INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

FOR THE

LINNE ROAD/CORRAL HOLLOW ROAD INTERSECTION IMPROVEMENT PROJECT

November 2022

Prepared For:
City of Tracy
Department of Development Services
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Tracy, CA 95376

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1.0 INTRODUCTION & PURPOSE

1.1 PURPOSE AND SCOPE OF THE INITIAL STUDY

This IS/MND has been prepared in accordance with the California Environmental Quality Act (CEQA) (California Public Resources Code [PRC] Section (§) 21000 et seq.) and its Guidelines (California Code of Regulations [CCR], Title 14, §15000 et seq.), to evaluate the potential environmental effects associated with the construction and operation of the Corral Hollow and Linne Road Improvements Project (proposed project). Pursuant to Section 15367 of the State CEQA Guidelines, the City of Tracy (City) is the lead agency for the proposed project. The lead agency is the public agency that has the principal responsibility for carrying out or approving a project.

As set forth in the State CEQA Guidelines Section 15070, an IS/MND can be prepared when the Initial Study has identified potentially significant environmental impacts, but revisions have been made to a project, prior to public review of the Initial Study, that would avoid or mitigate the impacts to a level considered less than significant; and there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment.

1.2 SUMMARY OF FINDINGS

Section 3.0 of this document contains the Environmental Checklist that was prepared for the proposed project pursuant to CEQA requirements. The Environmental Checklist indicates whether the proposed project would result in no impact, less than significant impacts, less than significant impacts with the implementation of mitigation measures, or potentially significant impacts. These impacts are identified and discussed within each subsequent resource area throughout this document.

MITIGATION MEASURES

State CEQA Guidelines Section 15041, *Authority to Mitigate,* gives the lead agency for a project the authority to require feasible changes in any or all activities involved in the project in order to substantially lessen or avoid significant effects on the environment, consistent with applicable constitutional requirements such as the "nexus" and "rough proportionality" standards. CEQA Guidelines Section 15364 defines "feasible" as capable of being accomplished in a successful manner within a reasonable period of time, considering economic, environmental, legal, social, and technological factors. Mitigation measures will be adopted, as needed and feasible, to reduce the environmental impacts to less than significant levels and must be consistent with all applicable constitutional requirements, including the following:

- There must be an essential nexus (i.e., connections) between the mitigation measure and legitimate governmental interest.
- The mitigation measure must be "roughly proportional" to the impacts of the project.

Several forms of mitigation under CEQA Section 15370 are summarized as follow:

- **Avoiding** the impact by not taking a certain action(s);
- **Minimizing** impacts by limiting the degree or magnitude of the action and its implementation;
- **Rectifying** the impact by repairing, rehabilitating, or restoring the impacted environment;

- **Reducing or eliminating** the impact over time by preservation and maintenance operations during the life of the action; and
- **Compensating** for the impact by replacing or providing substitute resources or environment.

Avoiding impacts is the preferred form of mitigation, followed by minimizing or rectifying the impact to less than significant. Compensating for impacts would be pursued if no other form of mitigation is feasible.

ENVIRONMENTAL RESOURCE TOPICS

This IS/MND evaluates the proposed project's impacts on the following resource topic:

- Aesthetics
- Agricultural and Forestry Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Geology and Soils
- Greenhouse Gas Emissions
- Hazard and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Tribal/Cultural Resources
- Transportation
- Utilities and Service Systems
- Wildfire

1.3 REPORT ORGANIZATION

This document has been organized into the following sections:

Section 1.0 – Introduction. This section provides an introduction and overview describing the conclusions of the Initial Study.

Section 2.0 – Project Description. This section identifies key project characteristics and includes a list of anticipated discretionary actions.

Section 3.0 – Initial Study Checklist. The Environmental Checklist Form provides an overview of the potential impacts that may or may not result from project implementation.

Section 4.0 – Environmental Evaluation. This section contains an analysis of environmental impacts identified in the environmental checklist.

Section 5.0 – References. The section identifies resources used to prepare the Initial Study.

2.0 DESCRIPTION OF PROPOSED PROJECT

2.1 PROJECT LOCATION

The proposed project is located within in the City of Tracy in San Joaquin County, California. The project site is located at the intersection of Corral Hollow Road and Linne Road. The project site is located approximately 1.5 miles north of the Interstate 5/Corral Hollow Road freeway interchange and approximately 0.75-mile north of the Tracy Municipal Airport. The project also would result in acquisitions of portions of seven existing parcels, and would be adjacent to one parcel, and make a minor upgrade to immediately adjacent area. Please see **Figure 2-1: Regional Map** and **Figure 2-2: USGS Topographic Map**, that show the project location. The APN's and addresses that would be affected, the acreage of those parcels, right-of-way acquired, existing land uses, and description of the acquired property are shown in *Table 2-1: Project Parcels and Acquisition Areas*.

Table 2-1: Project Parcels and Acquisition Areas

APN and Address	Acres	ROW Acquired	Existing Land Uses	Description of Acquired Property
025-311-029 11888 W. Linne Road	22.99	0.0 acres	Heavy Industrial	None. Adjacent to the southerly boundary of the parcel.
025-311-020 28720 South Corral Hollow Road	1.9	0.53 acres	Rural Residential – 2 or more residential	Disturbed/mowed undeveloped land, billboard, fencing, gravel/dirt driveway and parking lot
024-401-008 None	1.31	0.24 acres	Road and Rail shoulder	Disturbed roadway and railroad shoulder
024-401-007 None	1.31	0.04 acres	Road and Rail shoulder	Disturbed roadway and railroad shoulder/Easement for railroad line
024-014-033 28499 South Corral Hollow Road	14.49	0.12 acres	Road and Rail shoulder	Disturbed roadway and railroad shoulder/Easement for railroad line
025-302-012 28677 South Corral Hollow Road	119.55	01.60 acres	Irrigated Orchard	Interior dirt road in orchard adjacent to Corral Hollow Road. Approximately 24-26 orchard trees.
024-014-021 24855 South Corral Hollow Road	1.95	0.1 acres	Small industrial utility building with gated dirt driveway	No Acquisition – Make improvement to existing driveway.
025-311-002 28818 South Corral Hollow Road	1.49	0.1 acres	Heavy Industrial	No Acquisition – Make improvement to existing driveway.

2.2 ENVIRONMENTAL SETTING

REGIONAL SETTING

Regionally, the City of Tracy in central California and approximately 53 miles directly east of San Francisco and 19 miles southwest of Stockton. The City of Tracy is in an area of California called the Central Valley. The Central Valley is an elongated valley occupying the central region of California and is on average 50 miles wide and approximately 400 miles in length from the City of Redding on the north to approximately 30 miles south of the City of Bakersfield on the south (USGS, 2021). As one of the most notable structural depressions in the world, the Central Valley is known for its prolific agricultural production. Hydrologically, the project site is within the San Joaquin Basin, which is characterized by the San Joaquin River which flows northwesterly from the Sierra Mountains to the southeast and through the basin with outlets to the San Francisco Bay and ultimately the Pacific Ocean. The City of Tracy is located approximately four miles west of the nearest reaches of the river and approximately 10 miles from the western boundary of the basin at Coast Range approximately 10 miles to the west.

LOCAL SETTING

The land uses within the project area are consists of a mix of agriculture, industrial, residential, and infrastructure (canals and airport). Residential uses are dominant to the north as new development is expanding southerly from the main City center. Residential development is located to the northwest of the project site and additional homes are under construction. Further to the northwest the primary land uses are agricultural production. To the southeast, south, and southwest, the project is surrounded by a mix of land uses. This includes industrial uses for concrete production, the Tracy Municipal Airport, American Legion Park, the Tracy Water Treatment Plan, the northerly reach of the Delta Mendota Canal, and agricultural land.

Adjacent land uses to the north of Linne Road include highly disturbed roadway shoulder and the Union Pacific Railroad (UPRR). This area is nearly devoid of vegetation and does not contain any structures. To the south of Linne Road is an industrial site with numerous buildings used for sand and gravel operations and manufacturing concrete products. To the southeast of the corner of Linne Road and Corral Hollow Road is a lot that is partially developed with three small single-story structures. The westerly side of this lot is adjacent to the eastern alignment of Corral Hollow Road. The northerly portion of the lot contains a undeveloped but disturbed area with an existing billboard. The southerly half of this parcel contains three structures. To the west of Corral Hollow Road is agricultural land that is cultivated with an orchard. There are above ground power lines strung on wooden power poles along both the southerly sides of Linne Road and the easterly side of Corral Hollow Road.

Figure 2-3: Aerial Map, shows the project intersection and roadways on an aerial, and **Figure 2-4: Project Acquisition Areas**, show project site and portions of adjacent parcels that would be acquired, or have improvements made, as well as areas needed for temporary construction easements. The City of Tracy General Plan and zoning designations for the project parcels are shown in *Table 2-2: Project Parcels General Plan and Zoning*. Adjacent to the north and northwest of the Corral Hollow Road intersection land use designation is for Commercial (C), to the southwest is Urban Reserve, and to the southeast Industrial.

Table 2-2: Project Parcels General Plan and Zoning

APN and Address	General Plan	County Zoning
025-311-029 **11888 W. Linne Road**	Heavy Industrial	I/L
025-311-020 **28720 South Corral Hollow Road**	Heavy Industrial	I/L
024-401-008 **None**	Existing Linne Road alignment and ROW	Rail Road/UPRR ROW
024-401-007 **None**	Existing Linne Road alignment and ROW	Rail Road/UPRR ROW
024-014-033 **28499 South Corral Hollow Road**	None	AU-20
025-302-012 **28677 South Corral Hollow Road**	Urban Reserve	AU-20
024-014-021 **24855 South Corral Hollow Road**	Commercial	AU-20
025-311-002 **28818 South Corral Hollow Road**	Heavy Industrial	I/L AU-20 Rail Road/UPRR ROW

PROJECT APPROVALS

The proposed project would require the following approvals:

- Improvement Plans

2.3 PROPOSED PROJECT

The proposed project would make transportation improvements within Corral Hollow Road, Linne Road, within the intersection of the two roadways and within portions of adjacent parcels as shown in *Table 1*, above. Improvements would include widening Corral Hollow Road, Linne Road, and the addition of signals within the intersection. The intersection of Corral Hollow Road currently operates at a deficient LOS. The improvements, widening, addition of dedicated turn land and addition of signalization and improvements would improve the LOS. Intersection improvements would improve mobility, alleviate traffic congestion, and improve traffic efficiency along Corral Hollow Road.

Corral Hollow Road would be widened to two (2) travel lanes in each direction. These project improvements would start immediately north of the Union Pacific Railroad (UPRR) right of way ROW and extend southerly to approximately 500 feet south of the intersection with W. Linne Road. Other improvements proposed along Corral Hollow Road would include the construction of a center median, curbs, and sidewalks. New sidewalk and curb and gutter would be installed on the westerly side of the

roadway and at the two corners of the intersections. Standard sidewalks and curb ramps would be Americans with Disabilities (ADA) compliant. In addition, the driveways to the adjacent properties would be improved with new concrete driveways (a total of four new driveways would be installed. One each at APNs (024-014-041), (25-311—020), and two for APN (025-311-002).

A new retention basin (approximately 0.35 acres/15,400 sf) would be installed adjacent to the southwest corner of the intersection and would require the removal of approximately 40 orchard trees. Other standard improvements would include the installation of new signage, roadway striping, and crosswalks. All roadway improvements would conform to Caltrans and City standards as applicable.

Minor improvements to Linne Road would be made, primarily in the westbound lanes. The road would be widened to enable paving and striping of a new right turn only lane. The existing left lane would remain and be used as a left only to southbound Corral Hollow Road. New traffic signals would also be installed at the intersection of Corral Hollow Road and W. Linne Road as well as streetlights and a pre-signal north of the UPRR crossing for southbound traffic along Corral Hollow Road by the proposed project. Signals would be connected to existing infrastructure on the north side of Corral Hollow Road. Signal timing between the proposed traffic signal, the pre-signal, and raising and lowering of guard arms, would be created in coordination with UPRR. All work within the UPRR right of way will be constructed by UPRR labor forces.

As discussed above, some right of way (ROW) acquisitions would be required. In addition to the listed 40 orchard trees above, approximately 151 other trees would be removed, for new right-of-way and a temporary construction easement. In addition, the project would require removals of some existing hardscape, existing fencing, and grinding and matching with existing pavement grades, and utility relocation.

