.30). The City's Department of Utilities and Development Services are coordinating planning efforts to connect existing water customers and new development to recycled water.

The City intends to expand the existing recycled water system to serve non-potable water demands in most of the new development areas. Recycled water is planned to be used at: (a) parks, sports fields, and other landscape areas; (b) industrial facilities such as the Tracy Power Plant; (c) fill stations for dust control during construction, street sweeping, and residential emergency landscape irrigation; and (d) the proposed lakes at Tracy Village. The future recycled water use was estimated to be 1,000 af/yr in 2025, increasing to 6,300 af/yr in 2045 as new development areas build out, based on the adopted unit water demand factors and the future dwelling units or gross acreage.

Several future service areas already have recycled water distribution pipelines installed by developers, including Cordes Ranch, Ellis Specific Plan Phase 1, and Tracy Hills Phase 1. These pipelines are not yet connected to the recycled water mains, but instead are temporarily connected to the potable water system to meet irrigation demands. Once recycled water system construction is complete and the appropriate permitting is completed, the pipelines will be connected to the recycled water system and the temporary connections to the potable water system will be removed.

6.3.1.2 Other Potential Future Uses

The City is considering other potential future uses for recycled water. As described in Section 6.2.2, the City is evaluating the use recycled water in exchange for additional CVP supply through the proposed Recycled Water Distribution Network and Exchange Program.

The City is also considering the potential for direct potable reuse of recycled water in the future. With direct potable reuse, recycled water would be discharged directly into the DMC and then conveyed to downstream users, including the City. However, the project is in the conceptual evaluation stage and therefore the future recycled water use associated with this potential approach is not quantified.

6.3.2 Shallow Non-Potable Groundwater

The Tracy Subbasin underlying the City has two aquifers: semi-confined and confined. The City's production wells draw groundwater solely from the confined portion of the Lower Tulare Formation aquifer. Above the confining Corcoran Clay is shallow groundwater that is not currently used for groundwater production. The water quality is considered to be not suitable for direct use due to the poor water quality. Thus, it is not included as a future supply source.

6.4 Summary of Existing and Additional Planned Future Water Supplies

Table 6-4 provides a summary of the City's existing and additional planned future water supply entitlements. As indicated in the table and discussed in Section 6.1, the City has historically used its existing water supply entitlements.

A discussion of the future anticipated availability of these existing and additional planned future water supplies during normal year, single dry year, and multiple dry years is provided in Section 6.5.

Table 6-4. Summary of Existing and Additional Planned Future Water Supplies

Supply	Water Supply Entitlement, af/yr	Supply Used by City
Existing Water Supplies		
USBR CVP - Tracy Contract[a]	10,000	Yes
USBR CVP - BCID Contract[b]	5,000	Yes
USBR CVP - WSID Contract[c]	5,000	Yes
BBID (pre-1914)[d]	3,330	Yes
SCWSP (SSJID) (pre-1914)[e]	11,120	Yes
Groundwater[f]	9,000	Yes
Dry Year Supplies		
Semitropic Water Storage Bank[g]	3,500	Yes
Aquifer Storage and Recovery	1,000	Yes
Additional Planned Future Water Supplies		
Additional USBR CVP (BBID contract)[h]	—	No
Recycled Water Exchange (Potable)	7,500	No
Recycled Water (for non-potable uses)[i]	6,300	No

(a) M&I-reliability CVP water. Assumes the terms of the long-term renewal contract with the USBR are consistent with those of the interim renewal contract entered into between the City and USBR in February 2016.

(b) In June 2001, the USBR approved the assignment of 5,000 af/yr of BCID's contractual entitlement to Ag-reliability CVP water.

(c) In August 2001, the USBR approved the assignment of 2,500 af/yr of WSID's contractual entitlement to Ag-reliability CVP water, with the option to purchase an additional 2,500 af/yr in the future. In December 2013, the City and WSID approved the additional assignment; the City's current assignment of WSID CVP water is 5,000 af/yr.

(d) The City anticipates that up to 4,500 af/yr of BBID pre-1914 water will be available to serve the Tracy Hills Specific Plan development. This water is only available for use in the portion of Tracy Hills that lies within BBID Raw Water Service Area 2 the CVP Consolidated Place of Use, so the quantity of supply is limited to potable water demand in this area. Therefore, the maximum BBID supply delivered to this area is reduced to 3,330 af/yr.

(e) Includes the 10,000 af/yr allocation and the additional 1,120 af/yr obtained through the 2013 Lathrop-Tracy Purchase, Sale, and Amendment Agreement. Does not include the interim purchase from Escalon.

(f) The City is able to withdraw up to 9,000 af/yr of groundwater from the Tracy Subbasin. However, due to the aging infrastructure and water quality issues in the City's groundwater supplies, the City is projecting to be able to withdraw up to 2,500 af/yr in normal years. During dry years, the City anticipates increasing its groundwater production on a short-term basis from the normal year production of 2,500 af/yr to 4,500 af/yr.

(g) The City has purchased 10,500 af of water storage in the Stored Water Recovery Unit, which allows the City to withdraw up to 3,500 af/yr for three consecutive years.

(h) While up to 8,800 af/yr of BBID's Ag-reliability CVP water may be available as agricultural lands are converted to other uses, for purposes of water supply planning, the City assumes this supply will not be available.

(i) Based on the total projected recycled water demand at buildout of the City WSMP Update.

6.5 Water Supply Availability and Reliability

Water Code Section 10910 (c)(4) requires that a WSA include a discussion with regard to "whether total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses." Accordingly, this WSA addresses these three hydrologic conditions through the Year 2045. Further, this WSA provides a discussion of the availability and reliability of the City's available water supplies to meet the City's water demands in the event that the City's surface water supplies are limited under emergency water supply conditions.

The reliability of each of the City's existing and additional planned water supplies and their projected availability during normal, single dry, and multiple dry years is described in Section 6 of the 2020 UWMP. Water supply and demands for these hydrologic years, from 2025 to 2045, are compared in Section 7 of the 2020 UWMP and summarized herein. These hydrologic year types are characterized as follows:

- A **normal year** represents the water supplies available under normal conditions, this could be an averaged range of years or a single representative year;
- A **single dry year** represents the lowest available water supply; and
- A **multiple dry year drought** (also referred to as five-consecutive-year drought) represents the driest five-year period in the historical record.

A summary of the reliability of the City's water supply sources is provided in Table 6-5 and discussed in the following sections.

Table 6-5. Water Supply Reliability in Normal, Single Dry and Multiple Dry Years

Supply Source	Anticipated Reliability (% of Entitlement)		
	Normal Years	Single Dry Years	Multiple Dry Years
Current Water Supplies			
USBR CVP			
M&I Reliability Water (Tracy Contract)[a]	75	25	40
Ag Reliability Water (BCID & WSID Contract)	50	0	0
BBID for Tracy Hills Demand	100	100	100
South County Water Supply Project (SSJID)	100	56-76[b]	56-100[b]
Groundwater[c]	100	100	100
Current Dry Year Supplies			
Semitropic Water Storage Bank[d]	—	0	67
Aquifer Storage and Recovery	—	100	100
Additional Planned Future Water Supplies			
USBR CVP (BBID contract) (Ag Reliability Water)	0	0	0
Recycled Water Exchange (Potable)	100	100	100
Recycled Water (for non-potable uses)[e]	100	100	100

Source: City of Tracy 2020 UWMP, Tables 7-2 and 7-3, and Section 7.1.2.3, June 31, 2020.

(a) Anticipated reliability percentage is based on historical use in accordance with 2017 USBR CVP Municipal and Industrial Water Shortage Policy Update.

(b) Based on information from SSJID.

(c) Although the City can sustainably extract up to 9,000 af/yr of groundwater on a continuous basis, the City is planning to scale back its groundwater extraction in normal years to increase the overall quality of its water supply. With these reduced supply volumes, the groundwater resource is considered 100 percent reliable.

(d) Due to the difficulties experienced by the City in accessing stored water via the DMC, the City has conservatively assumed that 0 percent of the City's Semitropic water supply will be available in the first year of a multiple dry year period and 100 percent will be available in the second and third year. The 67 percent presented in this table for multiple dry years is the average value for a three-year period.

(e) Although recycled water supplies are currently available from the City's WWTP, required recycled water pipelines and pump stations to convey and deliver the recycled water to the recycled water use areas have not yet been constructed. See Section 6.3.1 of this WSA for additional information regarding the City's plan for implementation of its recycled water system.

6.5.1 Normal Years

Normal or wet water years are those that match or exceed median rainfall and runoff levels. The reliability of each of Tracy's existing and future water supplies and their projected availability during normal year is outlined below:

- The City's contract with the USBR for 10,000 af/yr of DMC/CVP water is subject to M&I reliability. Based on the historical record, the City's long-term average allocation of DMC/CVP water pursuant to this contract is anticipated to be at least 85 percent of the total entitlement. However, due to recent environmental concerns in the Delta and potential future impacts due to climate change, the normal year supply of DMC/CVP M&I water is assumed to be 75 percent of the City's historical use. Based on a historical use of 5,930 af/yr (i.e., the average quantity of CVP water put to beneficial use by the City during the last three years of water deliveries that were unconstrained by the availability of CVP water), the projected normal year supply is 4,448 af/yr.
- The City has received acquired assignments from Banta-Carbona Irrigation District (BCID; 5,000 af/yr) and West Side Irrigation District (WSID; 5,000 af/yr) for a total entitlement of 10,000 af/yr of DMC/CVP water. These supplies are subject to Ag-reliability. The City is conservatively estimating that it will receive 50 percent of its Ag-reliability contractual entitlement, or 5,000 af/yr, in normal years.
- The City has acquired up to 4,500 af/yr of pre-1914 appropriative water rights water from BBID. These supplies are restricted in their place of use, and therefore the supply is anticipated to be equal to the projected demand within that place of use (i.e., the Tracy Hills area) ranging from 800 af/yr in 2025 to 3,300 af/yr in 2045. The City anticipates being able to receive 100 percent of this supply in normal years.
- The City has a total contractual entitlement of 13,135 af/yr of Stanislaus River water provided through the SCWSP, including 10,000 af/yr from its original contract with SSJID, 1,120 af/yr purchased from Lathrop, and 2,015 af/yr purchased on an interim basis from Escalon. The agreement between Tracy and Escalon is assumed to terminate after 2025. Based on information provided by SSJID, the City expects to receive 100 percent of its SCWSP water supply allocation during a normal water year. As such, the City anticipates being able to receive 13,135 af/yr of SCWSP supply in 2025 and 11,120 af/yr afterwards, assuming normal year conditions.
- The City is able to withdraw up to 9,000 af/yr of groundwater from the Tracy Subbasin. However, due to the aging infrastructure and water quality issues in the City's groundwater supplies, the City is projecting to be able to withdraw up to 2,500 af/yr in normal years. This groundwater supply is considered to be 100 percent reliable.
- The City does not anticipate using its Semitropic water or ASR water in normal years.
- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected to supply an amount ranging from 1,925 af/yr in 2030 to 7,500 af/yr in 2045. This water supply is considered to be 100 percent reliable.

- The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 af/yr of recycled water supply in 2025, increasing to 6,300 af/yr in 2045.

The reliability of each of the City's existing and additional planned future water supplies and their projected availability during normal years at buildout is shown in Table 6-6.

Table 6-6. Projected Existing and Additional Planned Future Water Supplies Available in Normal Years at Buildout

Supply	Percent Allocation/ Entitlement	Projected Available Supplies, af/yr
Existing Water Supplies		
USBR CVP - Tracy Contract[a]	75	4,448
USBR CVP - BCID Contract	50	2,500
USBR CVP - WSID Contract	50	2,500
Total CVP Supplies		**9,448**
BBID (pre-1914 to meet Tracy Hills demand)	100	3,300
SCWSP (SSJID) (pre-1914)	100	11,120
Groundwater	100	2,500
Semitropic Water Storage Bank[b]	0	0
Total Existing Potable Supplies		**26,368**
Additional Planned Future Water Supplies[a]		
Additional USBR CVP (BBID contract)	0	0
Aquifer Storage and Recovery[b]	0	0
Recycled Water Exchange	100	7,500
Recycled Water (non-potable)	100	6,300
Total Additional Planned Future Potable Supplies		**7,500**
Total Potable Supplies		**33,868**
Total Additional Planned Future Non-Potable Supplies		**6,300**
TOTAL WATER SUPPLY		**40,168**

Source: City of Tracy 2020 UWMP, Table 7-2, June 2021.

(a) Percent of historical use
(b) Not used in normal years.

6.5.2 Single Dry Years

During a single dry year, all of the City's existing surface water allotments are subject to some level of reduction. Assumed reductions are based on actual reductions in CVP deliveries experienced in the recent drought and the new USBR M&I Reliability Policy adopted in 2017. The actual reductions will vary with the severity of the regional water supply shortage and climatic conditions, and the consideration of contract agreements.

The reliability of each of Tracy's existing and future water supplies and their projected availability during a single dry year is outlined below and summarized in Table 6-7.

- The City's contract with the USBR for 10,000 af/yr of DMC/CVP water is subject to M&I reliability. During a single dry year, the City estimates to receive 25 percent of the City's historical use. Based on the historical use of 5,930 af/yr, the projected supply is 1,483 af/yr.
- The City has a total entitlement of 10,000 af/yr of DMC/CVP Ag-reliability water. The City anticipates receiving 0 percent of its DMC/CVP Ag-reliability water in a single dry year.
- The City has acquired up to 4,500 af/yr of pre-1914 appropriative water rights water from BBID. This supply is restricted with regard to the place of use (Tracy Hills). The City anticipates being able to receive 85 percent of its contractual entitlement in a single dry year (3,825 af/yr). As the projected demand is 3,300 af/yr in 2045 and is lower than the 3,825 af/yr of available supply, the reduction in reliability does not result in a reduction to actual amount of water used. Therefore, the supply in a single dry year is anticipated to be equal to the projected demand within the Tracy Hills area, ranging from 800 af/yr in 2025 to 3,300 af/yr in 2045.
- The City has a total contractual entitlement of 13,135 af/yr of Stanislaus River water provided through the SCWSP. Based on information provided by SSJID, the City expects to receive 76 percent of its SCWSP water supply allocation during 2025, 2030, and 2035 and 56 percent during 2040 and 2045. In addition, the SCWSP water transferred from Escalon is assumed to be unavailable after 2025. As such, the City estimates 9,974 af/yr of SCWSP supply in 2025, 8,444 af/yr in 2030 and 2035, and 6,177 af/yr afterwards.
- During a single dry year, the City anticipates increasing its groundwater production on a short- term basis from the normal year production of 2,500 af/yr to 4,500 af/yr. The groundwater supply is considered to be 100 percent reliable.
- The City anticipates that 700 af/yr of water will be available for use in a single dry year through operation of its ASR well. An additional 300 af/yr is estimated to be available by 2040 for a total of 1,000 af/yr. This water supply is considered to be 100 percent reliable assuming that the City is consistently able to refill the ASR storage during non-drought years to maintain at least 1,000 af in storage at the beginning of a single dry year.
- The City has acquired 10,500 af/yr of storage in Semitropic, which allows the City to withdraw up to 3,500 af/yr for three consecutive years. Due to the difficulties experienced by the City in accessing stored water via the DMC on a short timeframe, the City has conservatively assumed that the Semitropic water will not be available in a single dry year.

- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected to supply an amount ranging from 1,925 af/yr in 2030 to 7,500 af/yr in 2045. This water supply is considered to be 100 percent reliable.
- The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 af/yr of recycled water supply in 2025, increasing to 6,300 af/yr in 2045.

The reliability of each of the City's existing and additional planned future water supplies and their projected availability during a single dry year at buildout is shown in Table 6-7.

Table 6-7. Projected Existing and Additional Planned Future Water Supplies Available in Single Dry Years at Buildout

Supply	Percent of Entitlement	Projected Available Supplies, af/yr
Existing Water Supplies		
USBR CVP - Tracy Contract[a]	25	1,483
USBR CVP - BCID Contract	0	0
USBR CVP - WSID Contract	0	0
Total CVP Supplies		**1,483**
BBID (pre-1914 to meet Tracy Hills demand)	100	3,300
SCWSP (SSJID) (pre-1914)[b]	56	6,177
Groundwater[c]	100	4,500
Semitropic Water Storage Bank	0	0
Total Existing Potable Supplies		**15,460**
Additional Planned Future Water Supplies		
Additional USBR CVP (BBID contract)	0	0
Aquifer Storage and Recovery[c] [d]	100	1,000
Recycled Water Exchange[c]	100	7,500
Recycled Water (non-potable)[c]	100	6,300
Total Additional Planned Future Potable Supplies		**8,500**
Total Potable Supplies		**23,959**
Total Additional Planned Future Non-Potable Supplies		**6,300**
TOTAL WATER SUPPLY		**30,259**

Source: City of Tracy 2020 UWMP, Table 7-3, June 2021.

(a) Percent of historical use.
(b) Percentage of contract entitlement is based on information from SSJID for 2040 and later.
(c) Groundwater and recycled water volumes assume the City invests in infrastructure and/or permitting.
(d) ASR volumes assume surplus supplies are available in wet years to inject and store, as well as additional investment in ASR construction and operation.

6.5.3 Multiple Dry Years

During multiple dry years, the City's surface water supplies (from both the CVP and SCWSP) may be significantly reduced. Thus, in the event of drought, the City will have to depend more heavily on conservation efforts, groundwater, and the proposed future supply projects.

The reliability of each of Tracy's existing and future water supplies and their projected availability during a five consecutive year drought is outlined below and summarized in Table 6-8.

- The City's contract with the USBR for 10,000 af/yr of DMC/CVP water is subject to M&I reliability. During multiple dry years, the City estimates that it will receive 40 percent of the City's historical use. Based on the historical use of 5,930 af/yr, the projected supply is 2,372 af/yr.
- The City has a total entitlement of 10,000 af/yr of DMC/CVP Ag-reliability water. The City anticipates receiving 0 percent of its DMC/CVP Ag-reliability water in multiple dry years.
- The City has acquired up to 4,500 af/yr of pre-1914 appropriative water rights water from BBID. This supply is restricted with regard to the place of use (Tracy Hills). The City anticipates being able to receive 85 percent of its contractual entitlement in multiple dry years (3,825 af/yr). As the projected demand is 3,300 af/yr in 2045 and is lower than the 3,825 af/yr of available supply, the reduction in reliability does not result in a reduction to actual amount of water used. Therefore, the supply in multiple dry years is anticipated to be equal to the projected demand within the Tracy Hills area, ranging from 800 af/yr in 2025 to 3,300 af/yr in 2045.
- The City has a total contractual entitlement of 13,135 af/yr of Stanislaus River water provided through the SCWSP. Based on information provided by SSJID, the City's SCWSP water supply reliability during multiple dry years range from 56 to 100 percent. In addition, the SCWSP water transferred from Escalon is assumed to be unavailable after 2025. The City's projected SCWSP supply is presented in Table 6-8.
- During multiple dry years, the City anticipates increasing its groundwater production on a short-term basis from the normal year production of 2,500 af/yr to 4,500 af/yr. The groundwater supply is considered to be 100 percent reliable.
- The City anticipates that 700 af of water will be available for use in multiple dry years through operation of its ASR well. An additional 300 af is estimated to be available by 2040 for a total of 1,000 af. The City is assumed to be unable to refill the ASR storage during multiple dry years. Therefore, the annual ASR supply available is assumed to equal one fifth of the total stored volume (i.e., 140 af/yr between 2025 and 2035 and 200 af/yr between 2040 and 2045). This water supply is considered to be 100 percent reliable assuming that the City is consistently able to refill the ASR storage in non-drought years to maintain at least 1,000 af in storage at the beginning of a multiple dry year sequence.

- The City has acquired 10,500 af/yr of storage in Semitropic, which allows the City to withdraw up to 3,500 af/yr for three consecutive years. Due to the difficulties experienced by the City in accessing stored water via the DMC on a short timeframe, the City has conservatively estimated that the 0 percent of the City's storage will be available in the first year of a five-consecutive-year drought, and 100 percent will be available over the following four years. Based on the City's current storage at Semitropic of 6,887 af, the amount available in the second to fifth year of a five- consecutive-year drought is assumed to be 1,722 af/yr (6,887 af divided by four). A similar reliability estimate is provided for all dry-year sequences under the assumption that the City is consistently able to re-fill the water bank in non-drought years to maintain at least 7,000 af/yr in storage at the beginning of a multiple dry year sequence.
- The City anticipates that a Recycled Water Distribution Network and Exchange agreement will be executed with the USBR by 2030 to provide additional CVP supplies to the City in exchange for the City discharging a like amount of tertiary-treated recycled water to the DMC. The City assumes that the Recycled Water Distribution Network and Exchange will be implemented as needed to meet future demand conditions and is currently projected to supply an amount ranging from 1,925 af/yr in 2030 to 7,500 af/yr in 2045. This water supply is considered to be 100 percent reliable.
- The City's recycled water supply is expected to be 100 percent reliable. Based on the projected non-potable demands and assuming that the City makes investments in infrastructure and permitting, the City estimates that they will have access to 1,000 af/yr of recycled water supply in 2025, increasing to 6,300 af/yr in 2045.

The reliability of each of the City's existing and additional planned future water supplies and their projected availability during a five-consecutive-dry year (multiple dry year) period at buildout is shown in Table 6-8.

Table 6-8. Projected Existing and Additional Planned Future Water Supplies Available Five-Consecutive-Dry Years at Buildout

Supply	Percent of Entitlement	Projected Available Supplies, af/yr				
		Year 1	Year 2	Year 3	Year 4	Year 5
Existing Water Supplies						
USBR CVP - Tracy Contract[(a)]	40	2,372	2,372	2,372	2,372	2,372
USBR CVP - BCID Contract	0	0	0	0	0	0
USBR CVP - WSID Contract	0	0	0	0	0	0
Total CVP Supplies		**2,372**	**2,372**	**2,372**	**2,372**	**2,372**
BBID (pre-1914 to meet Tracy Hills demand)	100	3,300	3,300	3,300	3,300	3,300
SCWSP (SSJID) (pre-1914)	[(b)]	11,120	11,120	6,177	6,177	11,120
Groundwater[(c)]	100	4,500	4,500	4,500	4,500	4,500
Semitropic Water Storage Bank	100	0	1,722	1,722	1,722	1,722
Total Existing Potable Supplies		**21,292**	**23,014**	**18,071**	**18,071**	**23,014**
Additional Planned Future Water Supplies						
Additional USBR CVP (BBID contract)	0	0	0	0	0	0
Aquifer Storage and Recovery[(c)(d)]	100	200	200	200	200	200
Recycled Water Exchange[(c)]	100	7,500	7,500	7,500	7,500	7,500
Recycled Water (non-potable)[(c)]	100	6,300	6,300	6,300	6,300	6,300
Total Additional Planned Future Potable Supplies		**7,700**	**7,700**	**7,700**	**7,700**	**7,700**
Total Potable Supplies		**28,992**	**30,714**	**25,771**	**25,771**	**30,714**
Total Additional Planned Future Non-Potable Supplies		**6,300**	**6,300**	**6,300**	**6,300**	**6,300**
TOTAL WATER SUPPLY		**35,292**	**37,014**	**32,071**	**32,071**	**37,014**

Source: City of Tracy 2020 UWMP, Tables 7-4 and 7-5, June 2021.

(a) Percent of historical use.

(b) Information provided by SSJID. SSJID's reliability estimates for a five consecutive year drought were based on the historical supplies available during the 2012 to 2016 drought period. During 2012, 2013, and 2016 (the first, second, and fifth years), SSJID was able to provide the full allocation, whereas during 2014 and 2015 (the third and fourth years), SSJID was only able to provide 75 percent of the full allocation.

(c) Groundwater and recycled water volumes assume the City invests in infrastructure and/or permitting.

(d) ASR volumes assume surplus supplies are available in wet years to inject and store, as well as additional investment in ASR construction and operation.

6.5.4 Emergency Water Supply Conditions

During the recent drought conditions in California, water supply deliveries from the SWP and CVP (and other surface water supply sources throughout California) were severely reduced and even the availability of pre-1914 water rights was challenged. Many water supply agencies, including the City, implemented their Water Shortage Contingency Plans, including mandatory water conservation measures, to reduce water use. Even with 0 percent deliveries from the City's USBR CVP agricultural supplies in 2014, the diversity of the City's water supply portfolio together with water conservation efforts by the City's customers allowed the City to meet all water demands. If the recent drought were to re-occur, and deliveries of surface water supplies are reduced further, the City's Water Shortage Contingency Plan would be enacted as needed.

The City's Water Shortage Contingency Plan includes shortage response actions for six water shortage levels up to greater than 50 percent shortage due to foreseeable or unforeseeable events. The City's Water Shortage Contingency Plan is included in Appendix H of the 2020 UWMP. The City may implement demand reduction actions, supply augmentation, mandatory restrictions, and other actions as appropriate for the shortage level to reduce the gap between supply and demand.

Further, the City has prepared a Water System Emergency Response Plan which provides a framework for emergency response by the City's Utilities Department by describing the department's emergency management organization, roles, and responsibilities and emergency policies and procedures. The Water System Emergency Response Plan provides action plans to be implemented to address the emergency.

7.0 DETERMINATION OF WATER SUPPLY SUFFICIENCY BASED ON REQUIREMENTS OF SB 610

Water Code Section 10910 states:

> *10910(c)(4) If the city or county is required to comply with this part pursuant to subdivision (b), the water supply assessment for the project shall include a discussion with regard to whether the total projected water supplies, determined to be available by the city or county for the project during normal, single dry, and multiple dry water years during a 20-year projection, will meet the projected water demand associated with the proposed project, in addition to existing and planned future uses, including agricultural and manufacturing uses.*

Pursuant to Water Code section 10910(c)(4), analyses were conducted to assess the sufficiency of total projected water supply for existing and planned future demands, including the demands of the Proposed Project, during normal, single dry, and multiple dry water years over a 20-year projection. A service reliability analysis was conducted in Section 7 of the City's 2020 UWMP, which compared future supplies and demand to buildout, assumed as 2045 but is certain to occur beyond that planning horizon. As discussed in Section 5.2, the Proposed Project's demands are included in the City's future water demand projections.

7.1 Sufficiency of Water Supply

Table 7-1 summarizes the projected availability of the City's existing and planned future potable water supplies compared with projected water demands in normal, single dry and multiple dry years at Buildout. Figure 7-1 shows the City's existing and planned future potable water supplies and the City's projected water demands in normal, single dry and multiple dry years under the Buildout time frame, which is expected to occur after 2045.

To be conservative, water demands were assumed to be at normal levels. With future planned projects implemented, the results of the assessment show that water supply is sufficient during normal years. However, during a single dry year or a multiple dry year period, the City must depend more heavily on conservation efforts, groundwater, and the proposed future supply projects to overcome the gap between supply and demand. As described in this WSA and the City's 2020 UWMP, these findings are primarily due to projected reduced reliability of the City's CVP supplies and SSJID supplies in dry years.

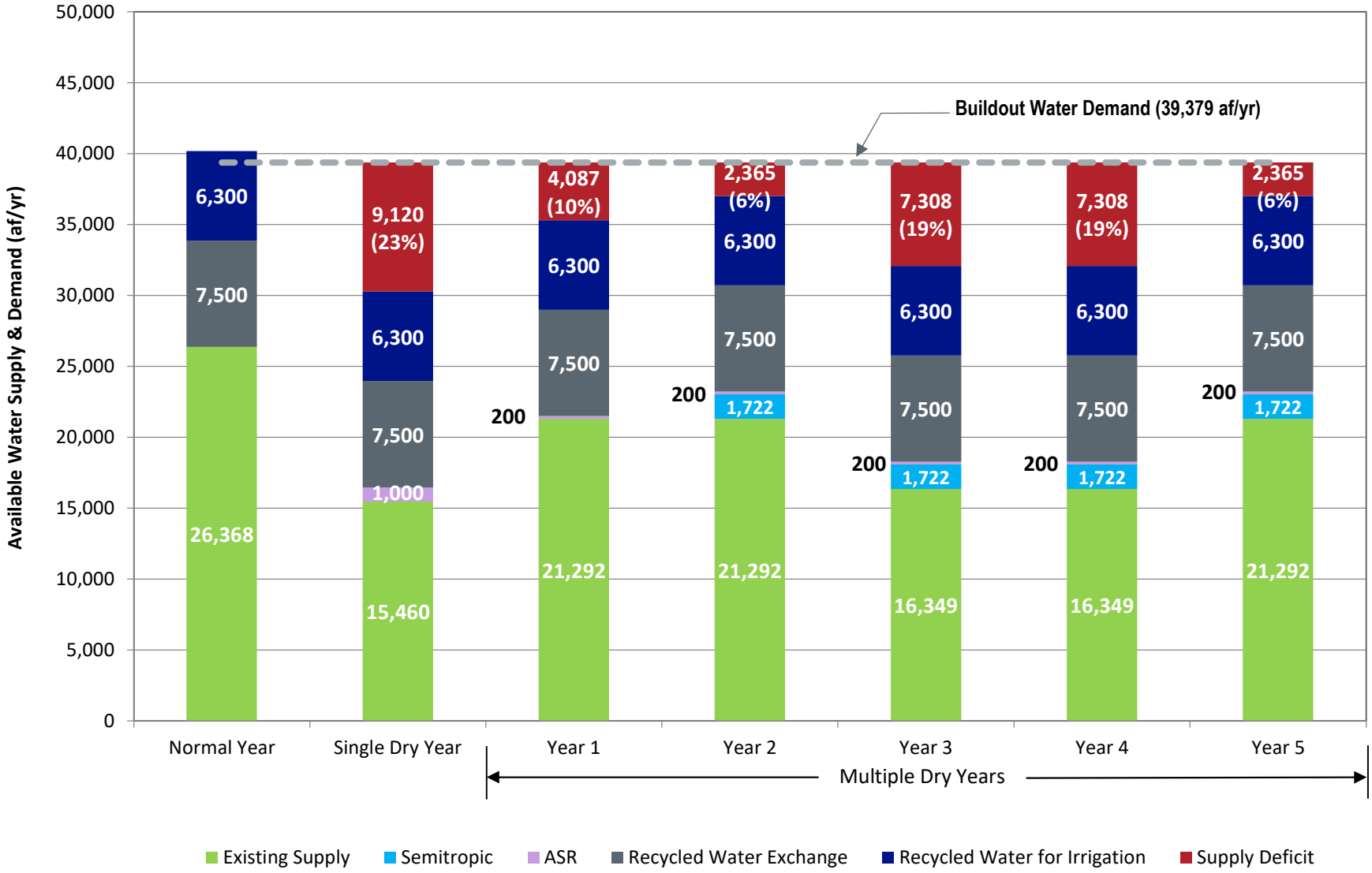
To close the gap between supply and demand during dry years, the City will need to implement its Water Shortage Contingency Plan to reduce water demands. As discussed in Section 5.3, the City has shown that it can achieve its water conservation goals. During the 2012-2016 statewide drought, the City exceeded its water conservation goals of 25 percent. Further, the City must fully implement its proposed future water supply projects, including the Recycled Water Distribution Network and Exchange Program and expansion of the ASR Program. Investments in wet year water supplies will also be needed to refill storage in Semitropic and expand the City's ASR program. Delays in implementing the proposed future water supply projects could result in greater water supply shortages and the need for additional water conservation to meet demands.