It should be noted that Corral Hollow Road is currently being widened north of the intersection and private development is anticipated to fund additional widening efforts to both roadways as development progresses and demand becomes is known. Ongoing widening of Corral Hollow road is occurring to the north, and the proposed project would widen Corral Hollow Road to match the width of this and other improvements to the south of the project site. This is intended to help ensure smooth traffic flow and avoid constriction that would occur under the existing alignment (from two lanes to a single lane). **Figure 2-5: Project Improvement Plans**, provides a graphic representation and location of the proposed improvements.

Stormwater

The proposed project would include new stormwater facilities and would utilize an approximate 0.35-acre retention basin to contain stormwater flows, promote water infiltration, and reduce potential for increased downstream stormwater flows.

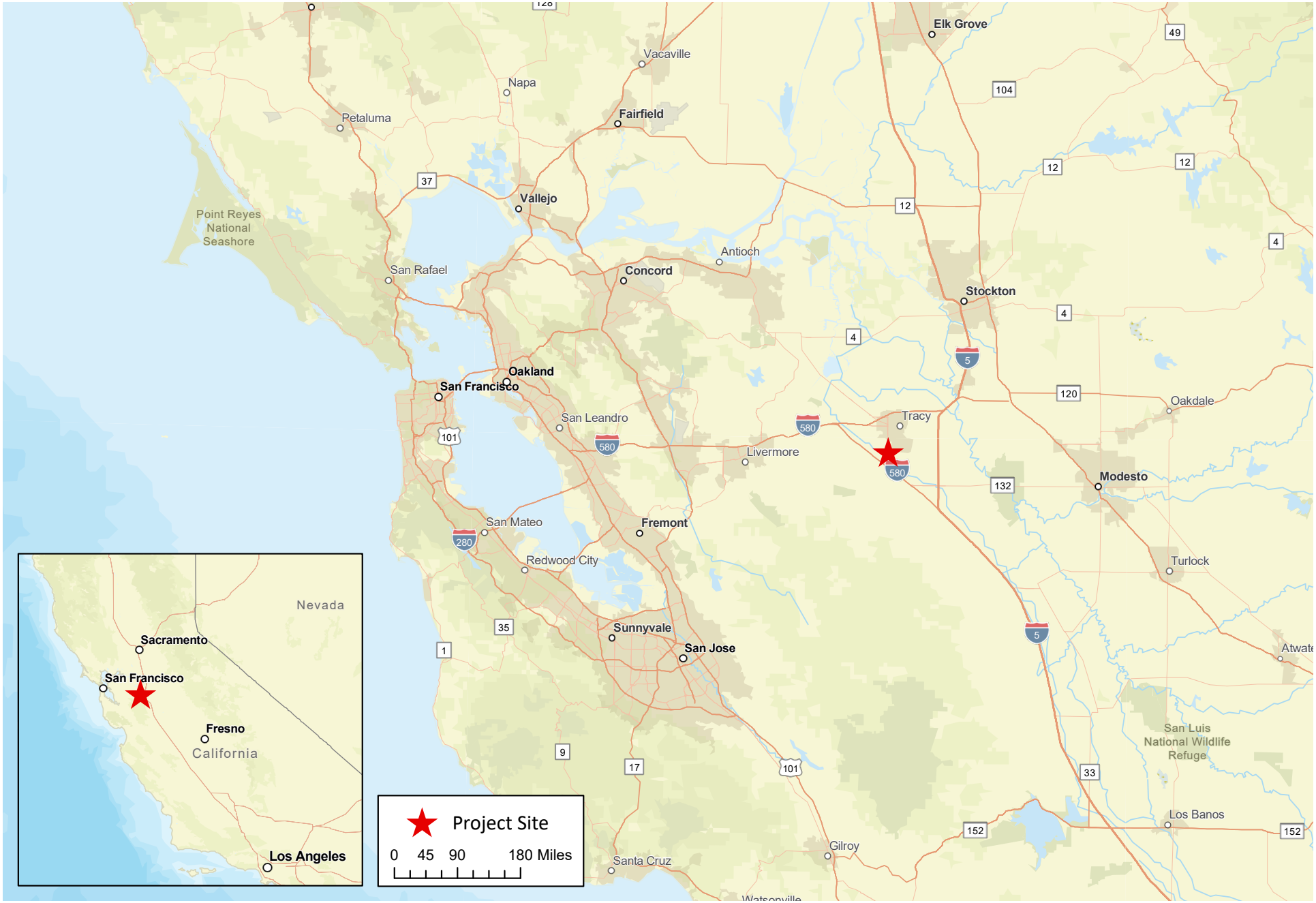
Utilities

The proposed project, as needed, would tie into existing utilities for electrification of the new signals, streetlights, and other roadway and railroad crossings. The project does not propose any tie in to existing water, sewer, or gas facilities because the project does not include new land uses. The proposed project would realign the above ground utility lines and poles adjacent to the new roadways.

Construction

Some demolition, excavation, and grading would be required for this project. Equipment that may be used to accomplish project work is listed below. Some excavation to a maximum depth of 14 feet for the installation of traffic signal poles, six feet for the drainage feature, and four feet for road widening would be required only where these project elements are proposed.

Bobcat/skid steer loader	Gradall (multi-purpose excavator
Compactor (Ground)	Jackhammer
Concrete Mixer Truck	Pavement Scarifier/Roller
Concrete Saw	Pneumatic Tools
Crane or bucket truck	Truck (Dump/Flat Bed
Dozer/Grader/Excavator/Scraper	



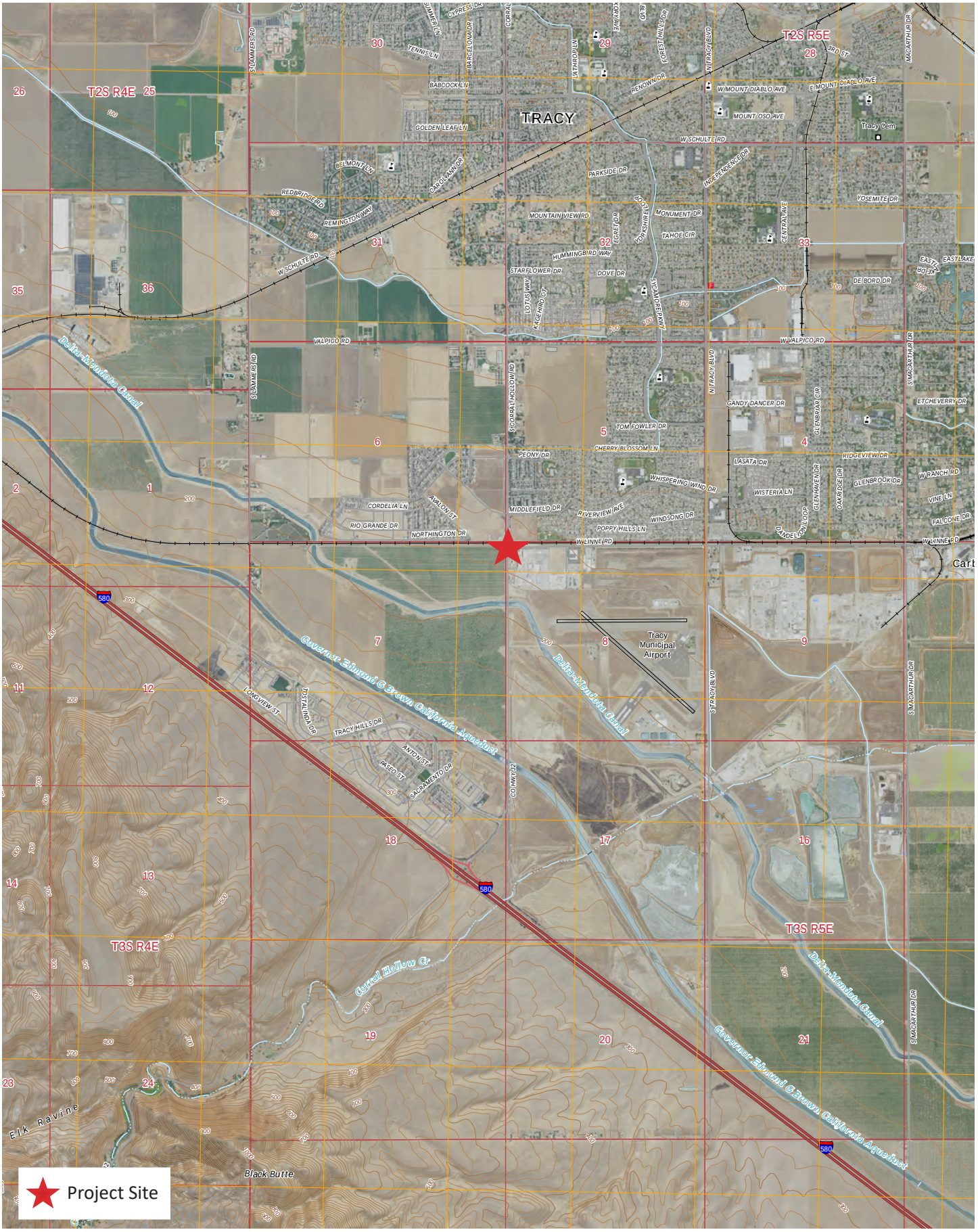
SOURCE: ESRI, 2022

FIGURE 2-1: Regional Map

Corral Hollow and Linne Road Grade Crossings/Improvements
Initial Study/Mitigated Negative Declaration

Not to scale

Kimley»Horn



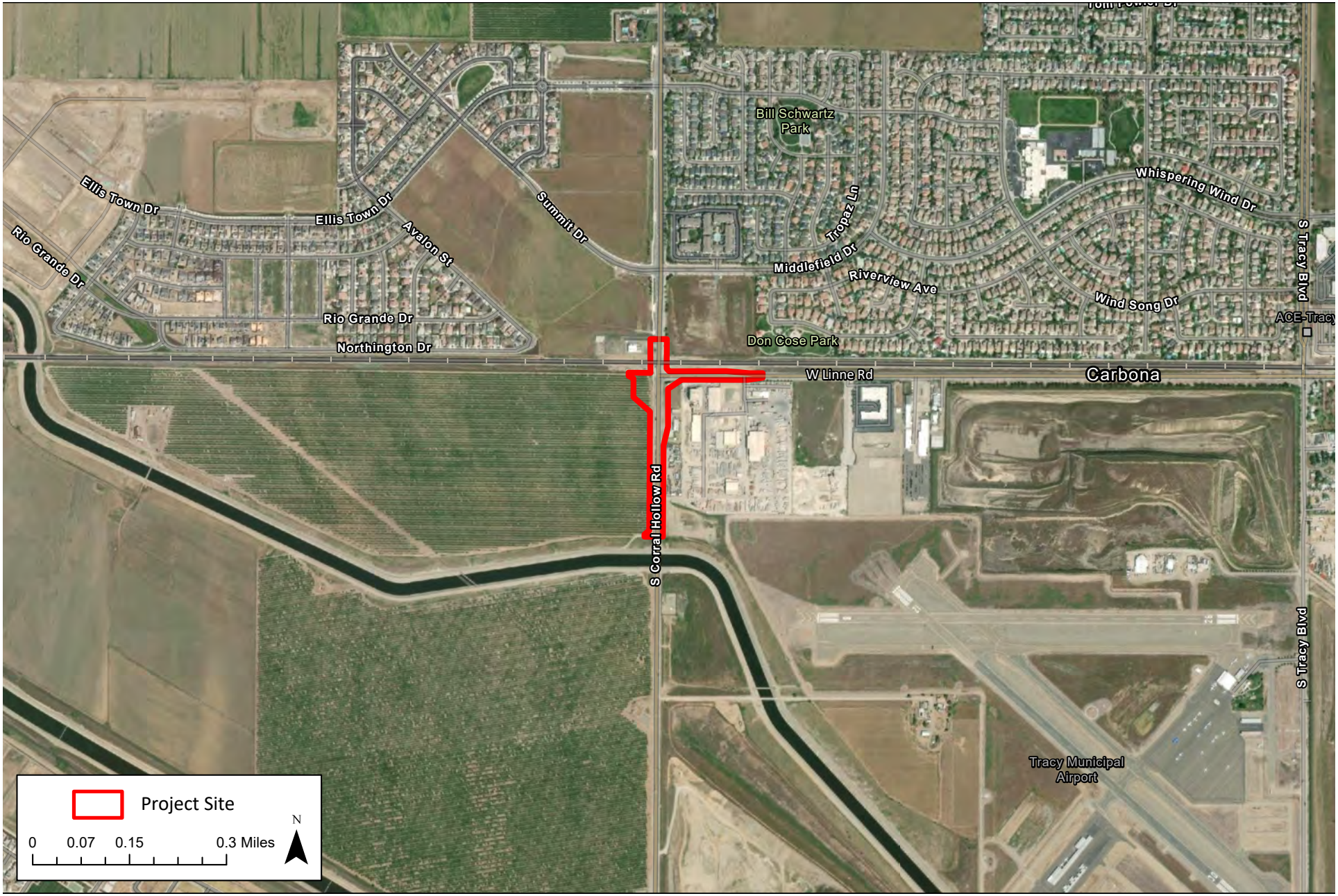
SOURCE: USDOI, USGS, 2009

FIGURE 2-2: USGS Topographic Map

Corral Hollow and Linne Road Grade Crossings/Improvments
Initial Study/Mitigated Negative Declaration