Table 7-1. Summary of Buildout Total Water Supply Versus Demand During Hydrologic Normal, Single Dry, and Multiple Dry Years[a]

Hydrologic Condition		Supply and Demand Comparison, af/yr
Normal Year[b]		
Available Total Water Supply		40,168
Total Water Demand (with Proposed Project)		39,379
Potential Surplus (Deficit)		789
Percent Shortfall of Demand		-
Single Dry Year[c]		
Available Total Water Supply		30,259
Total Water Demand (with Proposed Project)		39,379
Potential Surplus (Deficit)		(9,120)
Percent Shortfall of Demand		23%
Multiple Dry Years[d]		
Year 1	Available Total Water Supply[e]	35,292
	Total Water Demand (with Proposed Project)	39,379
	Potential Surplus (Deficit)	(4,087)
	Percent Shortfall of Demand	10.4%
Year 2	Available Total Water Supply	37,014
	Total Water Demand (with Proposed Project)	39,379
	Potential Surplus (Deficit)	(2,365)
	Percent Shortfall of Demand	6.0%
Year 3	Available Total Water Supply	32,071
	Total Water Demand (with Proposed Project)	39,379
	Potential Surplus (Deficit)	(7,308)
	Percent Shortfall of Demand	18.6%
Year 4	Available Total Water Supply	32,071
	Total Water Demand (with Proposed Project)	39,379
	Potential Surplus (Deficit)	(7,308)
	Percent Shortfall of Demand	18.6%
Year 5	Available Total Water Supply	37,014
	Total Water Demand (with Proposed Project)	39,379
	Potential Surplus (Deficit)	(2,365)
	Percent Shortfall of Demand	6.0%

(a) Water demands are from Table 5-2.
(b) Normal Year supplies are from Table 6-6.
(c) Single Dry Year supplies are from Table 6-7.
(d) Multiple Dry Year supplies are from Table 6-8.
(e) Assumes 0 percent of the City's storage in Semitropic is available for the first year.

Figure 7-1. City of Tracy Existing and Planned Future Potable Water Supplies vs. Projected Demand - Buildout



The dry year shortfalls presented in Table 7-1 are based on water supply and demand projections with numerous uncertainties and the situation is dynamic as discussed in Section 7 of the 2020 UWMP. The City continues to work on strategies and actions to address the projected water supply shortfall. Uncertainties are itemized below, along with the City's water management strategies and options.

7.2 Uncertainties in Dry Year Water Supply Projections

Significant water supply shortfalls are currently projected in future single and multiple dry years. These projections include numerous sources of uncertainty as summarized below:

- The Bay-Delta Plan Amendment implementation is under negotiation. The SSJID and others are continuing negotiations with the SWRCB on implementation of the Bay-Delta Plan Amendment for water supply cutbacks, particularly during droughts. This is a dynamic situation and the projected drought cutback allocations may need to be revised before the next (i.e., 2025) UWMP depending on the outcome of ongoing negotiations. The City has considered a conservative estimate of the potential impacts of the Bay-Delta Plan Amendment on the SCWSP (and therefore the City), which is provided in Appendix G of its 2020 UWMP.
- The supply yield of the City's development of additional ASR and recycled water supplies are accounted for in current supply projections. However, implementation of these projects will require significant investment by the City. Similarly, investments in wet years supplies will be needed to refill storage in Semitropic and expand the City's ASR program.
- The City continues to work closely with the USBR and SSJID on their rationing policies to ensure that M&I needs can be met. Rationing policies may potentially be revised.
- The City's projected water demands are subject to change in the future based on water conservation policies and regulations for current and future development, and the pace and extent of development.
- Frequency and duration of cutbacks and, therefore, the shortfalls are also uncertain. In addition to the supply volumes, the above listed uncertainties would also impact the projected frequency and duration of shortfalls.

7.3 Water Management Strategies and Options

The City has developed strategies and actions to address the projected supply shortfalls discussed in the City's 2020 UWMP and provided below.

7.3.1 Recycled Water for Non-Potable Use

The City continues to develop recycled water supplies as discussed in Section 6.2. Recycled water is planned to augment non-potable demands that would otherwise be supplied with potable water. Buildout potable water demands could be less than the current projections and therefore the resultant supply shortage will likely to be smaller.

7.3.2 Future Water Supply Projects

The City continues to evaluate the expansion of its existing supply and to obtain new supply sources, including the ASR Program and Recycled Water Distribution Network and Exchange Program. Other potential supply options, such as direct potable reuse of recycled water, are also being considered.

7.3.3 Implementation of Demand Management Measures

The City has an active water conservation program and continues to implement the demand management measures described in Section 9 of its 2020 UWMP. Further, in response to the anticipated future shortfalls, the City has developed a robust Water Shortage Contingency Plan (WSCP) that systematically identifies ways in which the City can reduce water demands. The WSCP is included in Section 8 of its 2020 UWMP.

7.3.4 Policy-Based Water Efficiency Tools

The City is currently exploring other policy-based water efficiency tools that other supply-constrained agencies across California have implemented. These policy-based tools are often bundled together and referred to as Water Demand Offset (WDO) or Water Neutrality policies. Through these policies, project developers are generally required to offset the new demand anticipated by the development through some combination of demand mitigation options, such as:

- **On-site retrofits.** Project developer with existing property reduces total projected water demand by retrofitting existing property with efficient water fixtures. If projected water demand is reduced below baseline for existing property, no off-site WDOs are required. If not, offsite WDOs are required.
- **Off-site retrofits.** Project developer coordinates and pays for installation of water efficient fixtures at other properties or converts existing irrigation systems to recycled water for other off- site properties, typically those owned by other entities.
- **On-site reuse.** Larger scale developments are required to implement on-site reuse of water, including rainwater, greywater, stormwater, and blackwater, as has recently been implemented by the Cities of San Francisco and Menlo Park.
- **Supply augmentation.** Project developer secures its own water supply to serve the development, either through direct provision of water to the development or through an agreement to transfer rights to the water supplier.
- **WDO fees.** Project developer pays fees to implementing entity based on the amount of water offset, and the agency uses the fees to fund water conservation programs. Such conservation programs could include system water loss mitigation projects (e.g., capital improvement, Advanced Metering Infrastructure [AMI] meters, etc.), purchase of water efficient equipment (e.g., NO-DES hydrant flushing machine to recycle water used to flush mains), and recycled water system infrastructure, as well as fixture rebate or retrofit and education-based conservation programs.

Such policies could be designed as a “net neutral” policy wherein the new development is required to offset all new demands associated with the development project and minimize the overall supply reliability impacts for the existing customers.

8.0 WATER SUPPLY ASSESSMENT APPROVAL PROCESS

> *10910 (g)(1) Subject to paragraph (2), the governing body of each public water system shall submit the assessment to the city or county not later than 90 days from the date on which the request was received. The governing body of each public water system, or the city or county if either is required to comply with this act pursuant to subdivision (b), shall approve the assessment prepared pursuant to this section at a regular or special meeting.*
>
> *10911 (b) The city or county shall include the water supply assessment provided pursuant to Section 10910, and any information provided pursuant to subdivision (a), in any environmental document prepared for the project pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.*

As the approving agency for the Proposed Project, the Tracy City Council must approve this WSA at a regular or special meeting. Furthermore, the City must include this WSA and its findings in the Draft Environmental Impact Report (EIR) that is being prepared for the Proposed Project.

9.0 REFERENCES

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APPENDIX H

Costco Depot Wastewater Letter Report

Engineers...Working Wonders With Water®

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May 13, 2021

Rick Steiner
SNG & Associates
5776 Stoneridge Mall Road, Suite 365
Pleasanton CA, 94588

Subject: Tracy Costco Depot (Project) Annexation EIR Support

Dear Mr. Steiner,

The purpose of this letter report is to document the findings of the Costco Depot Project Annexation EIR Support, which was conducted by Carollo Engineers, Inc. (Carollo).

Background

Carollo developed a draft Wastewater Master Plan Update (Master Plan Update) for the City of Tracy (City) that was submitted in August 2020. The Master Plan Update was created to help the City plan wastewater system upgrades to serve existing and future developments. The proposed Costco Project is a Costco Depot that will consist of two warehouse and distribution buildings located along the southwestern City limits, south of West Schulte Road, north of 580 freeway, and along the Delta-Mendota Canal. Figure 1 displays the location of the Costco Depot and Figure 2 displays the proposed pipeline that will possibly be servicing the Costco Depot. The objectives of this study are to:

- Evaluate the impacts of the proposed Costco Project on the existing wastewater collection and treatment system.
- Confirm the infrastructure to convey the projected flows for the development is properly sized.

Costco Depot Project

The Costco Project is a proposed Costco Depot located just outside the southwestern City limits. The Costco Project is proposing to change the land use designation from general agriculture to light industrial. Table 1 shows a summary of the updated land use and projected flows for the Costco Project. As shown in Table 1, the updated land use designation includes a total of 104 acres of light industrial land with a total average dry weather flow (ADWF) of 78,000 gallons per day (gpd) (0.078 million gallons per day [mgd]). The flow factor of 750 gpd/ac for industrial land use type was generated as part of the City's Wastewater Master Plan Update.

Table 1 Updated Land Use

Land Use	Area (ac)	Flow Factor (gpd/ac)	ADWF (gpd)
Industrial	104	750(1)	78,000

Notes:
(1) Flow factor was developed in the City of Tracy's Wastewater Master Plan Update (August 2020).

Maximum dry day weather flow (MDDWF) and Peak wet weather flow (PWWF) are used to evaluate the collection system. The MDDWF was determined by applying a peaking factor of 1.12 to the ADWF. This peaking factor was determined by looking at historical MDDWF and ADWF. The MDDWF for the Costco

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Project is 0.087 mgd. The PWWF is the highest observed hourly flow that occurs following the design storm event, and therefore is used for evaluating the collection system. Wet weather infiltration and inflow (I/I), which occurs during and after rainfall events, increases flows in the collection system. PWWF was derived by routing a 10-year, 24-hour design storm through the hydraulic model. A peak I/I rate for future development of 500 gpd/acre was applied to the Costco Project. This calculated I/I rate was added to the ADWF to derive the PWWF. The PWWF for the Costco Project is 0.13 mgd. Table 2 shows a summary of the ADWF, MDDWF, and PWWF.

Table 2 Wastewater Flows

Flow Type	Wastewater Flow (mgd)
ADWF	0.078
MDDWF[(1)(2)]	0.087
PWWF	0.13

Notes:
(1) MDDWF to ADWF peaking factor is 1.12.
(2) This peaking factor was developed in the City of Tracy's Master Plan Update (August 2020).

Collection System Performance Criteria

The evaluation of the impacts of the Costco Project is based on the evaluation criteria summarized in the Master Plan Update. The performance criteria include maximum flow depth to pipe diameter ratio (d/D). The d/D value is defined as the depth of flow (d) in a pipe during peak (design) flow conditions divided by the pipe's diameter (D). The maximum allowable flow depth varies depending on the flow condition:

- Peak Hour Dry Weather Flow (PHF): Under dry weather flow conditions, the maximum allowable flow depth to pipe diameter (d/D) ratio is 0.75 for all pipelines.
- Peak Wet Weather Flow (PWWF): Under PWWF conditions, flow depths are allowed to exceed the maximum d/D ratio established for dry weather conditions. The maximum d/D ratio is 0.90 for all pipelines.

Collection System Evaluation

Due to the location of the Project, the developer has proposed to use an existing but currently abandoned 8-inch sewer that runs along Schulte Rd to Lammers Rd. As part of the study, the City is requiring a full inspection of the abandoned pipeline to determine if rehabilitation is needed to meet the City's Standards. The rehabilitation may include, but is not limited to, ball flushing, cleaning, CCTV inspection, repairs where needed and a possible PVC or CIPP liner.

Keir & Wright conducted the CCTV video inspections and cleaning of the proposed 8-in pipeline in spring of 2020 and the videos were provided to Carollo and the City. Keir & Wright identified multiple locations that need repairs and ensured the City that those locations will be repaired to meet City standards before this pipeline will be approved to come online.

Keir & Wright provided the Patterson Pass Business Center Sanitary Sewer and Water System Phase II project plans which include the 8-in portion of pipeline that runs along Schulte Rd to Lammers Rd. The project plans are included as an enclosure to this letter.

The 8-inch pipeline along Schulte Rd originally flowed to a now abandoned lift station. This lift station is not going to be rehabilitated, but instead a new pipeline along Lammers Rd will need to be constructed to allow the pipeline on Schulte Rd to be a viable option. The pipeline running north along Lammers Rd that needs to be constructed will be an 18-inch diameter pipeline that is 3,310 feet long (pipeline WWGM-5 from the Master Plan Update 2040 recommended improvements, see Figure 6.5 from the Draft Master Plan Update (August 2020) as an enclosure to this letter). A similar pipeline with a slightly different layout was also recommended in the Tracy Wastewater Master Plan completed in December 2012 by CH2MHill (see Figure 5-1 as an enclosure to this letter).

The City's wastewater system hydraulic model was used to conduct the evaluation and analysis of the potential impacts of the Costco Project. The following scenarios were evaluated:

- Existing System, Design Storm
- Existing System, Maximum Dry Day

Based on modeling results, the flows from the Costco Project cause the maximum d/D under PWWF conditions in the sewer along Schulte Road and along Lammers Road to raise to 0.39 and 0.23, respectively. With the addition of the Costco Project, the maximum d/D in the sewer along Schulte Road and Lammers Road under existing maximum dry day conditions is 0.42 and 0.23, respectively. The projected d/D levels in the Schulte Road and Lammers Road sewers do not trigger the need for improvements as the maximum d/D criteria established in the sewer Master Plan Update is 0.75.

Treatment System Evaluation

The existing wastewater flows are nearing the rated capacity of the City's wastewater treatment plant (WWTP). The City is in the process of constructing a project to increase the capacity to manage growth in the future. According to City staff, the existing plant has the capacity to treat and dispose of the proposed 0.078 mgd increase in flows from the Costco project.

Conclusion and Recommendations

The objectives of this study were to evaluate the impacts of the Costco Project on the existing sewer collection and treatment system, and to confirm the infrastructure to convey the projected flows are properly sized and rehabilitated.
The main concern for this project is the impact the Costco Project has on the Schulte Rd and Lammers Rd sewers and the WWTP.
The hydraulic model was used to evaluate the impacts from the construction of the Costco Project. Since this was a previously abandoned pipeline, there are currently no flows. The flows from the Costco Project raise the maximum d/D in the Schulte Road sewer to 0.39 under PWWF conditions and raise the maximum d/D in the Schulte Road sewer to 0.42 under MDDWF conditions. Therefore, the additional flows from the

Costco Project do not cause any capacity deficiencies downstream or trigger the need for capacity projects. It is assumed that the pipeline along Schulte Road (pipeline WWGM-5 from the Master Plan Update 2040 recommended improvements) will be constructed to serve this area.

Currently the City's WWTP has the available capacity to treat and dispose of the proposed flows attributed to the Costco project.

Sincerely,

CAROLLO ENGINEERS, INC.



Tim Loper, P.E.

Project Manager

TJL:cjp

Enclosures:
Figure 1 – Costco Depot Location
Figure 2 – Costco Depot Discharge Pipeline
Figure 6.5 from the Draft Master Plan Update (August 2020) – 2040 System Improvements
Patterson Pass Business Center Sanitary Sewer and Water System Phase II project plans
Figure 5-1 from the Final Wastewater Master Plan (December 2012) – Major Wastewater Conveyance Facilities

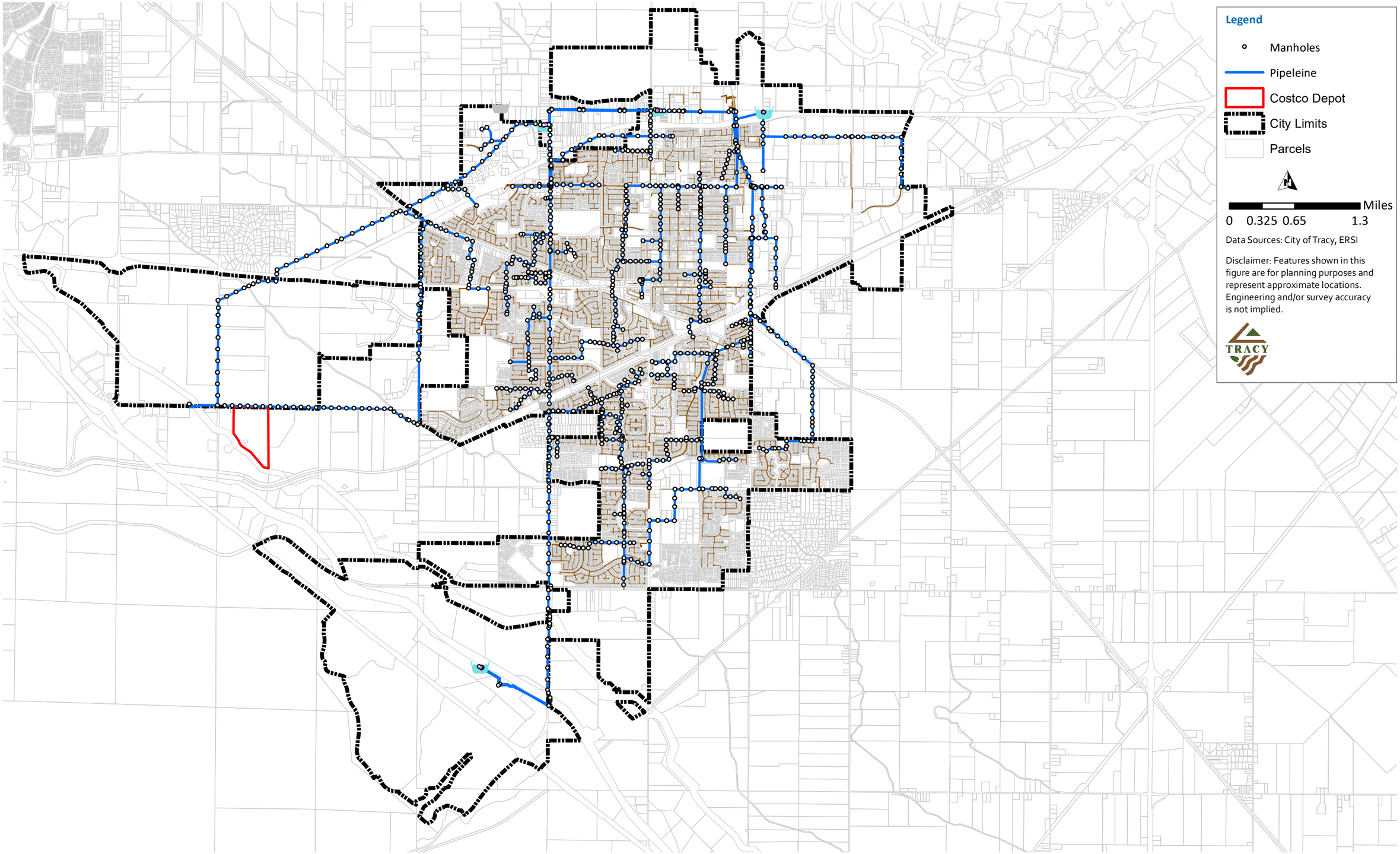


Figure 1 Costco Depot Location

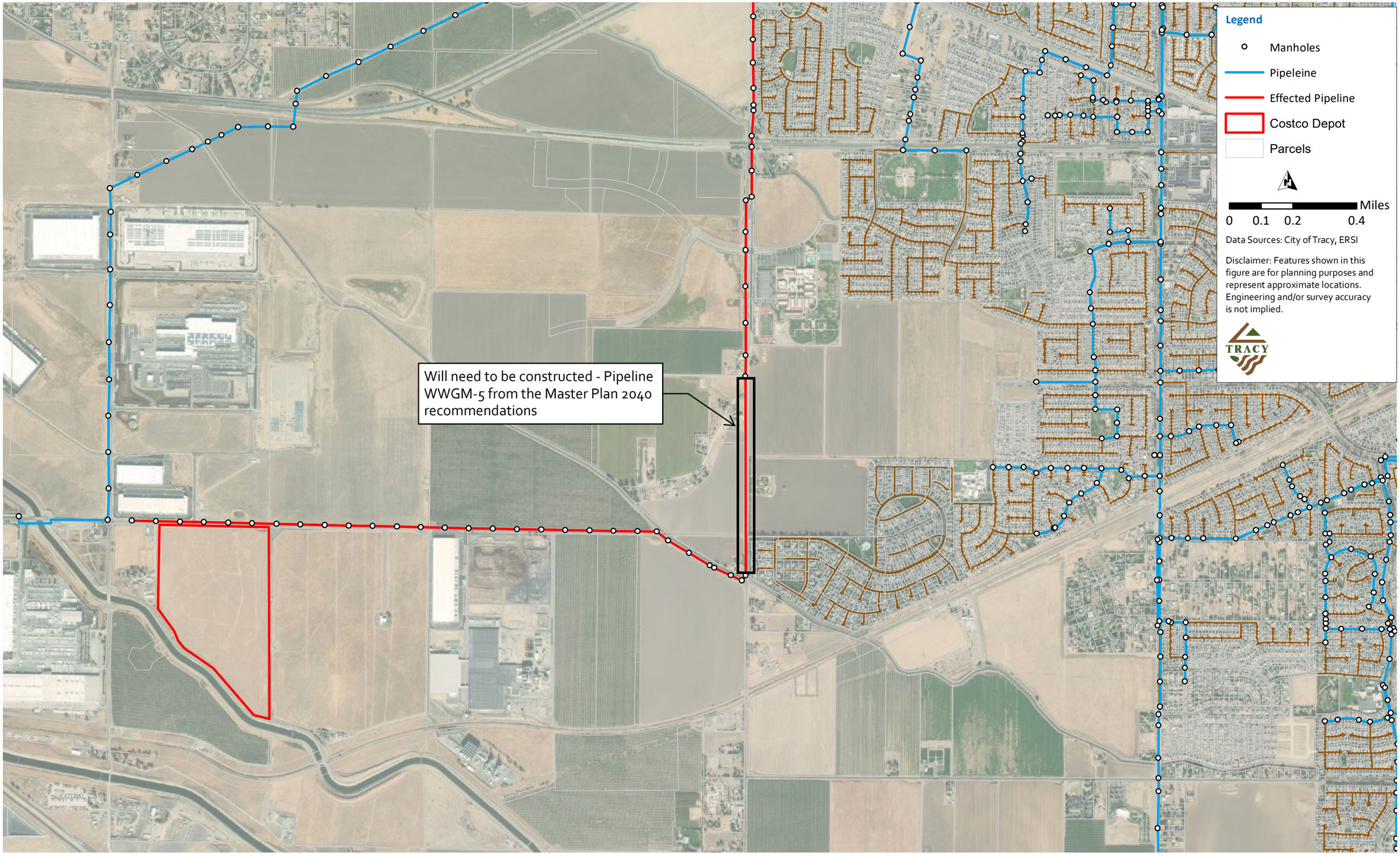


Figure 2 Costco Depot Discharge Pipeline

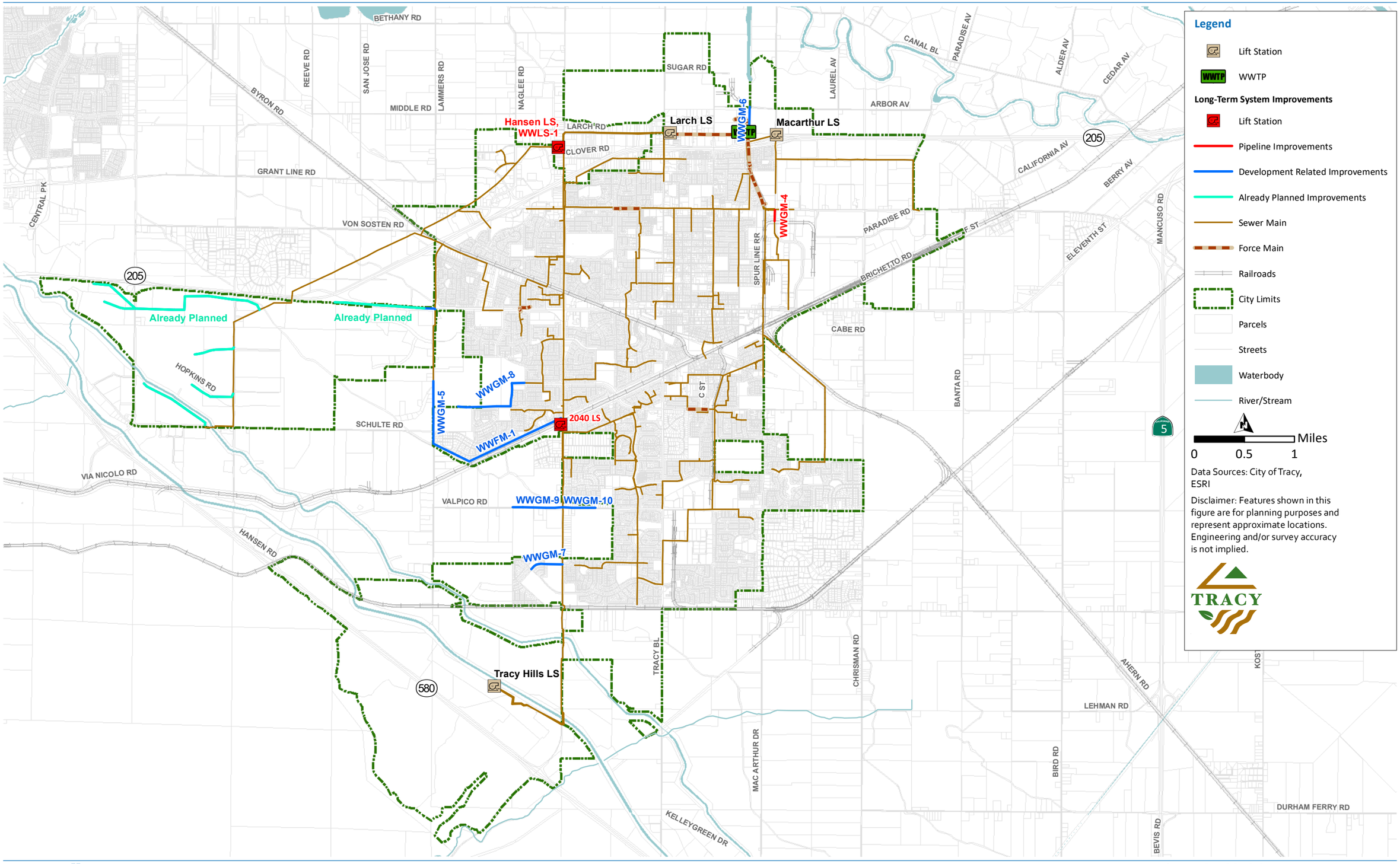
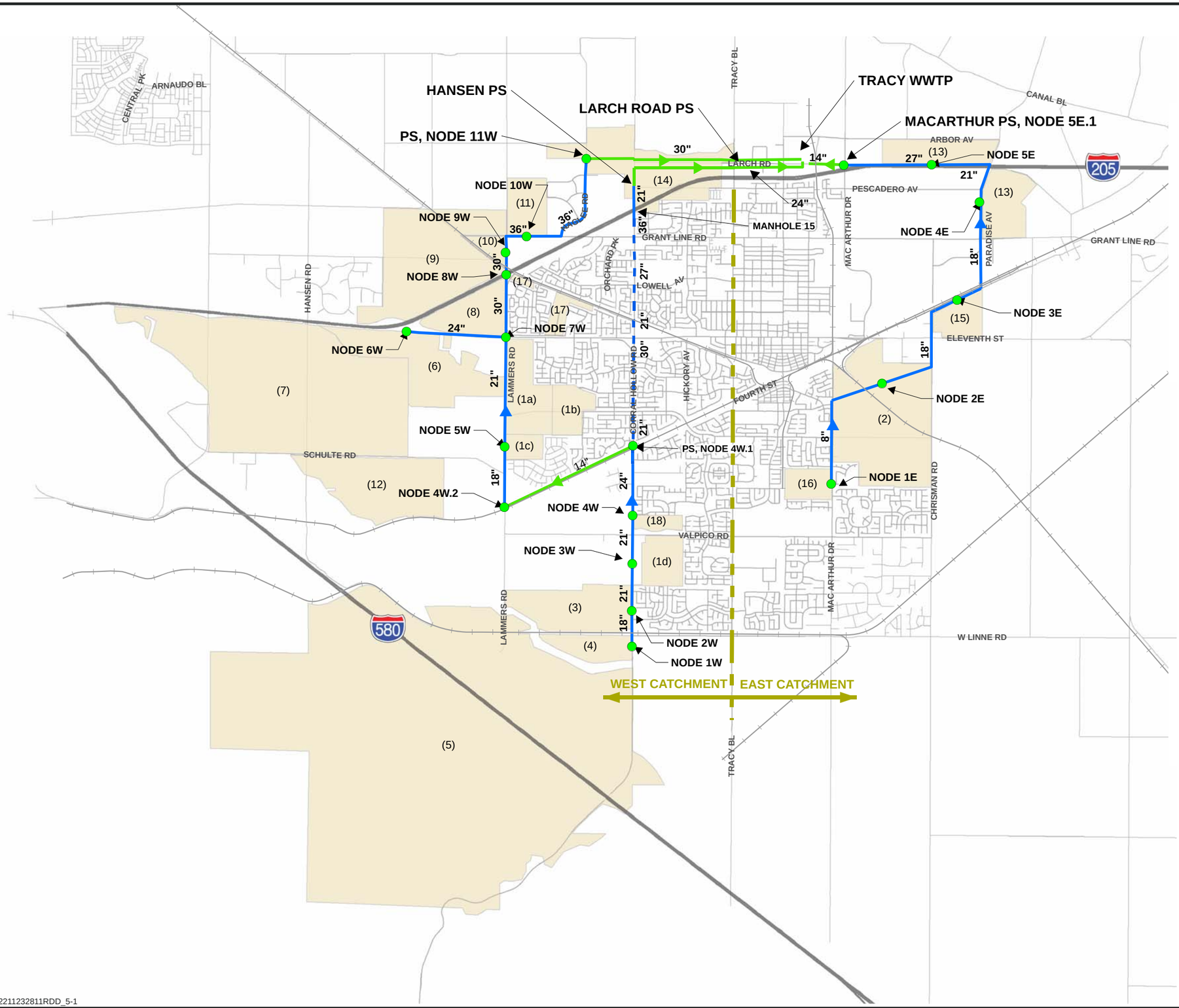