Not to scale

Kimley»Horn



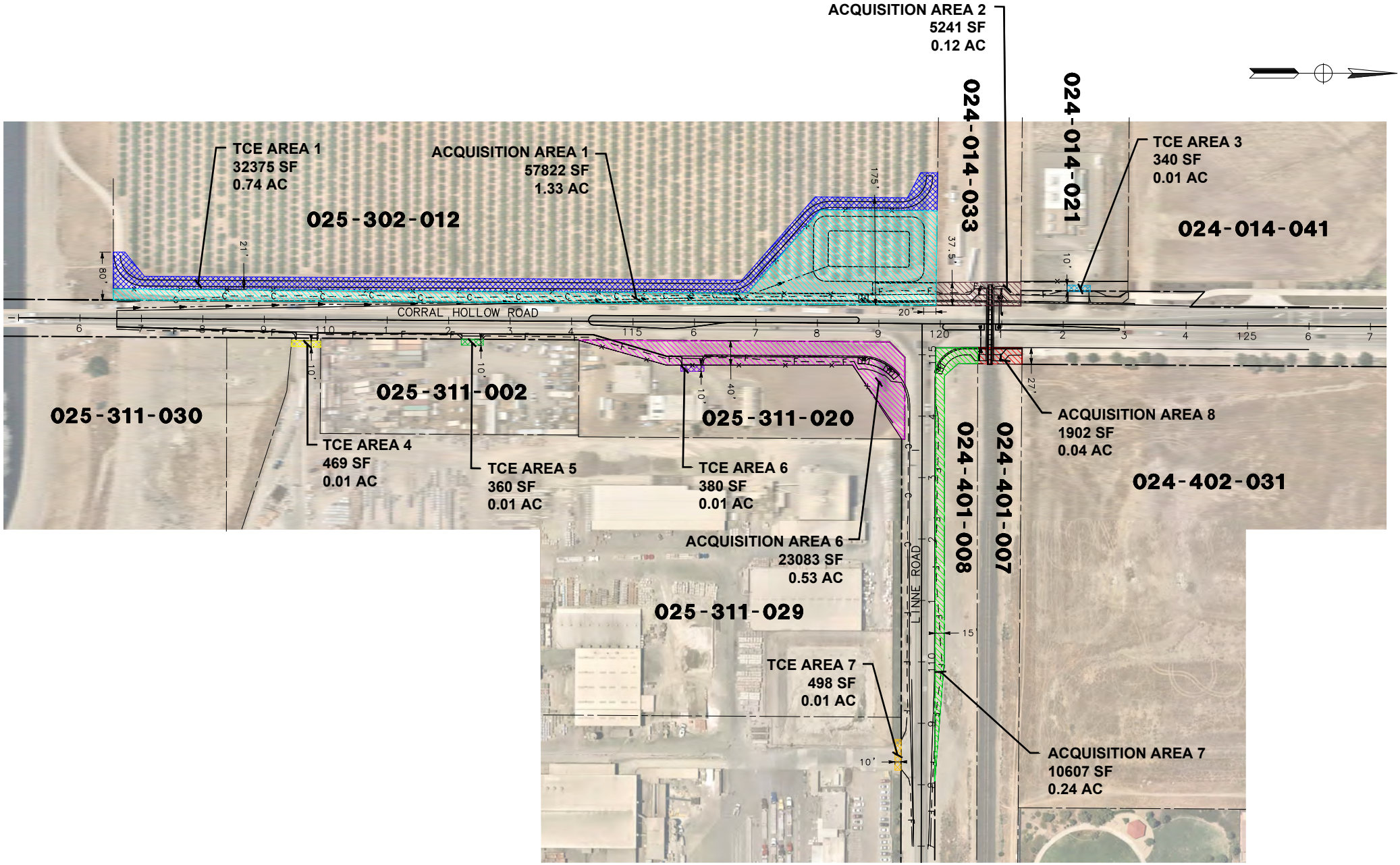
Source: ESRI, 2022

FIGURE 2-3: Aerial Map

Corral Hollow and Linne Road Grade Crossings/Improvements
Initial Study/Mitigated Negative Declaration

Not to scale

Kimley»Horn



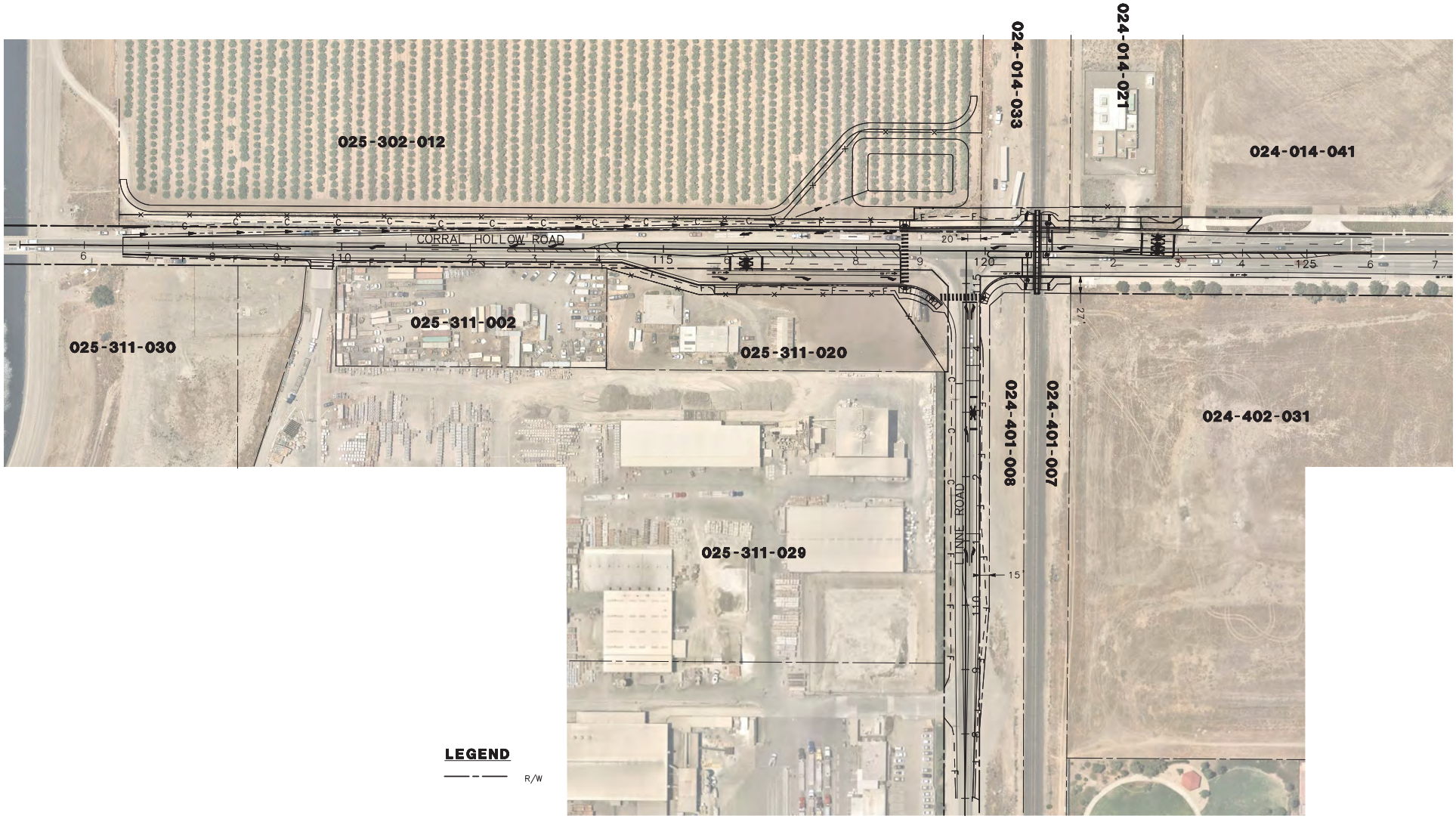
SOURCE: MARK THOMAS, 2022

FIGURE 2-4: Project Acquisition Area

Corral Hollow and Linne Road Grade Crossings/Improvements
Initial Study/Mitigated Negative Declaration

Not to scale

Kimley»Horn



SOURCE: MARK THOMAS, 2022

FIGURE 2-5: Project Improvement Plans

Corral Hollow and Linne Road Grade Crossings/Improvements

Initial Study/Mitigated Negative Declaration

Not to scale

Kimley»Horn

3.0 INITIAL STUDY CHECKLIST

NOTE: The following is a sample form that may be tailored to satisfy individual agencies' needs and project circumstances. It may be used to meet the requirements for an initial study when the criteria set forth in CEQA Guidelines have been met. Substantial evidence of potential impacts that are not listed on this form must also be considered. The sample questions in this form are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance.

1. **Project title:**

   The Corral Hollow and Linne Road Improvements Project

2. **Lead agency name and address:**

   City of Tracy
   333 Civic Center Plaza
   Tracy, CA 95376

3. **Contact person and phone number:**

   Anju Pillai, PE., MS Engr.
   Senior Civil Engineer
   (209) 831 6455

4. **Project location:**

   11888 W. Linne Road, 28720 South Corral Hollow Road, APN 024-401-008 and 024-401-007 (no address), 28499 South Corral Hollow Road, 28677 South Corral Hollow Road, 24855 South Corral Hollow Road.

5. **Project sponsor's name and address:**

   City of Tracy
   333 Civic Center Plaza
   Tracy, CA 95376

6. **General plan designation:**

   Commercial (C), Industrial (I), and Urban Reserve 10[1]. The project area has been planned for in the City General Plan and includes these designations.

7. **Zoning:**

   Limited Industrial (I/L); (Industrial) Agriculture-Urban Reserve (AU-20); Railroad/UPRR ROW. The proposed project is within unincorporated San Joaquin County and includes these zones.

[1] Urban Reserve 10 – is a 120-acre parcel and is a portion of the previously approved South Schulte Specific Plan area. The vision for the area is for industrial development to capitalize on the area's proximity to I-580 and the Union Pacific Railroad line. See page 110/402 of General Plan.

8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

The proposed project would widen Corral Hollow Road to two (2) travel lanes in each direction starting immediately north of the Union Pacific Railroad (UPRR) right of way (ROW) at W. Linne Road to approximately 500 feet south of the intersection with W. Linne Road. Improvements proposed by the project along Corral Hollow Road in addition to the widening would include the construction of a median, curbs, and sidewalks, the construction of a drainage feature on the west side of the project site, and the installation of new signage and striping. Some ROW acquisition, temporary construction easements, and utility relocation would be required for project implementation. Linne Road would be widened to enable restriping for a single right-turn lane only and left turn only lane for westbound traffic.

New traffic signals would also be installed at the intersection of Corral Hollow Road and W. Linne Road, streetlights and a pre-signal north of the UPRR crossing for southbound traffic along Corral Hollow Road. Signals would be connected to existing infrastructure on the north side of Corral Hollow Road. Signal timing between the proposed traffic signal and the pre-signal would be created in coordination with UPRR.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

The area surrounding the project is designated for commercial, industrial, and urban reserve. Existing surrounding uses include industrial (sand and gravel, concrete operations), agricultural (orchard), residential uses (low density residential (LDR) further to the northwest and northeast and UPRR railroad adjacent to Linne Road and that crosses Corral Hollow Road. The project is located near the westerly City limits and would primarily occur within existing roadways (Corral Hollow Road and Linne Road).

10. Public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

City of Tracy

- Adoption of the Mitigated Negative Declaration (MND);
- Adoption of the Mitigation Monitoring and Reporting Plan (MMRP), and
- City review and approval of Grading and Improvement Plans.

Other Agencies which may be required to issue a permit or approval.

- Department of Water Resources (DWR);
- Regional Water Quality Control Board - National Pollution Discharge Elimination System (NPDES), and Stormwater Pollution Prevention Plan (SWPPP);
- San Joaquin Valley Air Pollution Control District;
- San Joaquin Council of Governments (SJCOG);
- California Department Fish and Wildlife (CDFW); and
- California Department of Toxic Substances Control (DTSC);

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

On August 1, 2022 the City of Rio Tracy, acting as the CEQA Lead Agency informed eight tribes including the (Ione Band of Miwok Indians, The Confederated Villages of Lisjan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts Tribe, Tule River Indian Tribe, Buena Vista Rancheria of Me-Wuk Indians, Wilton Rancheria, and Wuksache Indian Tribe/Eshom Valley Band of the proposed project and invited to consult. No requests for consultation were received.

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

3.1 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 Unless Mitigation Incorporated" as indicated by the checklist on the following pages. No environmental factors were identified as "Potentially Significant Impact."

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

DETERMINATION:

On the basis of this initial evaluation (check one):

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ 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.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ 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.

☐ 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.

4.0 ENVIRONMENTAL ANALYSIS

AESTHETICS

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1.	**AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:**				
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 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**	

a) Have a substantial adverse effect on a scenic vista?, and 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 applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. The City of Tracy General plan does not specifically designate any scenic viewsheds within the City. The existing Tracy General Plan Draft EIR does, however, note Tracy's scenic environmental resources include the views to the surrounding natural hillsides in the western portion of the City, as well as views of agricultural land from highways and other roadways (City of Tracy, 2005).

Under CEQA, a scenic vista is defined as a viewpoint that provides expansive views of a highly valued landscape for the benefit of the public. A vista is a view from a particular location or combination of locations; a scenic vista combines an aesthetically pleasing aspect, often natural, to the vista. Examples of scenic vistas can include mountain ranges, valleys, ridgelines, water bodies, or visually important trees, rock outcroppings, or historic buildings. While a scenic vista may be formally designated, they can be informal public views. Changes in the viewshed are

typically discussed in terms of foreground, middleground, and background views. An adverse effect to a scenic vista may result from a degradation of an existing vista or the loss of access to an existing viewpoint.

Impacts to scenic resources occur when changes to a site have an effect on these resources directly or impact the availability of views to such resources. The proposed project is located within Corral Hollow and Linne Road at a stop-controlled intersection in an area characterized by industrial, agricultural, residential, railroad, and utilities (e.g., overhead powerlines). Proposed improvements would widen the roadways, signalize the intersection, install streetlights, make pedestrian improvements, and tie into existing portions of Corral Hollow Road to the north and south that have already been widened.

The project would introduce new visual elements to the project site but the changes to the visual environment would not be considered a substantial alternation. The proposed project would not significantly impact any scenic vista. The new signal poles, mast arms, and street lighting would be above ground level and extend upward from ground level and be visible in the skyline from closer viewing angles. These elements, however, would not be dissimilar to the existing power poles, power lines, streetlights, and billboard, and railroad crossing arms. The proposed project would relocate the powerlines on adjacent to the existing Corral Hollow Land alignment and would remove the billboard which would decrease the visual obstructions in the skyline.

The proposed project does not include any other elements that would be elevated and have the potential to affect any distant views or a the local viewshed. The proposed project would be consistent with the existing visual environment and is an extension of existing uses. Thus, the proposed project would not result in a substantial alteration to the existing visual character of the site or its surroundings. The proposed project would not substantially alter the existing character of the area. Impacts would be less than significant, and no mitigation is required.

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Less than Significant Impact. The project site is not located within view of a scenic highway. There are two officially designated scenic highway segments in the City including portions of Interstate 580 (I-580) between I-205 and I-5, and I-5 between I-205 and the Stanislaus County border. The proposed project may be intermittently viewed between highway berm from I-580, which is approximately 1.5 miles to the south and west. interment views, however, would be available at highway travel speeds and would largely be obscured by intervening development, manufactured slopes along the freeway, and intervening vegetation. The project site is not visible from the segment of I-5 between I-205 and the Stanislaus County border.

Thus, **a**lthough the project site may be intermittently visible from I-580 for short periods of time, there are no trees, rock outcroppings, or historical buildings on the project site that would alter the viewshed from the perspective of viewers from the freeway. Therefore, the proposed project would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway. Implementation of the proposed project would have a less than significant impact in this regard and mitigation is not required.

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 applicable zoning and other regulations governing scenic quality?

Less Than Significant Impact. See Impact discussion under a), above.

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

Less Than Significant Impact. There is a potential for the implementation of the proposed project to introduce new sources of light and glare into the project area during construction and operation. Contributions to light and glare impacts would include temporary during construction, short-term and only occurring this period of time. The project does include new streetlights and signals that would introduce a new light source in the area for the life of the project. The proposed project would conform to City of Tracy standards for street lighting that establish requirements for light illumination, the use of LED lighting, the use of light shields, and lighting that is directed downward to minimize the effects of spill light, the halo effect, and potential for glare. Thus, the proposed project would have a less than significant impact in this regard and mitigation is not required.

Cumulative Impacts

The potential aesthetic impacts related to views, aesthetics, and light and glare are generally site-specific. As discussed above, project-related changes would be minimal and impacts to scenic vistas would be less than significant. The proposed project would not substantially change the on-site visual character because the new visual elements would not be dissimilar from the existing visual environment. The project also would not alter the balance of the surrounding areas and they would retain their exiting character. New sources of lighting from the signalization and streetlights would be consistent with the other recent improvements along Corral Hollow Road and would not make a substantial contribution to new light sources in the area. Similar to the proposed project, other projects would be required to use lights that are shielded and directed. Therefore, while the proposed would make minor change the appearance of the site, this project in conjunction with other past, present, and reasonably foreseeable projects in the vicinity would follow applicable local planning and design guidelines regarding roadway design including materials, coloration, and landscaping. This would serve to minimize the effects to aesthetic resources and cumulative impacts would be less than significant.

AGRICULTURE AND FORESTRY RESOURCES

ENVIRONMENTAL IMPACTS Issues		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
2.	**AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:**				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?		**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 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?			**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**	

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?

Potentially Significant Unless Mitigation Incorporated. Based on the California Department of Conservation Important Farmland Monitoring and Mapping Program (FMMP), the project site is located on Urban and Build and Prime Farmland. Urban and Built-up Land is defined as land that is 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. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airport, golf courses, sanitary landfills, sewage treatment, and water control structures.

Prime Farmland is irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date. The FMMP shows that approximately,1.60 acres of APN 025-302-012 is within a 146.9-acre area that is designated as Prime Farmland and would be converted to a nonagricultural use. The majority of the area, however, would not be modified and the area used for the retention basin and most of the surrounding area would not be paved. Thus, while the area would be changed from its exiting use as an orchard the soils that are valuable for agricultural would not be permanently lost.

In addition, the potential environmental impacts from development of the roadway and project area for urban uses and the associated removal of Prime Farmland for agricultural use were considered and addressed in the City of Tracy General Plan and Final EIR. The EIR disclosed that buildout of the General Plan would result in the conversion of farmland and it result in a significant and unavoidable impact. While mitigation measures, were adopted to minimize the loss, on February 1, 2011, the Tracy City Council adopted a Statement of Overriding Considerations (Resolution 2011-028) for conversion of agricultural land within the City. Mitigation measures include the implementation of a “Right to Farm” ordinance by the City (Or. 10.24 et seq.) that is intended to preserve and protect existing agricultural operations within the incorporated City, and participation in the City’s agricultural mitigation fee program (Tracy Municipal Code, Chapter 13.26).

Although, the 1.6 acres is identified as Prime Farmland, this area is identified in the General Plan for use as urban reserve. The balance of the project areas is identified for use as industrial and commercial, and the remainder is already used as roadway and unproductive roadway right-of-way. Thus, development of the project area for future urban land uses was planning in the Tracy General Plan and implementation of the proposed project would not create new impacts over and above those identified in the General Plan Final EIR and would not significantly change previously identified impacts.

As part of the development process for individual site-specific projects, the agricultural mitigation fee adopted by the City shall be paid for each acre of Prime Farmland to be converted. The fee is outlined in Chapter 13.28, Agricultural Mitigation Fee, of the Tracy Municipal Code. The fees shall be collected by the City at the time building permits are issues for such site-specific projects, or as

otherwise required by the City of Tracy. The proposed project would be subject to the agricultural mitigation fee, as required by Mitigation Measure **MM AG-1**. With implementation of this mitigation measure, the proposed project would have a less than significant impact relative to this issue.

MM AG-1: Prior to issuance of a grading permit, the City of Tracy shall pay the adopted agricultural mitigation fee for each acre of Prime Farmland converted. The fee shall be collected prior to construction. The acreage of Prime Farmland developed shall be determined once the final improvement plans are submitted to the City, and the acreage shall be noted on the improvement plans.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less Than Significant Impact. Refer to a), above. The 2015 San Joaquin County Williamson Act Parcel map viewer from August, shows the portion of the site within APN 025-302-012 is under a Williamson Act contract. The area, however, is not shown under the more recent San Joaquin County Agricultural Preserve Zone. The portion of the proposed project in this area is designated in the General Plan as Urban Reserve and does not have existing zoning for agricultural use. This renders the project consistent with the buildout development scenario contemplated in the General Plan and preciously analyzed in the General Plan EIR.

In addition, and as discussed above, the majority of the 1.6-acre area would remain undeveloped, would not contain hardscape, and would be used for roadway shoulder and retention basin. As such, while the area would be taken out of agricultural production and approximate 151 orchard trees would be removed, the existing soils which are a large part of the property's value for agricultural production would remain. In addition, the proposed project would not result in any greater impacts associated with conversion of Williamson Act lands than identified in the General Plan EIR, impacts would not be greater than previously analyzed. Thus, impacts for the purpose of this project, would be less than significant, and additional mitigation is not required.

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

Less Than Significant Impact. The project is not zoned as forest land, timberland, or timberland production and no land in the project vicinity is. Therefore, the proposed project would not conflict or cause rezoning of any forest land (as defined in Public Resource Code section 12220(g)) timberland (as defined by Public Resources Code section 4526), or zoned Timberland Production (as defined by Government Code section 51104(g)). Therefore, impacts related to the loss of this agricultural resource are less than significant.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Less Than Significant Impact. Refer to c), above.

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?

Less Than Significant Impact. Refer to a) and c)

Cumulative Impacts

The proposed project includes transportation improvements and roadway widening needed to accommodate future development envisioned by the General Plan. The proposed project would occur within areas that are identified for development and are designated as industrial, commercial, urban reserve. Implementation of the proposed project would not induce any additional or new population growth not already identified in the General Plan or studied in the General Plan EIR. As discussed above, with implementation of Mitigation Measure AG-1, the proposed project would pay appropriate development fees as would other past, present, and reasonably foreseeable projects that fall within qualified areas designated as farmland. Thus, the proposed project would not result in new impacts related to agricultural resources, nor would the proposed project result in an increase in the severity of an impact related to agricultural resources previously disclosed in the General Plan EIR. Therefore, the proposed project would not cause either a new cumulative impact to occur, nor a substantial increase in the severity of a cumulative impact previously disclosed.

AIR QUALITY

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
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**	

REGULATORY SETTING

Federal

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the U.S. Environmental Protection Agency (EPA) developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), particulate matter 10 microns in diameter or less (PM_{10}), particulate matter 2.5 microns in diameter or less ($PM_{2.5}$), and lead. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "nonattainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires that each state prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The EPA has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in *Table 4-1: State and Federal Ambient Air Quality Standards.*

California Air Resources Board

The California Air Resources Board (CARB) administers California's air quality policy. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in *Table 4-1*, are generally more restrictive than federal standards for each of the criteria pollutants except for lead and the 8-hour average for CO.