Figure 6.5 2040 System Improvements



LEGEND

- Future Service Areas
- Node # (point of wastewater contribution)
- Proposed Force Main
- Proposed Gravity Main
- Proposed Gravity Main, Replacement
- 18" — Pipe Diameter (See pipe schedule)

FUTURE SERVICE AREAS INDEX

(1a) UR 5 (Bright)
(1b) UR 7 (Bright)
(1c) UR 8 (Fahmy)
(1d) UR 9 (Keenan)
(2) UR 1 (Alvarez & others)
(3) UR 10 (Ellis)
(4) South Linne
(5) Tracy Hills
(6) Gateway (excluding Phase 1)
(7) Cordes Ranch
(8) Bright
(9) Catellus
(10) Filios
(11) I-205 Expansion
(12) Westside Industrial
(13) Eastside Industrial
(14) Larch Clover
(15) Chrisman Road
(16) Rocha
(17) Berg/Byron
(18) Kagehiro

ABBREVIATIONS

EXST	EXISTING
FM	FORCE MAIN
PS	PUMP STATION
WWTP	WASTEWATER TREATMENT PLANT

N

0 0.5 1
Miles

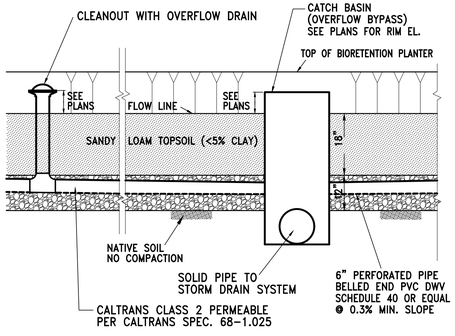
FIGURE 5-1
MAJOR WASTEWATER CONVEYANCE FACILITIES
TRACY WASTEWATER MASTER PLAN

CH2MHILL®

WBG042211232811RDD_5-1

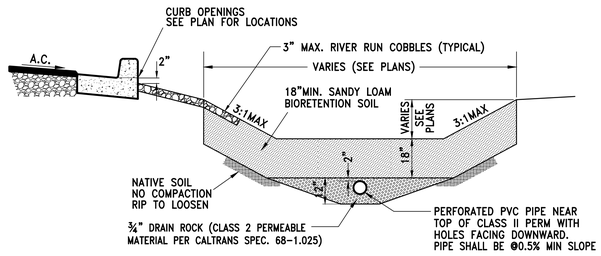
APPENDIX I

Stormwater Quality Control Plan



STORMWATER TREATMENT PLANTER - TYPICAL SECTION

N. T. S.



NOTES:
1. PLANTER SHALL BE GRADED TO DRAIN TOWARD OUTLET AT A MINIMUM SLOPE OF 0.3%
2. ALL PERFORATED PIPES SHALL HAVE TWO 5/8" DIA. HOLES AT 8" MAX. SPACING.
3. BIO-RETENTION SOIL SHALL BE PER APPENDIX B OF C.3 GUIDEBOOK.
4. BIORETENTION SOIL SHALL ACHIEVE A LONG-TERM INFILTRATION RATE OF AT MIN. 5"/HR
5. COBBLES SHALL BE PLACED AT ALL CURB CUTS AND DOWNSPOUT LOCATIONS.

TYPICAL SECTION
STORM WATER TREATMENT PLANTER

N. T. S.

DRAINAGE AREA	TOTAL TRIBUTARY AREA (AC)	IMPERVIOUS AREA ROOF (AC)	IMPERVIOUS AREA AC/CONC (AC)	PERVIOUS AREA LANDSCAPE (AC)	IMPERVIOUSNESS RATIO "I"	STORMWATER RUNOFF COEF. "C"	UNIT STORMWATER VOL "P_0"	SQDV (CF) REQUIRED	SQDV (CF) PROVIDED
1	12.07	6.10	4.51	1.46	0.88	0.70	0.45	19,880	20,000
2	36.50	20.37	12.85	3.28	0.91	0.75	0.48	63,959	66,000
3	2.46	0.00	1.50	0.96	0.61	0.42	0.27	2,409	4,800
4	2.00	0.00	1.30	0.70	0.65	0.45	0.29	2,112	4,100
5	34.26	13.58	14.20	6.48	0.81	0.61	0.40	49,319	55,000
6	1.64	0.00	1.18	0.46	0.72	0.51	0.33	1,977	4,000
7	5.68	0.05	3.07	2.56	0.55	0.37	0.24	4,969	6,000
TOTAL	94.61	40.10	38.61	15.90	5.13	3.81	2.47	144625.62	159900.00

CITY OF TRACY

PERSONAL & PUBLIC PARK DEDICATION: THE DEVELOPER OF THE PROJECT IS RESPONSIBLE FOR CONSTRUCTION OF MISTAKES, ERRORS, OR OMISSIONS ON THE PLANS. THE DEVELOPER SHALL HAVE THE AUTHORITY TO INCLUDE SUCH IMPROVEMENTS AS PUBLIC INTEREST REQUIRES. MODIFICATION OF OR A DEPARTURE FROM THE APPROVED PLANS SHALL BE SUBJECT TO THE APPROVAL OF THE CITY ENGINEER. THE CITY ENGINEER SHALL HAVE THE AUTHORITY TO REQUIRE SUCH MODIFICATIONS AS HE DEEMS NECESSARY TO ASSURE THE PROJECT IS SUBSTANTIALLY AS APPROVED. THE CITY APPROVES ONLY THE INFORMATION SHOWN ON THE SAME SHEET(S) AS THE CITY ENGINEER'S APPROVAL BLOCK. ANY OTHER INFORMATION SHOWN ON THE PLANS IS NOT REVIEWED OR APPROVED BY THE CITY OF TRACY.

ROBERT ARMIJO, P.E. CITY ENGINEER DATE:

TRACY Think Inside the Triangle

REGISTERED PROFESSIONAL ENGINEER MICHAEL F. BASSETT No. 71814 CIVIL STATE OF CALIFORNIA

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Livermore, California 94551
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REVISIONS

SYMBOL	DATE	DESCRIPTION	APPROVED
	06/07/20	CITY RE-SUBMITTAL	
	09/07/20	CITY RE-SUBMITTAL	
	04/23/21	CITY RE-SUBMITTAL	
	06/15/21	CITY RE-SUBMITTAL	
	08/24/21	CITY RE-SUBMITTAL	

DESIGNED BY: CJP
DRAWN BY: K.S.
CHECKED BY: M.F.B.
SCALE: 1" = 100'

COSTCO FACILITIES
COSTCO WHOLESALE
STORMWATER QUALITY CONTROL PLAN

SHEET
C.4.1
OF 8 SHEETS

APPENDIX J

Costco Depot Project Planning Submittal Review for Drainage and Flood

WOOD RODGERS

TECHNICAL MEMORANDUM



TO: Ms. Ilene Macintire, PE, City of Tracy
Mr. Richard Steiner, PE, LEED AP, EnvSP, SNG & Associates, Inc.

FROM: Mr. Harvey Oslick, PE, CFM, CPSWQ, EnvSP, Wood Rodgers, Inc.

DATE: August 10, 2021

SUBJECT: Costco Depot Project Planning Submittal Review for Drainage and Flood Management

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PURPOSE

The purpose of this Technical Memorandum is to present the results of an evaluation of pre-project 100-year flood conditions, a qualitative discussion about post-project flood management with respect to the proposed Costco Depot Project (Project), and comments on drainage elements shown on the on-site and off-site planning-level documents. Runoff from off-site watersheds that can impact the site originates in a watershed upstream of the Delta-Mendota Canal. This evaluation included a review of the measures to manage flows that originate off-site and to mitigate the impacts of the proposed project on 100-year flows as shown on the plans for New Costco Facilities dated June 6, 2021 (6th Submittal). Sheets 2, C.2.1, C.2.2 and C.2.3 from the 6th Submittal are attached for reference. This Technical Memorandum also discusses storm drainage detention requirements in the context of the city of Tracy's (City's) adopted and draft storm drainage master plans.

LOCATION

The location of the Project is south of the City limit along W. Schulte Road as shown on the attached **Figure 1** - Watershed Map and on Sheet 2 from the 6th Submittal. The site is north of the Delta-Mendota Canal, extending from approximately 700 feet to 2,700 feet east of Hansen Road. The proposed Project site area is approximately 104 acres and it is within the City's sphere of influence. The proposed Project area is within the Lammers Watershed as defined in the Citywide Storm Drainage Master Plan (2012 CSDMP) dated November 2012 prepared by Stantec and in the Draft Citywide Storm Drainage Master Plan Update (Draft CSDMP Update) dated March 13, 2020 prepared by Wood Rodgers. The site is located downstream from an overchute that carries runoff from a large watershed across the Delta-Mendota Canal and is referred to as Offsite Tributary Area 3 in the legend on Figure 1. **Figure 2** illustrates Key Existing Features and the existing conditions 100-year flood results discussed below.

EXISTING CONDITIONS 100-YEAR FLOOD MODELING

Wood Rodgers developed two existing conditions models. One of the models covers the upstream off-site areas and was based on 2007 LiDAR topographic data. The other model focused on the Project site and is based on site topographic data provided by Kier and Wright.

The existing conditions model that includes the off-site watersheds was created using Innovyze's InfoWorks ICM and employing the methodology described in the Draft CSDMP Update. The 100-year storm analysis used a 24-hour storm. The purpose of the existing conditions model that includes the off-site watersheds was to estimate the amount of runoff that would be expected to flow across the Delta-Mendota Canal onto the Project site.

The major watershed upstream from the Project is called Offsite Tributary Area 3 (or OFF3). The majority of this watershed is south of the California Aqueduct and it drains under Interstate 580 through a large culvert, across the California Aqueduct through an overchute, and under the railroad tracks that are south of the Safeway Distribution Center. To the north of the railroad tracks, the runoff turns to the east towards Hansen Road. There is a weir along the south side of an access road that runs on the south side of the Safeway Distribution Center to the north of the flow path towards Hansen Road. If the flood levels upstream of Hansen Road reach the level of the weir, some of the runoff from Offsite Tributary Area 3 will drain to the north through a drainage path within the Safeway Distribution Center. Any flows that drain over the weir to the north will not impact the Project site. Four 3-foot-high by 6-foot-wide concrete box culverts (CBCs) under Hansen Road convey most of the runoff east, towards an overchute crossing of the Delta-Mendota Canal that drains towards the Project site. There are a two other culverts located under Interstate 580 upstream from the minor pipe crossings over the California Aqueduct. These pipe overchutes (estimated to be 18-inch and 36-inch diameter pipes based on imagery) were included in this evaluation and were determined to not contribute significantly to the flows towards the Project site due to insignificant conveyance towards the box culverts under Hansen Road. The model routed the flows through the Hansen Road culverts and added local runoff, routing the combined flow through the Delta-Mendota Canal overchute.

Wood Rodgers reviewed the plans for the Delta-Mendota Canal overchute and evaluated its capacity. The ICM model calculated the 100-year discharge through the 3.5-foot-high by 7.5-foot-wide restriction at the upstream end of the overchute over the Delta-Mendota Canal to be approximately 170 cubic feet per second (cfs). The design plan (see Sheet 214-D-12201, included as **Figure 3**) indicates a design discharge of 200 cfs for the overchute.

In the existing conditions, the runoff from Offsite Tributary Area 3 that crosses the Delta-Mendota Canal would spread across the Project site, flowing generally to the northeast and perpendicular to existing contours. Most of the flow would pass across the eastern boundary of the Project. Some of the flow would re-concentrate on the north side of the Project site (W1951 on Figure 2), along the south side of Schulte Road before flowing to the east. Only an insignificant amount of flow would be expected to cross Schulte Road to the north based on a two-dimensional hydraulic analysis. The presentation of results was truncated at the future Pavilion Parkway because the

modeled topography does not reflect existing conditions to the east of Pavilion Parkway. A review of the site plans for the building and associated grading southeast of the corner of Pavilion Parkway and Schulte Road found that the finished floor of the structure is well above the potential overland flooding elevation along Schulte Road.

The existing conditions model, which was based on the pre-project site topography provided by Kier and Wright, was prepared using the computer program HEC-RAS. The HEC-RAS model simulates 200 cfs from the Delta-Mendota Canal overchute flowing across the Project site to provide a distribution of flows along the eastern Project boundary. The Project will be conditioned to approximate this simulated distribution as part of the detailed design and analysis process. The HEC-RAS results were provided to Kier and Wright. Kier and Wright superimposed these results on a site plan (included as **Figure 4**) that presents a concept for maintaining approximate existing conditions for the distribution of runoff crossing the Project site.

PROPOSED PROJECT

The Project includes two buildings and associate parking and drive aisles. Sheets C.2.1, C.2.2 and C.2.3 of the 6th Submittal illustrate the proposed plan to convey flows onto the Project site from the Delta-Mendota Canal overchute around to the eastern side of the Project area. A Ponding Area is proposed near the northern end of the Delta-Mendota Canal overchute. A berm with a crest elevation of 186 feet is proposed to direct flow into the Ponding Area, away from the proposed building to the north of the Ponding Area. A concrete and asphalt swale integrated into the parking area will convey the flow out of the Ponding Area to the southeast and around the south side of the proposed eastern building. The proposed configuration is adequate to convey 200 cfs without impacting the proposed structures.

The 6th Submittal shows a Treatment Planter along the eastern edge of the Project with a label indicating a bottom elevation of 159.0 feet. Calling out a bottom elevation of the Treatment Planter infers that the bottom is planned to be horizontal, as it should be for typical treatment planter installations. However, a single horizontal bottom elevation for this entire Treatment Planter may not be appropriate. A stepped bottom along the Treatment Planter may be considered during detailed design.

Sheet C.4.1 of the 6th Submittal presents the Stormwater Quality Control Plan. The Project area is divided into seven Drainage Management Areas (DMAs), each draining into a Treatment Planter. It should be noted that the DMAs must follow design condition topographic drainage area boundaries, even when these boundaries do not correspond to property boundaries. For example, the off-site area that will be graded to drain into the Ponding Area must be included in DMA 5. The expected minor adjustments to the DMA boundaries would not be expected to significantly change the treatment requirements, and this can be addressed as part of detailed design.

It is reasonable to assume that no flows originating south of the Delta-Mendota Canal would be expected to flow onto the site during a stormwater quality event. No water quality flows originating off-site would be expected to enter the site because, per the Multi-Agency Post-Construction Stormwater Standards Manual, the mean runoff producing event is 0.33 inch and the

initial abstraction (precipitation loss) is 0.70 inch for a Soil Conservation Service (SCS) Curve Number (CN) of 74, which is applicable to the undeveloped portions of the watershed.

The table on Sheet C.4.1 lists a total tributary area of 94.61 acres for the seven DMAs. The table lists 78.71 impervious acres based on the combination of roof and pavement areas. This equates to an imperviousness of 83.2 percent. The table lists a total imperviousness ratio of 5.13. The total values should be blank, or weighted averages should be listed, where sum totals do not provide useful information.