Table 4-1: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California 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	0.030 ppm
	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	---	---
	24-Hour	---	0.04 ppm
	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	---	20 $\mu g/m^3$
	24-Hour	150 $\mu g/m^3$	50 $\mu g/m^3$
$PM_{2.5}$	Annual	12 $\mu g/m^3$	12 $\mu g/m^3$
	24-Hour	35 $\mu g/m^3$	---
Lead	30-Day Average	---	1.5 $\mu g/m^3$
	Rolling 3-Month Average	0.15 $\mu g/m^3$	---

Source: California Air Resources Board, 2016
ppm = parts per million;
µg/m3 = micrograms per cubic meter

Regional

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The project site lies within the northern portion of the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over most air quality matters in the SJVAB and is tasked with implementing programs and regulations required by the FCAA and CCAA. If a project is found to interfere with the region's ability to comply with NAAQS and CAAQS, local governments then need to consider project modifications or provide mitigation measures to eliminate the inconsistency of the project plans. In order for a project to be considered "consistent" with the latest Air Quality Plan (AQP), the project must be consistent with the goals, objectives, and assumptions in the respective plan to achieve Federal and State air quality standards. Additionally, both construction-related and long-term emissions are required to be quantified and compared to the SJVAPCD significance thresholds.

Local air districts and CARB monitor ambient air quality to ensure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Air quality monitoring stations

measure pollutant ground-level concentrations (typically, 10 feet above ground level). Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. *Table 4-2: Attainment Status of the San Joaquin Valley Air Basin* summarizes the State and federal attainment status for criteria pollutants in the SJVAB.

Table 4-2: Attainment Status of the San Joaquin Valley Air Basin

Pollutant	State Standard	Federal Standard
Ozone (O_3) – 1-Hr Standard	**Severe Non-attainment**	No Federal Standard
Ozone (O_3) – 8-Hr Standard	**Non-attainment**	**Extreme Non-attainment**
Inhalable Particulates (PM_{10})	**Non-attainment**	Attainment-Maintenance
Fine Particulates ($PM_{2.5}$)	**Non-attainment**	**Non-attainment**
Carbon Monoxide (CO)	Attainment	Attainment-Maintenance
Nitrogen Dioxide (NO_X)	Attainment	Attainment
Sulfur Dioxide (SO_X)	Attainment	Attainment
Lead (Pb)	Attainment	No Federal Standard

Notes:
1. The Valley is designated nonattainment for the 1997 federal $PM_{2.5}$ standard. U.S. EPA released final designations for the 2006 $PM_{2.5}$ standards (effective in 2009), designated the Valley as nonattainment.
2. On May 5, 2010 the Valley was reclassified to extreme attainment in the Federal Register (effective June 4, 2010).
3. Effective June 15, 2005, the U.S. Environmental Protection Agency (U.S. EPA) revoked the federal 1-hour ozone standard, including associated designations and classifications. EPA had previously classified the SJVAB as extreme nonattainment for this standard. EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan on March 8, 2010 (effective April 7, 2010). Many applicable requirements for extreme 1-hour ozone nonattainment areas continue to apply to the SJVAB. In 2011, U.S. EPA indicated it plans to designate the entire State as attainment/unclassified for the 2010 NO2 standard. Final designations have yet to be made by U.S. EPA.

Non-attainment pollutants are highlighted in **Bold**.

As shown in *Table 4-2*, although the SJVAB is in attainment as to all NAAQSs, it is designated as non-attainment with respect to the more stringent State PM_{10} standard and the State's 8-hour ozone standard.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The FCAA and CCAA require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The SJVAPCD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. The SJVAPCD adopted the 2022 Ozone Plan and 2018 $PM_{2.5}$ Plan.

SJVAPCD periodically develops air quality plans that outline the regional strategy to improve air quality and protect the climate. The most recent plan, 2018 Plan for the 1997, 2006, and 2012 $PM_{2.5}$ Standards, includes a wide range of control measures designed to reduce emissions of air pollutants and GHGs.

Local

City of Tracy General Plan

The City of Tracy General Plan Air Quality Element includes the objectives and policies intended to control or reduce air pollution impacts. Relevant policies are listed below:

Objective AQ-1.1: Improve air quality and reduce greenhouse gas emissions through land use planning decisions.

Objective AQ-1.2: Promote development that minimizes air pollutant and greenhouse gas emissions and their impact on sensitive receptors as a result of indirect and stationary sources.

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.

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.

P3. Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.

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.

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.

Objective AQ-1.3: Provide a diverse and efficient transportation system that minimizes air pollutant and greenhouse gas emissions.

P1. The City shall continue to work with the San Joaquin Council of Governments on regional transportation solutions.

THRESHOLDS

The City of Tracy, including the project site, is located within the northern portion of the San Joaquin Valley Air Basin (SJVAB) and is within the jurisdictional boundaries of the SJVAPCD. The SJVAB area is currently designated as a non-attainment area for the State and federal O_3, State and federal $PM_{2.5}$, and State PM_{10} standards. The SJVAB is designated attainment or unclassified for all other NAAQS and CAAQS. It should be noted that although the EPA revoked their 1-hour ozone standard in 2005, in May of 2016, the EPA proposed findings that the SJVAB was in attainment of the 1-hour ozone standard.

In compliance with regulations, due to the non-attainment designations of the area, the SJVAPCD periodically prepares and updates air quality plans that provide emission reduction strategies to achieve attainment of the NAAQS and CAAQS, including control strategies to reduce air pollutant emissions through regulations, incentive programs, public education, and partnerships with other agencies. The most recent ozone plan is the 2016 Ozone Plan for the 2008 8-Hour Ozone Standard, which was adopted by the SJVAPCD on June 16, 2016. CARB subsequently conducted a public meeting to consider approval of the 2016 Ozone Plan for the 2008 8-Hour Ozone Standard, and approved the plan on July 21, 2016. Additionally, the most recent federal attainment plan for PM is the 2016 Plan for the 1997 $PM_{2.5}$ Standard, which was approved by the District Governing Board on April 16, 2015.

The aforementioned air quality plans contain mobile source controls, stationary source controls, and transportation control measures (TCMs) to be implemented in the region to attain the NAAQS and CAAQS within the SJVAB. Adopted SJVAPCD rules and regulations, as well as the thresholds of significance, have been developed with the intent to ensure continued attainment of NAAQS and CAAQS, or to work towards attainment for which the area is currently designated non-attainment, consistent with applicable air quality plans. The SJVAPCD has established broad significance thresholds associated with the construction and operation emissions for various criteria pollutants including ozone precursors such as reactive organic gases (ROG) and oxides of nitrogen (NO_X), as well as for PM_{10}, $PM_{2.5}$, SO_X, and CO expressed in tons per year. Thus, by exceeding the SJVAPCD's mass emission thresholds for operational emissions of ROG, NO_X, PM_{10}, $PM_{2.5}$, SO_X, or CO a project would be considered to conflict with or obstruct implementation of the SJVAPCD's air quality planning efforts. The SJVAPCD's adopted thresholds of significance for criteria pollutant emissions are presented in *Table 4-3: SJVAPCD Criteria Pollutant Thresholds of Significance*. If the proposed project's emissions exceed the applicable thresholds of significance presented in the table, the project could violate an air quality standard, contribute to an existing or projected air quality violation or conflict with or obstruct implementation of the applicable air quality plans.

Table 4-3: SJVAPCD Criteria Pollutant Thresholds of Significance

Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operational-Related
	Average Annual Emissions (tons/year)	Annual Average Emission (tons/year)
Reactive Organic Gases (ROG)	10	10
Nitrogen Oxides (NO_X)	10	10
Carbon Monoxide (CO)	100	100
Sulfur Oxides (SO_X)	27	27
Coarse Particulates (PM_{10})	15	15
Fine Particulates ($PM_{2.5}$)	15	15
Source: SJVAPCD, March 19, 2015.		

ENVIRONMENTAL IMPACTS

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The SJVAPCD is tasked with implementing programs and regulations required by the FCAA and the CCAA. 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 their 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". As discussed in Threshold AQ-2 below, the project would not exceed the any SJVAPCD Criteria Pollutant Thresholds during construction or operations. Therefore, the project would not conflict with or delay the implementation of SJVAPCD attainment plans and would result in a less than significant threshold.

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?

Less Than Significant Impact.

Construction Emissions

Project construction activities would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the project area include ozone-precursor pollutants (i.e., ROG and NO_x) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and temporary, lasting only while construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the SJVAPCD's thresholds of significance.

Construction results in the temporary generation of emissions during land clearing, grading, drainage/utilities installation, paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance, as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the project are estimated to last approximately three months, beginning in June 2024 and concluding at the end of August 2024. The project's construction-related emissions were calculated using the Sacramento Metropolitan Air Quality Management District's Road Construction Emissions Model (RCEM) (Version 9.0.0), which is designed to model emissions for roadway projects, based on typical construction requirements. The project would export a total of approximately 8,985 cubic yards (cy) and import a total of 217 cy of soil during grading. See Appendix A: Air Quality Modeling Data for additional information regarding the construction assumptions used in this analysis. The project's predicted maximum daily construction-related emissions are summarized in *Table 4-4: Construction-Related Emissions*.

Table 4-4: Construction-Related Emissions

Construction Phase	Pollutant (maximum tons per year)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_x)	Carbon Monoxide (CO)	Sulfur Oxides (SO_x)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Project Emissions						
Grubbing/ Land Clearing	0.01	0.05	0.06	<1	0.06	0.01
Grading/ Excavation	0.03	0.3	0.25	<1	0.07	0.02
Drainage/ Utilities/ Sub-Grade	0.02	0.19	0.22	<1	0.08	0.02
Paving	0.01	0.13	0.21	<1	0.01	0.01
Maximum	**0.03**	**0.30**	**0.25**	**<1**	**0.08**	**0.02**
SJVAPCD Significance Threshold [2]	*10*	*10*	*100*	*27*	*15*	*15*
Exceed BAAQMD Threshold?	No	No	No	No	No	No

1. Emissions based on the Sacramento Metropolitan Air Quality Management District Road Construction Emissions Model (Version 9.0.0).
2. SJVAPCD, August 2015.

Source: Refer to the modeling outputs provided in Appendix A.

Fugitive Dust Emissions. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. Pursuant to Regulation VIII, the project would be required to control fugitive dust. The RCEM model assumes a 50 percent control of fugitive dust from water and associated control measures.

Construction Equipment and Worker Vehicle Exhaust. Exhaust emission factors for typical diesel-powered heavy equipment are based on the RCEM defaults. Variables factored into estimating the total construction emissions include the following: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$.

ROG Emissions. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the SJVAPCD, the ROG emissions associated with paving have been quantified. Paints would be required to comply with SJVAPCD's Rule 4601 (Architectural Coatings) and limit the amount of ROG emissions from cutback asphalt in compliance with the requirements of SJVAPCD's Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations).

Summary. As shown in *Table 4-4*, all criteria pollutant emissions would remain below their respective thresholds. As such, the proposed project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the SJVAB's goal for meeting attainment standards. Impacts would be less than significant.

Operational Emissions

The project consists of transportation improvements within Corral Hollo Road, Linne Road, within the intersection of the two roadways, and within portions of adjacent parcels. Corral Hollow Road is currently being widened north of the intersection and private development is anticipated to fund additional widening efforts to both roadways as development progresses and demand becomes is known. Ongoing widening of Corral Hollow Road is occurring to the north, and the proposed project would widen Corral Hollow Road to match the width of this and other improvements to the south of the project site. This is intended to help ensure smooth traffic flow and avoid constriction that would occur under the existing alignment (from two lanes to a single lane). Project implementation is intended to support projected growth in the vicinity and would not directly result in increased trips or vehicle miles traveled. Therefore, increase in operational emissions is not anticipated.

Cumulative Short-Term Emissions

The SJVAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for the CAAQS and nonattainment for O_3 and $PM_{2.5}$ for the NAAQS. discussed above, the project's construction-related emissions would not have the potential to exceed the SJVAPCD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions would not be cumulatively considerable. The SJVAPCD recommends consistency Regulation VIII for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with SJVAPCD construction-related mitigation requirements are considered to reduce cumulative impacts at a SJVAB-wide level. As a result, construction emissions associated with the project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

As discussed above, the project would not result in an increase in trips or vehicle miles traveled. Therefore, increase in operational emissions is not anticipated. Cumulative impacts would not occur.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Sensitive land uses are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. The nearest sensitive receptors to the project site include multi-family residences approximately 300 feet to the southeast along Corral Hollow Road.

Construction Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generates diesel exhaust which is a known Toxic Air Contaminants (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. However, the use of diesel-powered construction equipment would be episodic and would occur in various phases throughout the linear project site.

Additionally, construction is subject to and would comply with California regulations (e.g., California Code of Regulations, Title 13, Sections 2485 and 2449), which reduce diesel PM and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations would further reduce nearby sensitive receptors' exposure to temporary and variable diesel PM emissions. Given the temporary and intermittent nature of construction activities likely to occur within specific locations in the project site (i.e., construction is not likely to occur in any one location for an extended time), the dose of diesel PM of any one receptor is exposed to would be limited. A less than significant impact would occur in this regard.

Operational Toxic Air Contaminants

As discussed above, the project would not result in an increase in trips or vehicle miles traveled. Therefore, increase in operational emissions is not anticipated and no impact with regard to toxic air contaminants would occur.

Carbon Monoxide Hotspots

The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

Although the SJVAPCD has not established a specific numerical screening threshold for CO impacts, the Bay Area Air Quality Management District (BAAQMD) has established that CO impacts may be determined to be less than significant if a project would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. Traffic would increase along surrounding roadways during long-term operational activities.

As discussed above, the project would not result in an increase in trips or vehicle miles traveled. Therefore, the project would not have the potential to create a CO hotspot and impacts would be less than significant.

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

Less Than Significant Impact.

Construction

Construction activities associated with the project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Any construction-related odors would be short-term in nature and cease upon project completion. As a result, impacts to existing adjacent land uses from construction-related odors would be short-term in duration and therefore would be less than significant.

Operational

According to the SJVAPCD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The project does not include any uses identified by the SJVAPCD as being associated with odors. Nonetheless, the project would be subject to the SJVAPCD's Rule 4102, which allows members of the public to submit complaints regarding odor. Impacts would be less than significant.

Cumulative Impacts

The SJVAPCD does not include separate significance thresholds for cumulative operational emissions. As discussed in Threshold b) above, the project would not exceed the any SJVAPCD Criteria Pollutant Thresholds during construction or operations. Therefore, the project would not conflict with or delay the implementation of SJVAPCD attainment plans and would result in a less than significant threshold. The SJVACPD notes that the nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Consistency with the SJVAPCD control measures would ensure that the project would not cumulatively contribute to air quality impacts in the SJVAB. Therefore, the project's cumulative contribution of air quality

emissions would be less than significant, and the project's cumulative air quality impacts would also be less than cumulatively considerable.

BIOLOGICAL RESOURCES

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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			**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**		

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?

Potentially Significant Unless Mitigation Incorporated. Special-status species includes plant and/or wildlife species that are legally protected under the federal Endangered Species Act, the California Endangered Species Act, or other regulations, or are considered rare enough by the scientific community and trustee agencies to warrant special consideration.

The project site is located within the existing road grades at the intersection of Corral Hollow Road and Linne Road. Both roads will be widened at the intersection to provide both through lanes and right-turn lane pockets, which will require the acquisition of new right of way (ROW), as well as utility relocation. Agriculture uses are present on the west side on the project site and commercial uses on the east. Additionally, the project site is primarily in the ROW and previously disturbed with no native vegetation.

Many special-status plant species were identified by the CNDDB, CNPS, and USFWS databases as having potential to occur in the region (see Appendix B). However, no special-status plant species are expected to occur in the BSA due to the lack of suitable habitat. No special-status plant species were observed during the biological reconnaissance-level survey, or in previous surveys conducted within the BSA. Since special-status plant species are not expected to occur within the BSA, the project would not impact any special-status plants.

Three surveys were conducted in 2018 for the Corral Hollow Road Widening Phase 2 Linne Road to I-580 Project. This road widening project overlaps the proposed project along Corral Hollow Road, and within the orchard. These surveys were conducted by Steve McMurtry of De Novo Planning Group to evaluate biological conditions within the project area (Horizon Water and Environment, 2022). Horizon Water and Environment conducted a reconnaissance survey of the BSA on May 2, 2022, see Appendix B. The survey was conducted on-foot in all accessible areas within BSA. Natural and anthropogenic features, land cover types, and the presence of common and special-status species were visually surveyed. Visual aids, such as binoculars, were used to better assess survey areas and wildlife species when appropriate. As described in the *Biological Technical Memorandum* (Appendix B) San Joaquin kit fox (Vulpes macrotis mutica) are known to occur in the vicinity of the BSA (Appendix B). Burrowing owl (Athene cunicularia) and Swainson's hawk (Buteo swainsoni) are known to occur at several locations within 5 miles of the proposed project. A Swainson's hawk was also observed perching on a power pole in the BSA during the May reconnaissance survey. Several species of special-status bats may forage over the BSA, including pallid bat (Antrozous pallidus), Townsend's big-eared bat (Corynorhinus townsendii), and western mastiff bat (Eumops perotis californicus). The special-status species with potential to occur include San Joaquin kit fox, Swainson's hawk, burrowing owl, pallid bat, Townsend's big-eared bat, and western mastiff bat.

The SJMSCP provides coverage for impacts to biological resources pursuant to the California Environmental Quality Act (CEQA), the California Endangered Species Act (CESA) and Federal Endangered Species Act (FESA) and is approved and authorized by the California Department of

Fish and Game and the United States Fish and Wildlife Service. Pursuant to these authorizations, applications must be prepared by the lead agency and submitted to the San Joaquin County Council of Governments, Inc. (SJCOG) for accounting and reporting purposes and to guide those participating in the Plan to comply with the provisions of the SJMSCP. Alternatively, the City of Tracy may "opt out" for this project if the City mitigates for identified biological impacts on its own. If the City decides to opt-out of the SJMSCP, the city would be required to conduct pre-construction surveys and ensure that mitigation is appropriately completed without SJCOG support. The specifies identified below would be protected as required by CDFW and USFWS regulations. The below listed mitigation would provide protection of the species through pre-construction surveys and protective measures during construction and would have the option to opt-out of the SJMSCP. Overall, with the implementation of Mitigation Measures **MM BIO-1** through **MM BIO-4**, impacts would be less than significant.

San Joaquin Kit Fox

The BSA is mainly comprised of roadways and orchard. These areas may be utilized by San Joaquin kit fox for dispersal and occasional foraging but are generally not suitable for extended periods of occupation (USFWS 2010). No dens were observed during reconnaissance surveys. Due to the very limited extent of suitable habitat, this species is considered unlikely to occur in the BSA. Although it is unlikely that San Joaquin kit fox would occur within the BSA, construction activities could create temporary barriers to movement and dispersal of this species. Potential impacts to San Joaquin kit fox would be reduced to a less than significant level by implementing Mitigation Measure **MM BIO-2**, which requires pre-construction surveys for San Joaquin kit fox dens and additional avoidance or minimization measures.

Swainson's Hawk

A Swainson's hawk was observed perching on a power pole in the BSA during the May reconnaissance survey. No suitable nesting habitat for this species is present within the BSA. Marginally suitable nesting habitat is present in the tree located to the northeast of the intersection of Corral Hollow Road and the Delta Mendota Canal, to the southeast of the BSA. Trees that provide marginally suitable nesting habitat area also present in the residential development to the north of W. Linne Road. This species may also forage within or adjacent to the BSA. Although no nesting habitat is present within the BSA, this species could nest in the marginally suitable habitat that is present within ½ mile of the BSA. Construction could disturb nesting Swainson's hawk through generation of noise or visual distraction. No suitable nesting habitat would be removed by the project. The project would not remove foraging habitat for Swainson's hawk but would result in temporary noise and visual disturbance during construction that could cause these species to avoid foraging within or adjacent to the BSA. Due to the large amount of foraging habitat available in the region, this would not be a significant impact. Implementation of **MM BIO-3** would reduce impacts to Swainson's hawk to a less than significant level.

Burrowing Owl

No burrows potentially suitable for burrowing owl were observed during reconnaissance surveys, and no burrowing owls, whitewash, or other evidence of occupation by burrowing owls was

observed. Burrowing owl could forage within the vicinity of the BSA. However, this species may disperse and colonize suitable habitat within the BSA. If present in the vicinity of the BSA, construction could disturb burrowing owls through noise, visual distraction, or direct impacts to occupied habitat. Implementation of **MM BIO-4** would reduce potential impacts on burrowing owls to a less than significant level.

Special-Status Bats

Several species of special-status bats may forage over the BSA, including pallid bat, Townsend's big-eared bat, and western mastiff bat. Suitable roosting habitat for these species is not present within the BSA. Construction of the project is anticipated to have minimal impacts on bat foraging, and no impacts on bat roosting. Therefore, impacts would not be significant, and no mitigation would be required.

Nesting Birds

Two inactive nest structures were observed in a shrub within the BSA during the May 2022 survey. Trees and shrubs within and adjacent to the BSA provide suitable nesting substrate for bird species protected by Migratory Bird Treaty Act (MBTA). Impacts to active nests belonging to MBTA- and California Fish and Game Code (CFGC)-protected bird species could occur throughout the BSA and immediately surrounding nesting substrate from construction activities. Indirect effects including project-related noise and vibration generated from nearby construction activities may disrupt nesting activity or nest fitness that could result in nest abandonment, potentially to the point of nestling mortality. Suitable nesting substrate occurs in shrubs and trees in and surrounding the BSA, and MBTA-protected bird species could nest within and adjacent to the BSA. Therefore, active nests of MBTA-protected species could be impacted by the project. Active bird nests protected by CFGC sections 3503 and 3503.5, as well as the MBTA will be avoided through the implementation of **MM BIO-4.** Impacts would therefore be reduced to a less than significant level.

MM BIO-1: **BIO-1, San Joaquin County Multi-Species Habitat Conservation and Open Space Plan.** Prior to any ground disturbance, the City shall,) participate in the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) and comply with all required Incidental Take Minimization Measures.

MM BIO-2: **Avoid and Minimize Impacts to San Joaquin kit fox.** Prior to any ground disturbance, the City shall ensure that:

- A qualified biologist will conduct preconstruction surveys no less than 14 days and no more than 30 days before the commencement of activities to identify potential dens more than 5 inches in diameter within 200 feet of ground disturbing activities. The City will implement USFWS' (2011) Standardized Recommendations for Protection of San Joaquin Kit Fox Prior to or During Ground Disturbance. The City will notify USFWS in writing of the results of the preconstruction survey within 30 days after these activities are completed.
- If potential dens are located within the proposed work area and cannot be avoided during construction activities, a USFWS-approved biologist will

determine if the dens are occupied. If occupied dens are present within the proposed work, their disturbance will be avoided. Exclusion zones will be implemented following the most current USFWS procedures (currently USFWS 2011). The City will notify USFWS immediately if a natal or pupping den is found in the survey area, and will present the results of pre-activity den searches within 5 days after these activities are completed and before the start of construction activities in the area.

MM BIO-3: **Conduct Swainson's Hawk Surveys.** If construction occurs between February 1 and August 31, the City or its contractor(s) shall require that a qualified biologist conduct surveys no more than 10 days before the start of construction for Swainson's hawk in accordance with the recommended timing and methodology developed by the Swainson's Hawk Technical Advisory Committee (2000 or most recent). Surveys will cover a minimum ½-mile radius around the construction area. If nesting Swainson's hawk are detected, buffers shall be established around active nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely affected by construction. Buffers around active nests will be ½ mile unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Factors to be considered when determining buffer size include the presence of natural buffers provided by vegetation or topography, nest height, locations of foraging territory, and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.

MM BIO-4: **Nesting Bird Avoidance.** To the extent feasible, construction activities should be scheduled to avoid the nesting season. If project activities are scheduled to take place outside the nesting season, impacts to nesting birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in San Joaquin County extends from February 1 through August 31. 31.If it is not possible to schedule project activities outside the nesting season, then the following measures will be implemented:

- A qualified biologist will conduct pre-construction surveys for nesting birds. These surveys shall be conducted no more than seven days prior to the initiation of project activities, including tree and vegetation removal. During these surveys, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ruderal areas, burrows, and structures) in and immediately adjacent to the construction areas for nests.

- If an active nest is found sufficiently close to work areas to be disturbed by these activities, a non-disturbance buffer zone will be established around the nest at the biologist's discretion and in accordance with regulatory permits and conditions to ensure that no nests of special-status species or species protected by the MBTA and California Fish and Game Code shall be disturbed

during project implementation. Buffers zones will remain until the birds have fledged or the nest is no longer active as determined by a qualified biologist.

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?

Less than Significant Impact. As there are no streams on or near the project site, there is no riparian habitat. Additionally, the US Fish and Wildlife Service did not identify any other sensitive natural communities on the National Wetlands Mapper Inventory. No natural communities of special concern, wetlands, or waters of the United States were identified within the BSA. The project would have a less than significant impact on these habitats.

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?

Less Than Significant Impact. As identified from the US Fish and Wildlife National Wetlands Mapper, there are no identified state or federally protected wetlands mapped within the project site (USFWS, 2022). Therefore, there is a less than significant impact.

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?