Flow arrows were used on the 6th Submittal drawings to indicate that overflow from the site that result from high flows originating off-site would be distributed along the eastern edge of the Project site. Some of these flow arrows were determined to be located too far to the south because the arrows are south of where existing conditions modeling shows existing conditions site runoff discharging to the east. The Project will be conditioned to control overflow from the site in a manner that approximates how overflows would have occurred in the pre-project condition, as illustrated on Figure 4.

PROJECT IN THE CONTEXT OF THE 2012 CSDMP

Exhibit B from Supplement No. 3 to the 2012 CSDMP, by Stormwater Consulting Inc. dated October 8, 2019, shows the Project area in the context of the 2012 CSDMP. The Project site is in drainage area L12, which is downstream from detention basin DET LW12 and upstream from detention basin DET LW11 in drainage area L10. Figure 3-2 from the 2012 CSDMP lists assumptions relative to the Project area. Figure 3-2 from the 2012 CSDMP and Exhibit B from Supplement No. 3 are attached for reference.

Detention basin DET LW 11 will receive piped runoff from the Project area and has a planned piped outlet to the north. The overland release from the Project area (drainage area L12) is through drainage area L10, including the portion of L10 that will become DET LW11. The overland release from DET LW11 is to the east into drainage area L05, and the overland release from L05 is further to the east into drainage area L06. The implications of the potential overland release on these areas and other areas further downstream was not evaluated. Figure 3-2 includes the following statements:

1. "There is not a detention basin proposed to regulate discharges into the Sphere of Influence from Sub-basin OFF3."
2. In reference to Sub-basin OFF3 (and OFF2), "Offsite sub-basins that must be accounted for in onsite design, but not included in sizing of detention basins serving new development."
3. Regarding drainage areas L05 and L06, "Sub-basins draining to Delta Mendota Canal, WSID Upper Main Canal, or tailwater ponds."

In other words, the 2012 CSDMP did not evaluate potential impacts of overland release from off-site tributary areas reaching the City limit. The 2012 CSDMP focused on managing runoff originating with the City's sphere of influence. The 2012 CSDMP called for detention basin DET

LW11 to have a peak storage volume of 30 acre-feet with a peak discharge of 2.5 cfs. Part of the 2.5 cfs peak discharge from DET LW11 was planned to be the 0.5 cfs discharge from DET LW 12 that would flow through DET LW11, leaving DET LW11 with an effective drawdown rate of 2 cfs. The 2012 CSDMP calls for DET LW11 to serve drainage areas L10 and L12.

The 2012 CSDMP sized DET LW11 based on drainage area L12 (the Project area) being 103.3 acres at 57-percent effective imperviousness and drainage area L10 being 225.5 acres at 6-percent effective imperviousness.

CITY DESIGN STANDARDS AND THE OFF-SITE STORM DRAIN

The City Design Standards were applied to planned conditions in order to provide comments on the sizing of the off-site storm drainage system. The Design Standards allow for combined street and pipe conveyance to be considered in the design, and they refer to both the 10-year and 100-year storm events. Rational Method analysis was used to compute discharges. Flow routing that would occur in the Treatment Planters was assumed to result in a site time of concentration of 20 minutes.

The Rational Method computes a discharge as the product of the runoff coefficient, rainfall intensity and tributary area. A runoff coefficient of 0.75 was computed for the 103-acre tributary area based on 95 acres of commercial area (C=0.8) and 8 acres of open space (C=0.1). The 10-year and 100-year rainfall intensities are 0.8 and1.3 inches per hour, respectively, based on Plate 5-1 in the Design Standards. These values result in a 10-year design discharge of 62 cfs and a 100-year discharge of 100 cfs. Based on Plate 5-4 in the Design Standards, the capacity of Schulte Road would be approximately 20 cfs at the top-of-curb and 60 cfs at the right-of-way limits. A minimum pipe capacity of 42 cfs is, therefore, required based on the 10-year discharge of 62 cfs less the street conveyance capacity of 20 cfs.

Storm Drain Exhibit Sheet 4 of 6 shows a transition from a 30-inch to a 36-inch storm drain pipe (both at a slope of 0.005) at the easternmost of two 24-inch stubs from the parcels between the Project site and DET LW11. Storm drain pipes with diameters of 30 inches and 36 inches at a slope of 0.005 have capacities of approximately 30 cfs and 49 cfs, respectively. Therefore, a minimum pipe size of 36 inches should be used from the point where all runoff from the Project site is combined to a point where a capacity in excess of 49 cfs is required. Analysis of the incremental increases in flow at the various connection points along the Project's frontage will be required to size the storm drains upstream from the 36-inch pipe. The City's General Plan does not include development of the two parcels to the east of the Project. Therefore, there is no basis for planning for flows towards Schulte Road that could potentially be collected in storm drain stubs.

As part of detailed design, the Project will need to demonstrate that all runoff originating from the Project site will be directed into DET LW11. There is a potential that runoff originating from the Project site could flow along Schulte Road to the east to a point where it could reach, and possibly cross, Pavilion Parkway. The Project will need to demonstrate that no flow from the project site crosses Pavilion Parkway when there is a discharge of 100 cfs from the Project. Multiple inlets west of Pavilion Parkway will likely be needed to direct the runoff conveyed along Schulte Road

into DET LW11. A 48-inch pipe would have sufficient capacity to convey 100 cfs into DET LW11, which should be adequate if there are not additional significant connections (such as the two 24-inch stubs that are currently shown) into the storm drain along Schulte Road. The final segments of pipe from Schulte Road into DET LW11 will need to be 48 inches in diameter. The precise configuration of the pipe and inlet system will need to be developed during the design phase.

The General Plan land use designation for the two parcels situated to the east of the Project (for which 24-inch stubs are shown on the Storm Drain Exhibit) is "Park", and this designation was used as a basis for sizing DET LW11. When and if this land use designation changes, DET LW11 would need to be expanded to accommodate runoff from additional impervious areas. The Project is not responsible for this potential future expansion. The Project does not need to plan for future development of the area that is currently zoned as Park and, therefore, does not need to include stubs for future development into the Schulte Road storm drain that is being planned.

PROJECT IN THE CONTEXT OF THE CSDMP UPDATE

The overall system configuration serving the Lammers Watershed was not revised between the 2012 CDSMP and the Draft CSDMP Update. However, the Draft CSDMP Update provides recommendations for updated design criteria to address identified issues with the 2012 CSDMP and apply current best available information. These recommendations resulted in the basin sizes in the Draft CSDMP Update to be larger than those called for in the 2012 CSDMP. Key reasons for why the Draft CSDMP Update recommends a larger basin for DET LW11 include the 2012 CSDMP assumption that the developing portion of the drainage area would only have an effective imperviousness of 57 percent and that only a 24-hour storm was used, even though it would take 15 days to drain at the design net discharge rate of 2 cubic feet per second. The Draft CSDMP Update uses an effective imperviousness of 85 percent for industrial development based on a 5-percent reduction from 90 percent to account for the effectiveness of Low Impact Development measures.

The area tributary to DET LW11 downstream from DET LW12 is approximately 326 acres. With a land use designation of park assigned to the two parcels situated to the east of the Project site, the CSDMP Update computed an effective imperviousness of 33.7 percent for the DET LW11 tributary area. DET LW11 should have a total depth of 10 feet based on the invert of the outlet at an elevation of 121 feet, and the existing ground elevations that control the top elevation, in order to satisfy the requirement to not have an embankment. Based on the recommended sizing approach in the Draft CSDMP Update, the DET LW11 should have a capacity of 64 acre-feet, including freeboard. The Draft CSDMP Update recommends that DET LW12 be designed with a peak outflow rate of 1 cfs rather than 0.5 cfs in order to achieve more reasonable drawdown times because this would allow for the use of a 10-day design storm. Therefore, the orifice outlet that will control the peak flow from DET LW11 should be sized for 3 cfs rather than 2.5 cfs. Additionally, it is recommended that the outlet from DET LW11 be fitted with a manual gate that can stop outflow in case downstream conditions require flow reductions at a time when there is available capacity in the basin.

Due to the expectation that site runoff would typically occur before peak runoff from the upstream watershed, the storm drainage system would be expected to direct some of the flow originating off-site into DET LW11. Additionally, DET LW11 is along the overland release path that would receive runoff originating from Offsite Tributary Area 3. Therefore, the detailed design of DET LW11 should include sufficient erosion control measures to limit damage when there is overland flow into the basin and when the basin overflows.

CONCLUSIONS AND RECOMMENDATIONS

Wood Rodgers evaluated the existing and proposed conditions for the Costco Depot Project site with respect to impacts on 100-year runoff and flooding. The evaluation considered how runoff originating off-site and on-site is planned to be collected and conveyed across the site.

The recommendations in this TM include conditioning the Project to provide detailed analysis during the Project design phase to demonstrate how flows originating off-site will be distributed along the eastern side of the Project. Additionally, calculations will need to be provided to support final sizing of the storm drainage system along Schulte Road. The final sizing of the storm drainage system and inlet configuration near Pavilion Parkway will need to demonstrate how 100-year flows originating on the Project will be directed into DET LW11.

Wood Rodgers recommends that DET LW11 be sized to have a capacity of 64 acre-feet including freeboard based on the basin sizing approach detailed in the Draft CSDMP Update. Because DET LW11 is situated along the overland release path for flows originating in Offsite Tributary Area 3, the basin should be designed to accommodate overland inflow and overflow.

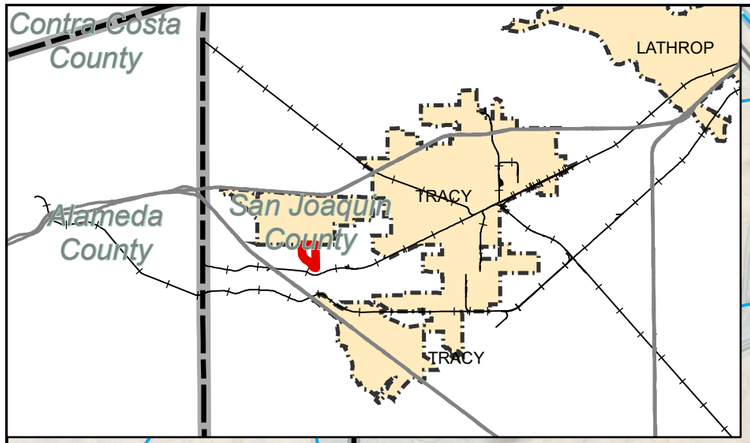
Attachments

WATERSHED MAP

COSTCO DEPOT PROJECT

CITY OF TRACY

AUGUST 2021



NORTH

0 2,000 4,000

Feet

Legend

- Interstate
- Highways
- Railroads
- Artificial Path, Canal, Ditch
- Pipeline, Connector
- Stream, River
- Historic Flow Path
- Project Site
- Lammers Watershed
- Offsite Tributary Area 3
- Non-Connected Lammers Watershed
- Modeled Drainage Areas
- CityLimits
- CountyLimit

WOOD RODGERS

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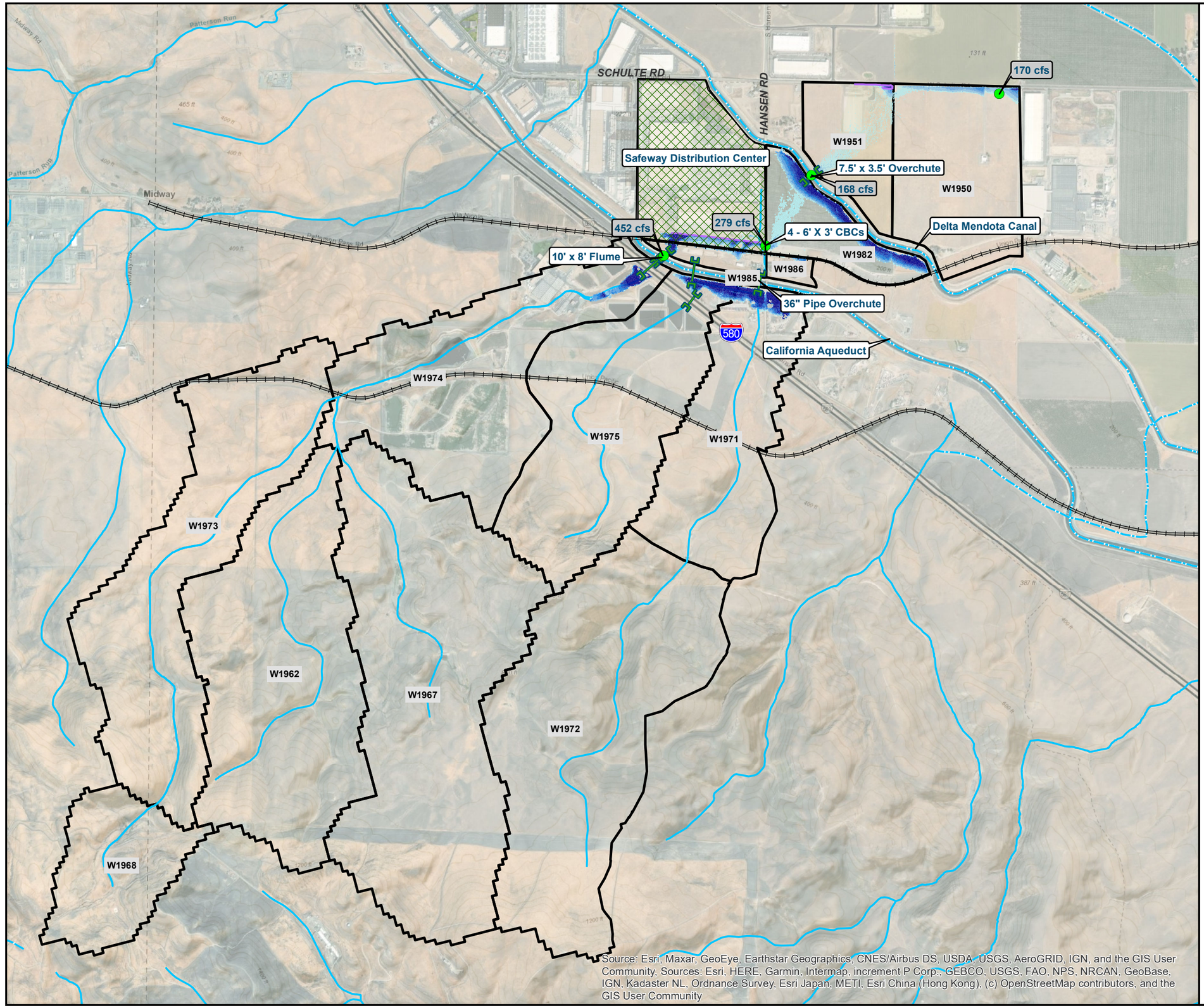
FIGURE 1

KEY EXISTING FEATURES MAP

COSTCO DEPOT PROJECT

CITY OF TRACY

AUGUST 2021



NORTH

0 2,000 4,000

Feet

Legend

- Key Locations
- Model Weir
- Model Conduit
- Railroads

100-year Model Results (depth in feet)

- 0.25 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 6.4

- ### cfs 100-year Discharge
- Model Drainage Areas
- Artificial Path, Canal, Ditch
- Stream, River

WOOD RODGERS

J:\Jobs\8750_City_of_Tracy\8750009_City-of-Tracy-Costco-Depot\GIS\Tasks\Figures\02_FIG2_Key_Features_Map.mxd 7/22/2021 4:52:10 PM mcedeno