Potentially Significant Unless Mitigation Incorporated. As noted, there are no streams on or near the project site. The project site is not a known wildlife migration corridor and is unlikely to be one, given its location amid urban development. However, the project site contains trees around the perimeter of the site and within the new right of way and temporary construction easement. The trees could be used by raptors and other migratory birds during their nesting seasons. If these trees are removed during nesting seasons for these birds, this could have a direct, adverse impact. However, with the implementation of **MM BIO-3**, impacts would be reduced to a level that would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant Impact. The City has a tree ordinance (Tracy Municipal Code [TMC] (Chapter 7.08) that protects “street trees” planted within rights-of-way or planting easements. A new retention basin (approximately 0.35 acres/15,400 sf) would be installed adjacent to the southwest corner of the intersection and would require the removal of approximately 40 orchard trees. Additionally, approximately 151 other trees would be removed, for new right-of-way and a temporary construction easement. Street tree removal, alteration, and maintenance associated with the project would be in compliance with the City’s Municipal Code, Chapter 7.08.020. Therefore, the project would have a less than significant impact on local biological requirements.

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?

Potentially Significant Unless Mitigation Incorporated. As stated above, project site is located within the jurisdiction of the SJMSCP, the City of Tracy shall consult with SJCOG and investigate coverage of the project pursuant to the SJMSCP. The proposed project site primarily contains land areas that are classified land category/pay zone: Category A – Exempt No Pay Zone and Category C Ag Habitat Open Space, Pay Zone B (Agricultural) under the SJMSCP. The proposed project is consistent with the SJMSCP and coverage under the plan can be done. Alternatively, the City of Tracy may "opt out" for this project if the City mitigates for identified biological impacts on its own. If the City decides to opt-out of the SJMSCP, the city would be required to conduct pre-construction surveys and ensure that mitigation is appropriately completed without SJCOG support. As discussed above under impact a) **MM BIO-1** which would require consultation with SJOG would reduce impacts to a less than significant level.

Cumulative Impacts

Overall, the project is a previously disturbed with existing development located next to an urban environment. Therefore, the development of project site would not be cumulatively considerable. In addition, the site in not located within a known habitat corridor and does not contain any riparian habitat, federally protected wetlands, or other sensitive natural communities. Though the project is located within the SJMSCP, it would comply with all policies, fees, and mitigation measures associated. Therefore, with the above-mentioned mitigation measures the project would have a less than significant impact on biological resources.

CULTURAL RESOURCES

ENVIRONMENTAL IMPACTS Impact		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
5.	**CULTURAL RESOURCES. Would the project:**				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to in § 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 dedicated cemeteries?			**X**	

a) Cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5?

Less Than Significant Impact. A *Historical Resources Evaluation Report* (HRER) was prepared for the project in 2022 and is attached as Appendix C. The HRER evaluates potential historical resources for inclusion in the California Register of Historical Resources (CRHR) in accordance with Section 15064.5(a) of the California Environmental Quality Act (CEQA) Guidelines. A records search (IC File Number. 19-2028) was conducted by the Central California Information Center (CCIC) on May 3, 2022, and a supplemental request (under the same IC File Number) on May 5, 2022. The CCIC, an affiliate of the California Office of Historic Preservation (OHP), is the official State repository of cultural resource reports for San Joaquin County. The records search included the APE and an additional 0.25-mile radius around the project area. The results of the records search indicate two historic properties or previously recorded historical resources within the APE or the 0.25-mile radius around the APE:

- 39-000089 Delta Mendota Canal (multiple addresses)
- 39-000098 Western Pacific Railroad (WPRR) (multiple addresses)

Field investigations were undertaken by a qualified architectural historian, Kara Brunzell, on May 13, 2022. Each parcel was observed from the public right of way and all visible facades were photographed. Ms. Brunzell inspected all photographs collected in order to make recommendations regarding potential architectural significance and historic integrity.

Two properties were recorded within the APE, including one rural-residential complex (MR2) and one residential property (MR1). DPR 523 series forms, which thoroughly describe each resource, are included in Appendix C. The properties are recommended not eligible for listing on the NRHP or CRHR.

One previously identified historic property, the Delta-Mendota Canal, has been determined eligible for the NRHP but is located outside the APE. Therefore, the APE contains one previously known historic property, the Western Pacific Railroad. The WPRR (MR3), which was completed in 1908, has been recorded many times over the years beginning in 1994, and several studies have included evaluations and integrity assessments of specific stretches of the railroad alignment. The railroad alignment could not be reevaluated for this study because only a short segment, roughly 20 foot by 80 foot stretch that crosses Corral Hollow Road just north of Linne Road, of the linear resource (which is over 700 miles long) is within the APE for this project. The WPRR is therefore being assumed eligible for listing on the NRHP for the purposes of the project pursuant to Stipulation VIII.C.4 of Caltrans' Section 106 PA. Though the WPRR is within the APE, the proposed project would not result in any alteration to the existing structure. Therefore, the project would have a less than significant impact and not cause a substantial adverse change in the significance of a historical resource pursuant to in § 15064.5.

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

Potentially Significant Unless Mitigation Incorporated. As indicated above An Ar*chaeological Survey Report* (July, 2022) was prepared for the project and is attached as Appendix D. The *Archaeological Survey Report* identified that, through a records search, eight project studies had previously been conducted within the projects area of potential effects (APE). As stated above, the record search determined that one cultural resource, the WPRR (P-39-000098), has previously been recorded in the APE. The records search found no other cultural resources. Additionally, an examination of USGS maps, dating back to 1916, indicated that there was no development in the project APE, other than the presence of the UPRR and Linne Road, until at least 1954. These early maps also indicate that there are no water sources, ephemeral or permanent, in the project vicinity. The closest natural surface water is Corral Hollow Creek located 1.5 miles to the southeast. The entire APE is underlain by Zacharias clay loam. These are deep deposits derived from alluvium on fans extending out from the base of the coastal range to the west. A gravel lens occurs at a depth of approximately 53 inches beneath the ground surface and there is no restrictive layer (hardpan) up to 80 inches in depth (Natural Resources Conservation Service [NRCS] 2022). Zacharias clay loams are Early to Middle Holocene in age (7,000 – 4,000 BP) and, thus, have a high potential to contain buried cultural deposits. However, this potential is influenced by other factors, such as distance to water, ecotone, and slope. As noted above, early maps of the region do not identify a nearby source of viable water. As a result, the potential for buried cultural remains at the project location is severely diminished (Peak 2020:19-20). Further, the following historical organizations were contacted via email on June 24, 2022, to obtain information regarding potential historic resources in the vicinity of the APE: San Joaquin County Historical Society and the Tracy Historical Museum (see Appendix D). The San Joaquin County Historical Society responded in an email on June 27, 2022. They had no information on historical resources in the project area but noted that significant Native American sites are known to exist in Corral Hollow, several miles south of the proposed project. There has been no response from the Tracy Historical Museum, to date.

An archaeological survey of the APE was conducted on May 12, 2022, by Janis Offermann, M.A., RPA, an archaeologist who meets the U.S. Secretary of the Interior's Professional Standards for

Archaeology. Single transects were walked along the current and proposed right of way on the shoulders of Corral Hollow and Linne roads, where ground surface visibility was very good. Areas of expanded right of way that included the orchard at the southwest corner of the Corral Hollow/Linne Road intersection were also examined in approximate 10-meter transects. A small area of proposed new right of way at the southeast corner of the intersection was not surveyed, as the area was fenced and not accessible (see Appendix D). As previously noted, all of the APE had previously been subject to past archaeological survey. No archaeological resources were identified and recorded during the pedestrian survey. Though overall impacts are anticipated to be minor there is the potential of subsurface resources. Though the circumstances would present a low possibility, the following mitigation measures (MM) would reduce impacts in the unanticipated discovery of archaeological resources during construction. With the implementation of **MM CUL-1, MM CUL-2,** and **MM CUL-3** impacts would be less than significant.

MM CUL-1: **Construction Worker Awareness Training:** Prior to the start of ground disturbance, all construction personnel involved with earth-moving activities should be informed that artifacts protected by law could be discovered during excavating. The training should include the appearance of common artifacts and proper notification procedures should artifacts be discovered. This worker training should be prepared and presented by a qualified archaeological professional.

MM CUL-2: **Subsurface Cultural Resources:** The Improvement Plans shall include the following statement: Prior to any ground disturbance the contractor shall demonstrate that a qualified archaeological monitor and a Native American monitor have been retained to perform onsite construction monitoring during the initial grading and excavation phase of the project. If any archaeological artifacts, exotic rock (non-native), or unusual amounts of shell or bone are uncovered during any on-site construction activities, all work shall be stopped immediately within a 50-foot radius of the find and the qualified archaeologist and Native American Monitor shall evaluate the deposit. The archaeologist and Native American monitor shall 1) evaluate the find(s) to determine if they meet the definition of a historical, archaeological, or cultural resource; and (2) make appropriate recommendations regarding the disposition of such finds prior to issuance of building permits. The qualified archaeologist and Native American monitor shall have authority to halt construction activities temporarily in the immediate vicinity of an unanticipated find. If, for any reasons, the qualified archaeologist or Native American monitor is not present, but construction crews encounter a cultural resource, all work shall stop temporarily within 50 feet of the find until a qualified archaeologist and Native American monitor has been contacted to determine the proper course of action. If the finds do not meet the definition of a historical, archaeological, and cultural resources, no further study or protection is necessary prior to project implementation. If the find(s) does meet the definition of a historical, archaeological, or cultural resource, the find and the area around the find shall be avoided by project activities and a Cultural Resources Treatment Plan as described in MM CUL-3 shall be implemented.

MM CUL-3: **Subsurface Cultural Resources Treatment Plan:** If subsurface testing revealed the presence of cultural resources, the qualified archeologist shall prepare an archaeological resources treatment plan prior to issuance of any grading permits. The treatment plan shall utilize data recovery methods to reduce impacts on subsurface resources. The treatment plan shall contain, at a minimum:

- Identification of the scope of work and range of subsurface effects (including location map and development plan), including requirements for preliminary field investigations.
- Description of the environmental setting (past and present) and the historic/prehistoric background of the parcel (potential range of what might be found).
- Development of research questions and goals to be addressed by the investigation (what is significant vs. what is redundant information).
- Detailed field strategy, including reasonable and good faith efforts to consult with Native American representatives regarding the most appropriate method to record, recover, or avoid the finds and address research goals.
- Analytical methods.
- Report structure and outline of document contents.
- Disposition of the artifacts.
- Appendices: all site records, correspondence, and consultation with Native Americans, etc.

The treatment plan shall be prepared and submitted to the Supervising Environmental Planner for review and approval prior to the issuance of any grading permits.

c) Disturb any human remains, including those interred outside of dedicated cemeteries?

Less Than Significant Impact. No human remains are known to be present within the project site. If human remains are found, those remains would require proper treatment in accordance with applicable laws, including Health and Safety Code (HSC) §§ 7050.5-7055 and PRC § 5097.98 and § 5097.99. HSC §§ 7050.5-7055 describe the general provisions for treatment of human remains. Specifically, HSC § 7050.5 prescribes the requirements for the treatment of any human remains that are accidentally discovered during excavation of a site. HSC § 7050.5 also requires that all activities cease immediately, and a qualified archaeologist and Native American monitor be contacted immediately. As required by state law, the procedures set forth in PRC § 5097.98 would be implemented, including evaluation by the County Coroner and notification of the NAHC. The NAHC would then designate the "Most Likely Descendent" of the unearthed human remains. If human remains are found during excavation, excavation would be halted in the vicinity of the discovery and any area that is reasonably suspected to overlay adjacent remains shall remain undisturbed until the County Coroner has investigated, and appropriate recommendations have been made for the treatment and disposition of the remains. Compliance with the established regulatory framework (i.e., HSC § 7050.5-7055 and PRC §§ 5097.98 and 5097.99) would ensure potential project impacts concerning human remains are reduced to less than significant

Cumulative Impacts

Overall, the project would not cause a considerable impact to historical cultural resources, archaeological cultural resources, or human remains. Due to the project location and previously disturbed project site ground, and the addition of the above listed mitigation measures the proposed project would not cause a cumulatively considerable impact to occur.

ENERGY

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
6. ENERGY. Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			**X**	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			**X**	

BACKGROUND

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. Depending on the nature of a given project, a project may be considered "wasteful, inefficient, and unnecessary" if 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. Projects such as residential, commercial, or industrial, that have daily on-going demands for energy for uses such as heating, cooling, lightings, and that would generate a vehicle trips and vehicle uses that would use fossil fuels, will require sometimes substantial continued energy use through the life of a project. This is different than projects including transportation projects, such as the proposed project where the vast majority of energy is used during construction and relatively minimal amount of energy is needed for long-term lighting (e.g., traffic signals, streetlights, and routine maintenance).