FIGURE 2

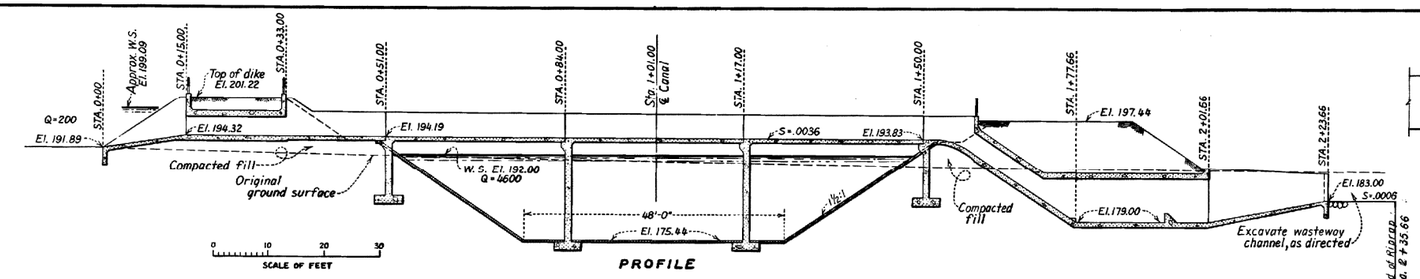
DELTA-MENDOTA CANAL
OVERCHUTE PLAN

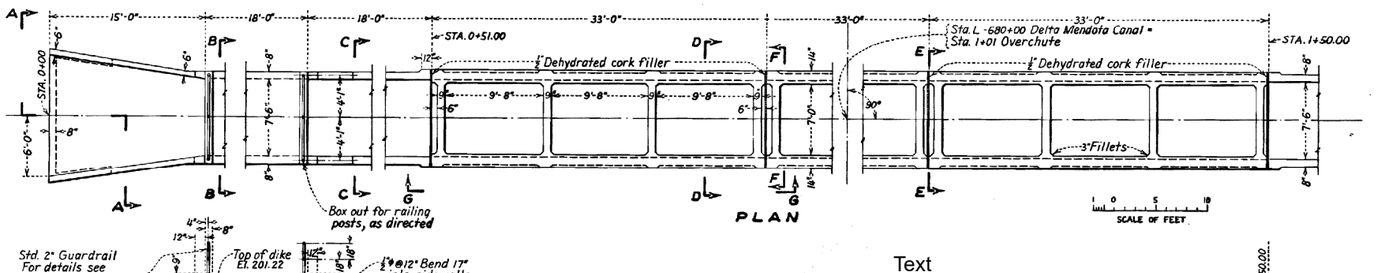
COSTCO DEPOT PROJECT

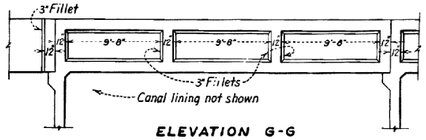
CITY OF TRACY

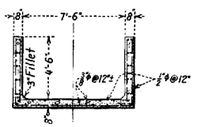
AUGUST 2021

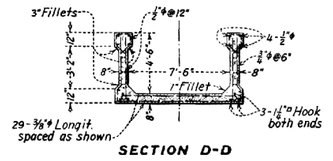
NORTH

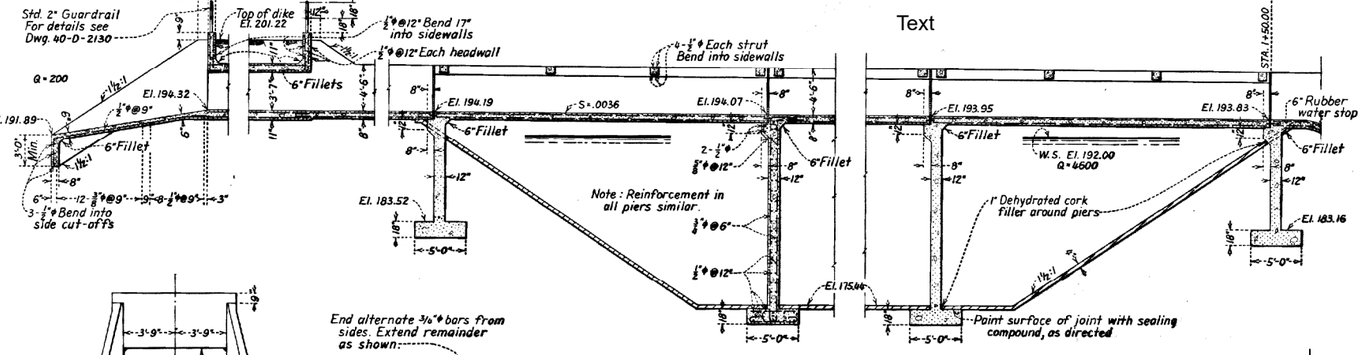


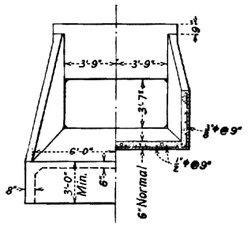


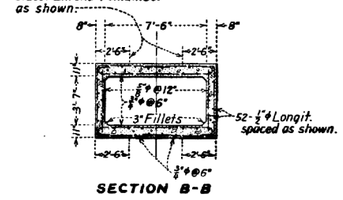


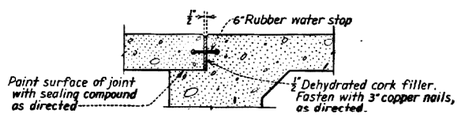


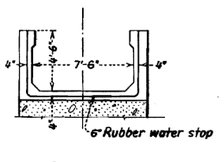


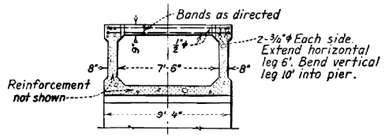


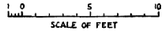












NOTE

For general notes see sheet 2

10-20-55 0 ETW. AS BUILT BY 205 - LTR. SR 143 - 43

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
CENTRAL VALLEY PROJECT-CALIFORNIA
DELTA DIVISION

DELTA-MENDOTA CANAL-STA. L-680+00
OVERCHUTE
INLET AND FLUME

DRAWN: R.F.M. SUBMITTED: [signature]
TRACED: R.F.M. RECOMMENDED: [signature]
CHECKED: [signature] APPROVED: [signature]
ASST. CHIEF ENGINEER

DENVER, COLORADO JUNE 27, 1946
SHEET 1 OF 2

214-D-12201

FEE 5-15-47

Text

WOOD RODGERS

J:\Jobs\8750_City_of_Tracy\8750009_City-of-Tracy-Costco-Depot\GIS\Tasks\Figures\03_FIG3_Proposed_Condition_Model_Map.mxd 7/27/2021 2:46:45 PM mcedeno

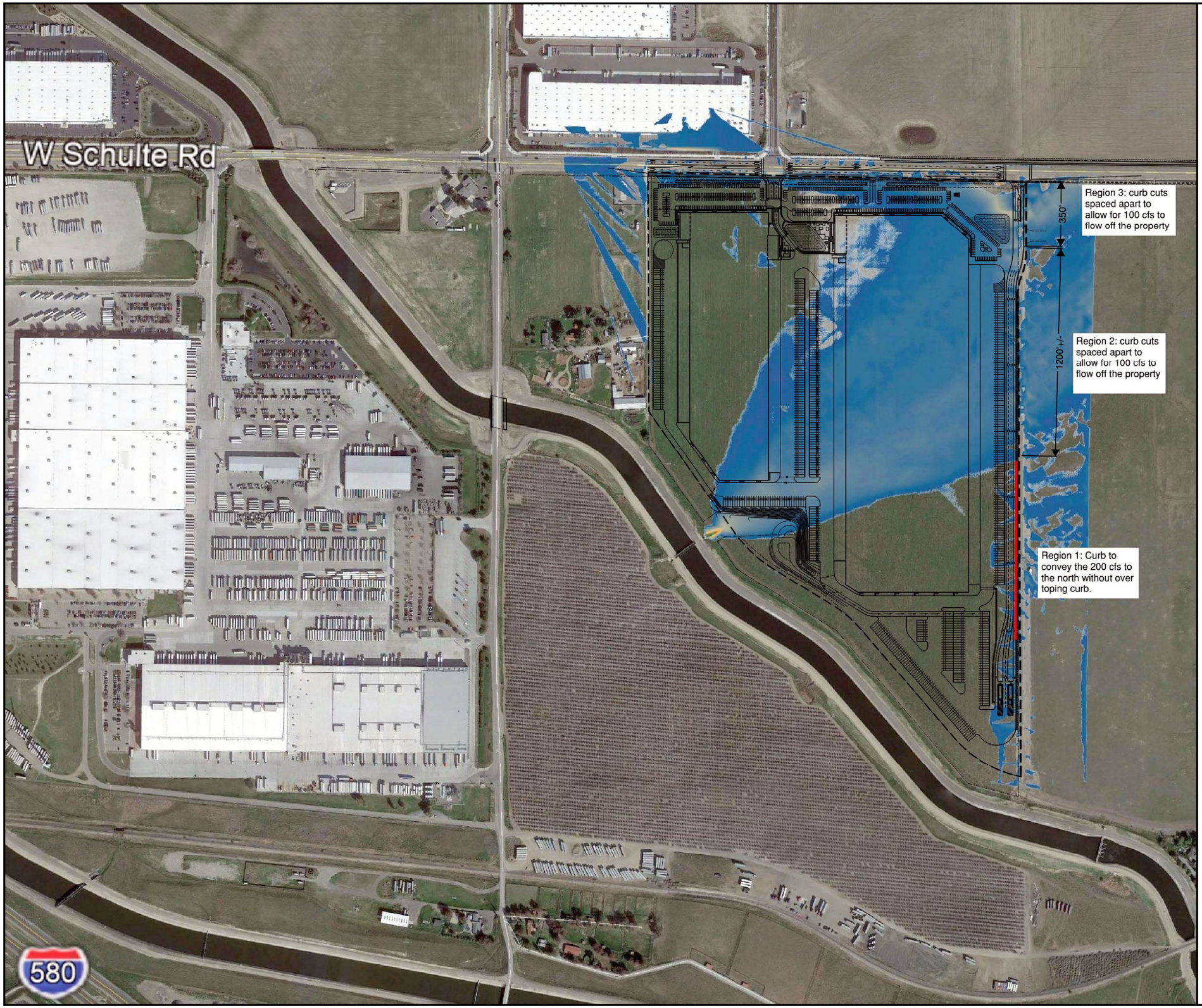
FIGURE 3

EXISTING CONDITIONS 100-YEAR FLOOD EXTENTS WITH PROPOSED DEVELOPMENT

COSTCO DEPOT PROJECT

CITY OF TRACY

AUGUST 2021



NORTH

WOOD RODGERS

J:\Jobs\8750_City_of_Tracy\8750009_City-of-Tracy-Costco-Depot\GIS\Tasks\Figures\04_FIG4.mxd 7/27/2021 2:05:14 PM mcedeno

FIGURE 4



DBA # P.281

DB+A

DAVID BABCOCK ✦ ASSOCIATES
ARCHITECTURE PLANNING LANDSCAPE
3581 MT. DIABLO BLVD., SUITE 235
LAFAYETTE, CALIFORNIA 94549
T: 925.283.5070

COSTCO FACILITIES

CONTEXT SITE PLAN

NOT TO SCALE
JUNE 16, 2021

NORTH

SHEET 2 OF 27

SCHULTE ROAD

NORTH

0 30 60 120 180

Scale 1" = 60 ft

TREATMENT PLANTER BOT ELEV 168.5

TREATMENT PLANTER BOT ELEV 164.5

TREATMENT PLANTER BOT ELEV 159.5

TREATMENT PLANTER BOT ELEV 159.0

TREATMENT/DETENTION BASIN BOTTOM ELEV 156.0

10' PUE

6' PUE

30' LANDSCAPE SETBACK

30' HISTORIC ROAD RIGHT OF WAY

F.F. 175.0

F.F. 168.25

12' WIDE ACCESS ROAD

20' WIDE UTILITY EASEMENT

BLDG SLAB SLOPED 0.5%

BLDG SLAB SLOPED 0.5%

ALL STORM DRAINS 0.5% SLOPE, UNLESS OTHERWISE NOTED

PAVEMENT LEGEND

AUTO PAVEMENT: 3" AC OVER 4" CLASS II AB OVER 12" LIME TREATED SOIL
AUTO PAVEMENT (T.I.=5.5)

TRUCK PAVEMENT: 5.5" AC OVER 5.5" CLASS II AB OVER 18" LIME TREATED SOIL
TRUCK PAVEMENT (T.I.=9.0)

CONCRETE TRUCK PAVEMENT: 6" CONCRETE OVER 4" CLASS II AB OVER 12" LIME TREATED SUBGRADE

STORMWATER TREATMENT BIO-RETENTION PLANTER

SEE SHEET C2.2

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE OBLIGATION TO COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, STANDARDS AND REGULATIONS IN EFFECT AT THE TIME OF APPROVAL OF THE IMPROVEMENT PLANS. THE CITY OF TRACY, BY ISSUING PERMITS AND APPROVING PLANS, DOES NOT ASSUME RESPONSIBILITY FOR ANY OMISSIONS OR ERRORS THAT MAY APPEAR ON THE PLANS, NOR DOES IT ASSUME ANY RESPONSIBILITY FOR THE CONSTRUCTION OF THE IMPROVEMENTS SHOWN ON THE PLANS. THE DEVELOPER IS RESPONSIBLE FOR THE CORRECTION OF ERRORS AND OMISSIONS AND IS LIABLE FOR ANY DAMAGE RESULTING FROM SUCH ERRORS AND OMISSIONS. THE DEVELOPER AGREES TO HOLD HARMLESS AND INDEMNIFY THE CITY OF TRACY FROM ANY LIABILITY RESULTING FROM ERRORS AND OMISSIONS ON THE PLANS.

DATE:

ROBERT ARMIJO, P.E. CITY ENGINEER

Think Inside the Triangle

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. BASSITAS
No. 71814
CIVIL
STATE OF CALIFORNIA

KIER+WRIGHT
2850 Collier Canyon Road
Livermore, California 94551
Phone (925) 245-8788
www.kierwright.com

REVISIONS		
SYMBOL	DATE	DESCRIPTION	APPROVED
	05/07/20	CITY RE-SUBMITTAL	
	10/27/20	CITY RE-SUBMITTAL	
	04/23/21	CITY RE-SUBMITTAL	
	06/15/21	CITY RE-SUBMITTAL	

DESIGNED BY: CJP
DRAWN BY: R.S.
CHECKED BY: M.F.B.
SCALE: 1" = 60'

COSTCO FACILITIES
COSTCO WHOLESALE
PRELIMINARY GRADING AND DRAINAGE PLAN

SHEET
C.2.1
OF 8 SHEETS

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SEE SHEET C2.1

NORTH

0 30 60 120 180

Scale 1" = 60 ft

PAVEMENT LEGEND

AUTO PAVEMENT: 3" AC OVER 4" CLASS II AB OVER 12" LIME TREATED SOIL

AUTO PAVEMENT (T.I.=5.5)

TRUCK PAVEMENT: 5.5" AC OVER 5.5" CLASS II AB OVER 18" LIME TREATED SOIL

TRUCK PAVEMENT (T.I.=9.0)

CONCRETE TRUCK PAVEMENT: 6" CONCRETE OVER 4" CLASS II AB OVER 12" LIME TREATED SUBGRADE.

STORMWATER TREATMENT BIO-RETENTION PLANTER

F.F. 181.75

F.F. 178.4

PROPOSED ROW DEDICATION

FUTURE SDMH

FUTURE 12"SD

12"SD TO FUTURE DETENTION BASIN LW12

SDMH

FUTURE SDMH

FL 181.3

FUTURE 12"SD

PONDING AREA

FUTURE DETENTION BASIN LW12

BLDG SLAB SLOPED 0.5%

ALL STORM DRAINS 0.5% SLOPE, UNLESS OTHERWISE NOTED

SEE SHEET 2.3

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE OBLIGATION OF OBTAINING THE NECESSARY PERMITS FROM ANY AGENCY OR ENTITY HAVING JURISDICTION OVER THE CONSTRUCTION OF THE IMPROVEMENTS CONTEMPLATED HEREIN. THE DEVELOPER SHALL ENTER INTO AN AGREEMENT WITH THE CITY OF TRACY, IN WHICH HE AGREES TO PERFORM THE WORK AND TO PROVIDE ALL NECESSARY SECURITY AND INSURANCE, AND TO PAY ALL FEES REQUIRED BY THE CITY OF TRACY. THE APPROVAL OF THESE PLANS SHALL EXPIRE AND BECOME NULL AND VOID IF THE AGREEMENT IS NOT EXECUTED WITHIN ONE YEAR OF THE DATE OF APPROVAL BY THE CITY ENGINEER.

ROBERT ARMIJO, P.E. CITY ENGINEER DATE:

Think Inside the Triangle

REGISTERED PROFESSIONAL ENGINEER
MICHAEL F. BASSITAS
No. 71814
CIVIL
STATE OF CALIFORNIA

KIER+WRIGHT
2850 Collier Canyon Road
Livermore, California 94551
Phone (925) 245-8788
www.kierwright.com

REVISIONS		
SYMBOL	DATE	DESCRIPTION
	10/07/20	CITY RE-SUBMITTAL
	10/27/20	CITY RE-SUBMITTAL
	04/23/21	CITY RE-SUBMITTAL
	06/09/21	CITY RE-SUBMITTAL

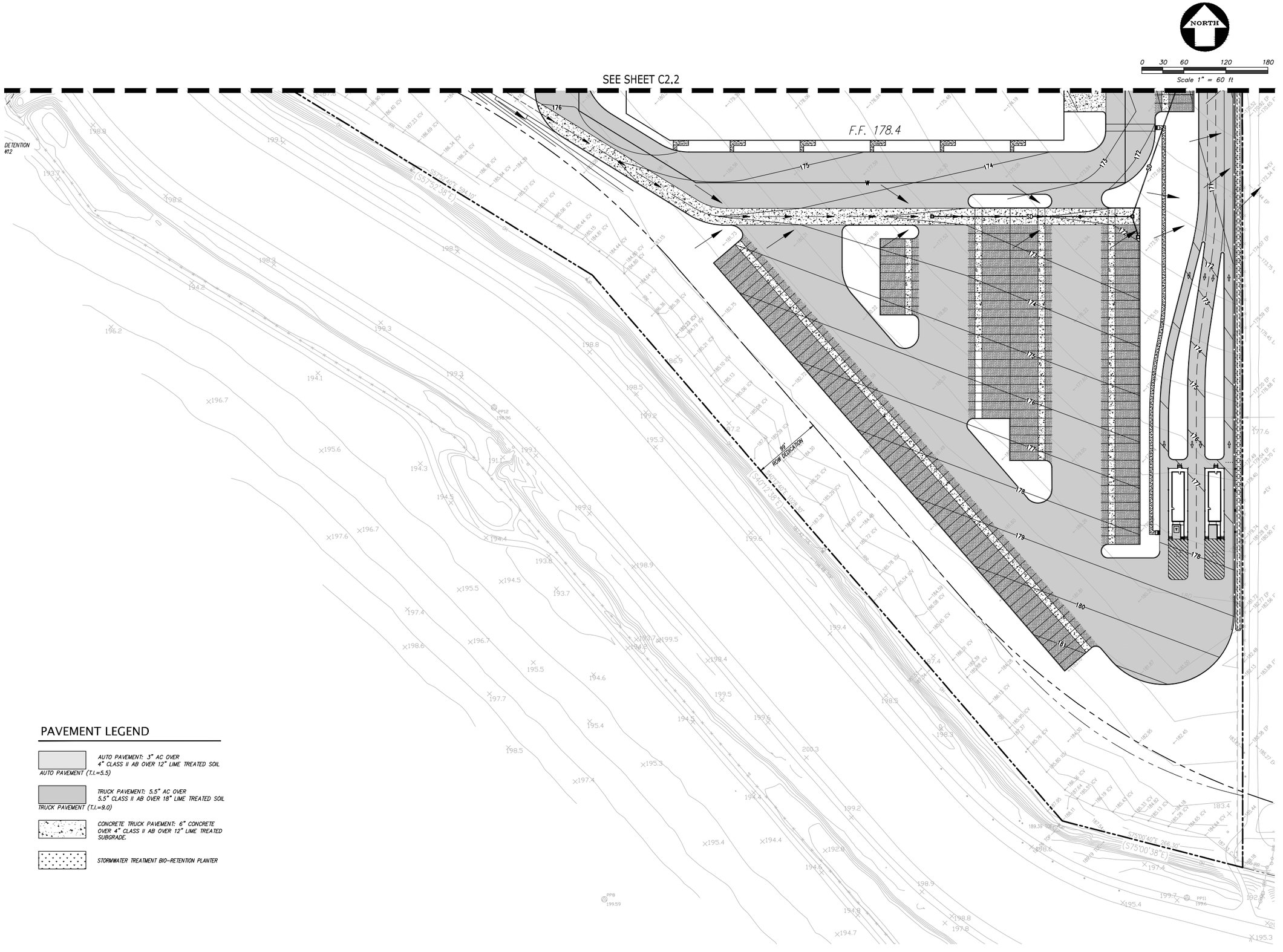
APPROVED

DESIGNED BY: CJP
DRAWN BY: R.S.
CHECKED BY: M.F.B.
SCALE: 1" = 60'

COSTCO FACILITIES
COSTCO WHOLESALE
PRELIMINARY GRADING AND DRAINAGE PLAN

SHEET C.2.2 OF 8 SHEETS

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PAVEMENT LEGEND

AUTO PAVEMENT: 3" AC OVER 4" CLASS II AB OVER 12" LIME TREATED SOIL
AUTO PAVEMENT (T.I.=5.5)

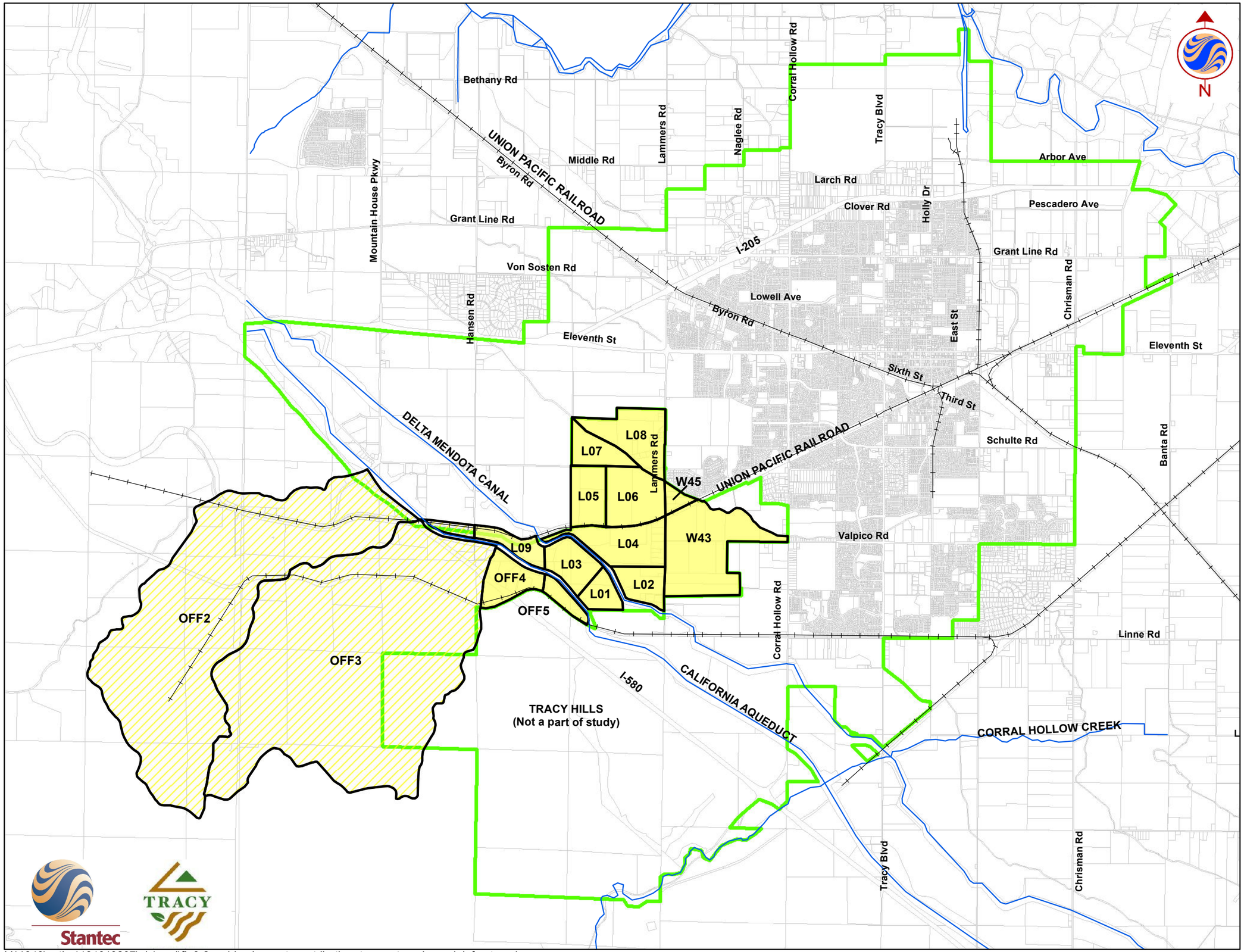
TRUCK PAVEMENT: 5.5" AC OVER 5.5" CLASS II AB OVER 18" LIME TREATED SOIL
TRUCK PAVEMENT (T.I.=9.0)

CONCRETE TRUCK PAVEMENT: 6" CONCRETE OVER 4" CLASS II AB OVER 12" LIME TREATED SUBGRADE.

STORMWATER TREATMENT BIO-RETENTION PLANTER

CITY OF TRACY

APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE OBLIGATION TO COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, STANDARDS AND REGULATIONS IN EFFECT AT THE TIME OF APPROVAL OF THE IMPROVEMENT PLANS. APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE OBLIGATION TO COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, STANDARDS AND REGULATIONS IN EFFECT AT THE TIME OF APPROVAL OF THE IMPROVEMENT PLANS. APPROVAL OF THESE PLANS DOES NOT RELEASE THE DEVELOPER OF THE OBLIGATION TO CORRECT ANY ERRORS OR OMISSIONS CONTAINED THEREIN. APPROVAL OF THESE PLANS DOES NOT RELEASE THE CITY OF TRACY FROM ITS DISCRETIONARY POWER TO REQUIRE CHANGES OR ALTERATIONS TO THE PLANS WHEN SUCH CHANGES OR ALTERATIONS ARE DEEMED NECESSARY BY THE CITY ENGINEER FOR THE PROPER COMPLETION OF THE PROJECT AS SHOWN ON THE APPROVED PLANS. ANY CHANGES OR ALTERATIONS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO CONSTRUCTION. THE DEVELOPER SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES RESULTING FROM CHANGES OR ALTERATIONS MADE TO THE APPROVED PLANS WITHOUT THE KNOWLEDGE AND CONSENT OF THE CITY ENGINEER



Legend

- Sphere of Influence
- L01 — Sub-basins draining to Delta Mendota Canal, WSID Upper Main Canal, or tailwater ponds
- OFF3 — Offsite sub-basins that must be accounted for in onsite design, but not included in sizing of detention basins serving new development
- Railroad

NOTE: A detention basin is proposed to capture flows derived from Sub-basin OFF2 in the future and limit the downstream discharge to a metered outflow of 5 cfs during a 100-year 24-hour storm. Upon completion of this detention basin (DET OFF2), downstream onsite design will only need to account for the 5 cfs outflow from this sub-basin. There is not a detention basin proposed to regulate discharges into the Sphere of Influence from Sub-basin OFF3.

Client/Project
CITY OF TRACY
CITYWIDE STORM DRAINAGE MASTER PLAN

FIGURE 3-2

Title
SUB-BASINS ASSUMED NOT TO CONTRIBUTE TO MASTER PLANNED INFRASTRUCTURE

NOVEMBER 2012
184010207
SCALE 1" = 5000'

Stantec

TRACY

V:\1840\active\184010207\gis\mxd\fig3-2_subbasins_not_contributing_to_master_planned_infrast.mxd

Scale:
1" = 1,500'
(if printed full size at 11"x17")

Supplement No. 3 Changes to the Citywide SDMP

List of proposed changes:

- Changes to Lammers Outfall pipe alignments
- Minor Sub-basin changes (L17A/L17B, extend Lammers Watershed 22 acres into Mountain House Watershed, L20/L14)
- DET MWH3a/3b/3c storage volume reduced from 37 AF to 33 AF
- DET LW6 storage volume increased from 101 AF to 103 AF
- DET LW9a storage volume increased from 89 AF to 94 AF
- DET LW8 no longer depicted as linear basin
- DET LW10A, LW10B, LW9a and LW6 have minor location or configuration changes
- DET LW3 is aggregate basin not located as of yet and will become 3 or so smaller basins to be determined by Specific Plan process for the property formerly known as Gateway
- DET LW4 and LW5 will drain to Lammers Road street storm drain system that will be directed to DET LW3; DET LW4 and LW5 (1 cfs outflow, total) will be "pass through" drainage in DET LW3

Provisions that are not changing:

- Outflow rates from detention basins (except DET LW3 outflow increase from 4 cfs to 5 cfs for "pass through" of 1 cfs from DET LW4 and LW5)
- Drainage Agreement between the City and WSID

V:\18401active\18401020\northeast_industrial_area\graphics\tracy_nei_exhibit_B_supplement_3.ai mtm 2-14-2019

Exhibit B – Proposed Revisions to the Existing Citywide Storm Drainage Master Plan per Supplement No.3

Supplement No. 3 to the Citywide SDMP

Legend:

- Existing Storm Drain
- Proposed Storm Drain
- Existing Detention
- Proposed Detention
- Pipe Change
- Overchutes
- Culverts
- Proposed Culverts
- Outfalls
- Proposed Pump Stations
- Subbasins
- Watershed Boundaries
- Sphere of Influence
- Existing Channel
- Proposed Greenbelt Parkway
- 100-yr Floodplain
- Drain Inlet to Delta Mendota Canal

Notes:

1. To DET LW3 via Lammers Road street drainage facilities and/or onsite Gateway facilities.
2. Location(s) and size of DET LW3 to be determined by specific plan process.

DATE: May 2019
SWC PROJECT NO. 2014-96CC

Storm Water Consulting Inc. | Stantec | TRACY "Think Inside the Triangle"