ENVIRONMENTAL IMPACTS

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

Less Than Significant Impact. The proposed project consists of roadway widening, lane adjustments and restriping, median installation, curb and gutter, a retention basin, new signals and

streetlights. Energy consumption associated with construction of the proposed project would primarily include the use of diesel fuel from on-road hauling trips, off-road construction diesel equipment (e.g scrapers, blades, dozers, and back-hoe's), and gasoline consumption from on-road worker commute and vendor trips. Temporary electric power during construction for as-necessary lighting and electric equipment (such as computers inside temporary construction trailers, and heating, ventilation, and air conditioning), if needed, would be powered by a generator(s). The amount of electricity used during construction is anticipated to be minimal and additional demand would stem from the use of electrically powered hand tools and equipment. As discussed above, the majority of the energy used during construction would be from fuels, diesel and gasoline, derived from petroleum.

Operational energy would be negligible as the proposed project does not include any new structures or buildings such as commercial, industrial, or residential that would require sustained long-term use of energy or increase trip generation or VMT. Thus, because the project does not include any structures, the amount of electricity required for operation of the project would be extremely low. The only electricity required for the project operation would be for the proposed traffic signals and streetlights.

Estimates of vehicle fuel consumed were derived based on the assumed construction schedule, vehicle miles travelled for haulers and workers provided in the SMAQMD Roadway Construction Emissions Model, and Year 2020 gasoline MPG factors provided by EMFAC2021. Gasoline would be the primary fuel used for worker trips and the proposed project is anticipated to require approximately 2,500 gallons based on the anticipated vehicle miles travelled by the workers, Diesel fuel would be the primary fuel consumed during construction, by construction equipment and based on the phasing of construction would be approximately 14,069 Gallons. Other energy use would be from continued operations and maintenance. Proposed project landscape maintenance activities would generally require a minimal use of fossil fuels to power maintenance equipment such as vehicles and lawn mowers. The energy used to power landscape maintenance equipment would not differ substantially from the energy required for landscape maintenance for similar project. These energy uses are necessary to enable construction of routine maintenance of the proposed project and are not considered wasteful. In addition, because work efforts would use modern equipment designed to reduce fuel consumption, it would not be considered inefficient.

Conclusion

The proposed project would use energy resources for the on-road vehicle trips (e.g., gasoline and diesel fuel) generated by the proposed project, from off-road construction activities associated with the proposed project (e.g., diesel fuel), and from landscape maintenance activities (e.g., gasoline and diesel fuel). Each of these activities would require the use of energy resources.

The proposed project would comply with all applicable Federal, State, and local regulations regulating energy usage. Energy provided to the project site would be from Pacific Gas and Electric (PG&E). PG&E provides electricity and natural gas to the project area and is anticipated to continue to do so for electrifying the signals and lights. PG&E 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 Renewable Portfolio Standard (RPS) to increase the proportion of renewable energy (e.g., solar

and wind) within its energy portfolio and PG&E is expected to achieve a 50 percent mix of renewable energy resources 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 for all City vehicles and those used to intermittently maintain and service the improvements and thereby conserve gasoline and diesel fuel.

As a result, the proposed project would not result in any significant adverse impacts related to project energy requirements, energy use inefficiencies, and/or the energy intensiveness of materials by amount and fuel type for each stage of the project including construction, operations, maintenance, and/or removal, PG&E, the electricity and natural gas provider to the proposed streetlights, maintains sufficient capacity to serve the proposed project. The proposed project would comply with all existing energy standards, including those established by the City of Tracy, and would not 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 threshold as described by Appendix F of the CEQA Guidelines. This is a less than significant impact

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. The proposed project would be required to comply with existing regulations, including applicable measures and regulations that would directly reduce energy use. This would include conformance with statewide regulations related to the use of low carbon fuel standards and increasingly stringent Renewable Portfolio Standards. As such, the project would not conflict with any other state-level regulations pertaining to energy. Thus, the proposed project would comply with existing State energy standards and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Impacts in this regard would be less than significant and mitigation is not required.

Cumulative Impacts

As discussed above, the use of fuel consumption during construction of the proposed project would not be inefficient, wasteful, or unnecessary. The proposed project would use an incrementally small volume of fuels and would not substantially affect existing energy or fuel supplies, or resources and new capacity would not be required. Therefore, the project's cumulative contribution of energy use would be less than significant, and the project's cumulative energy impacts would also be less than cumulatively considerable.

GEOLOGY AND SOILS

ENVIRONMENTAL IMPACTS Issues	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			**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**		

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.

Less Than Significant Impact. The General Plan EIR identified potential risks associated with ground and earthquake fault rupture in the southwest portion of the Tracy planning area that would include the project area and is anticipated to occur within the buildout timeframe of the General Plan. Fault rupture can occur along or immediately adjacent to faults during an earthquake. Fault rupture is characterized by ground cracks and displacement which would endanger life and property. Damage is typically limited to areas close to the moving fault. While the project site is located in an area that would be susceptible to low to moderate seismicity, no known active faults cross the project site, and the project site is not located within an Alquist-Priolo Earthquake Fault Zone (CDOC, 2022).

The nearest earthquake fault to the project site that is zoned as active by the State of California Geological survey and mapped by the CDOC, is the Black Butte Fault. This fault is located approximately 3.0 miles southwest of the intersection of Corral Hollow Road and Linne Road.

According to the City General plan EIR, the City of Tracy has a low to moderate seismic history and the largest recorded measurable magnitude earthquake measured 3.9 on the Richter Scale. In addition, relatively large earthquakes have historically occurred in the Bay Area (approximately 50 miles to the west) and along the margins of the Central Valley.

The proposed project includes infrastructure, specifically roadway improvements and does not propose the construction of any habitable structures and it would not result in any greater impact than detailed in the General Plan EIR. In addition, as part of the design and approval process, the proposed project would be subject to mitigation measure (MM-GEO-1), which requires site specific design-level geotechnical investigations pursuant to General Plan Safety Element Policy Objective SA-1.1, P2. This requires that geotechnical engineering studies be undertaken for any development in areas where potentially serious geologic risks exist. Although, the project is not anticipated to be substantially affected it would be evaluated for the risk of impacts from seismic activity. Therefore, because the site is not located within an area with known risk of fault rupture and would undergo a geologic hazards investigation to evaluate other potential geologic hazards (discussed below), impacts would be less than significant in this regard.

ii) Strong seismic ground shaking?

Less Than Significant Impact. As discussed above. The City has a low to moderate seismic history and a 3.9 magnitude earthquake is the largest recorded measurable earthquake. When an earthquake occurs, it can result in ground-shaking effects and the impacts can be widespread. Although a function of earthquake intensity, ground shaking effects can be magnified by the underlying soils and geology, which may amplify shaking at great distances it is difficult to predict

the magnitude of ground-shaking following an earthquake. The effects can vary widely in a relatively small area, and different project sites susceptible to ground shaking from faults in the region can differ based on numerous factors. The greatest potential for significant ground shaking in Tracy is believed to be from maximum credible earthquakes occurring on the Calaveras, Hayward, San Andreas, or Greenville faults. In addition, seismic activity can be expected to occur along the western margin of the Central Valley. As with all projects in the area, the proposed project would be designed to accommodate strong earthquake ground shaking and would be designed and construction in compliance with the applicable California building code standards.

Other faults capable of producing ground shaking at the site include the San Joaquin fault, approximately 7 miles to the southern, the Midway fault approximately 7.2 miles to the southwest, and the Corral Hollow-Carnegie fault approximately 11 miles to the southwest. Any of these faults could generate an earthquake capable of causing strong ground shaking experienced at the project site. Earthquakes of Moment Magnitude (Mw) 7 and larger have historically occurred in the region and numerous small magnitude earthquakes occur every year.

In addition, an earthquake of moderate to high magnitude from a fault within the San Francisco Bay Region and along the margins of the Central valley could cause ground shaking at the project site, similar to what has occurred in the past. To minimize potential damage to the proposed project caused by ground shaking, all construction would comply with the latest California Building Code standards, as required by the City of Tracy Municipal Code 9.04.030.

Seismic design provision of current building codes generally prescribes 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 substantially smaller than the comparable forces that would be associated with a major earthquake. Therefore, structures should 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. Use of the California Building Code standards, which include provision for seismic building designs, would ensure that impacts associated with ground shaking would be less than significant.

The Safety Element of the Tracy General Plan includes several goals, objectives and policies to reduce the risks to the community from earthquakes and other geologic hazards. In particular, the following policies would apply to the project site:

> *SA-1.1, Policy 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, Policy P1: All construction in Tracy shall conform to the California Building Code and the Tracy Municipal Code including provisions addressing unreinforced masonry buildings.*

The City would review the proposed project as it does all projects for consistency with the General Plan policies and California Building Code provisions identified above and as applicable. This review would occur during the project application review and processing stage and throughout plan check and building inspection phases. Since the majority of work under the scope of this project involves

roadway improvements, the relevant Caltrans, State, and FHWA codes and requirements would be used.

Consistency with the requirements of the California Building Code and the Tracy General Plan policies identified above would ensure that impacts on humans associated with seismic hazards would be less than significant and additional mitigation would not be required.

iii) Seismic-related ground failure, including liquefaction?

Potentially Significant Unless Mitigation Incorporated. Seismically induced liquefaction occurs when loose, water-saturated sediments of relatively low density are subjected to cyclic shaking that causes soils to lose strength or stiffness because of increased pore water pressure. The project does not fall within any liquefaction zones identified in the Seismic Hazards Map by the California Geological Survey (DOC, 2017). During an earthquake, ground shaking may cause certain types of soil deposits to lose shear strength, resulting in ground settlement, oscillation, loss of bearing capacity, landslides, and the buoyant rise of buries structures. The majority of liquefaction hazards are associated with sandy soils, silty soils of low plasticity, and some gravelly soils. Cohesive soils are generally not considered to be susceptible to liquefaction. In general, liquefaction hazards are more severe within the upper 50 feet of the surface, except where slope faces or deep foundations are present.

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. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during 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.

Soil expansion is dependent on many factors. The more clayey, critically expansive surface soil and fill material are subjected to volume changes during seasonal fluctuations in moisture content. According to the City of Tracy General Plan Draft EIR, portions of the Tracy Planning Area have a moderate to high risk for expansive soils. The General Plan EIR indicates that with the implementation of objectives, policies, and actions from the General Plan Safety Element, this potentially significant impact would be reduced to less than significant.

The project site is not designated within one of the above zones and the soils in the Tracy area are not considered to be susceptible to liquefaction, even though the groundwater is high, because the near surface soils are predominantly clays or sands with high silt and clay content (San Joaquin County, 1992). In addition, new roadways and infrastructures included in the project would be required by State law to be constructed in accordance with all applicable IBC and CBC earthquake construction standards, including those relating to soil characteristics, and adherence to **MM GEO-1**. The potential for substantial adverse effects to the project due to seismic-related ground failure, including liquefaction would therefore be less than significant.

MM GEO-1: Prior to earthmoving activities, a certified geotechnical engineer, or equivalent shall be retained to perform a final geotechnical evaluation of the soils at a design level. The final geotechnical evaluation shall include design recommendations to

ensure that soils conditions do not pose a threat to the health and safety of people or structures. The grading and improvement plans shall be designed in accordance with the recommendations provided in the final geotechnical evaluation.

iv) Landslides?

Less Than Significant Impact. The project site is relatively flat and does not have any substantial slopes and is not adjacent to an area with substantial slopes. According to the City's General Plan EIR, the landslide risk in Tracy is low in most areas including the project site and the potential for risks from landslides is similarly low. The project site is not located along riverbanks, foothills, or mountain terrain, that would make it susceptible to landslides. As such, the project site is exposed to little or no risk from landslides, impacts would be less than significant, and mitigation is not required.

b) Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The construction and grading associated with site preparation and construction of the project would remove existing orchard vegetation and hardscape. Most of the other project areas adjacent to the roadways and within the roadway shoulders contain very limited vegetative cover to impede runoff. Nonetheless, construction activities would temporarily increase the exposure of soils to water and wind erosion. Dust Control Measures mentioned in Chapter 3, Air Quality, which include watering of the project site and haul roads, would also help to prevent the loss of topsoil. The potential effects from uncontrolled erosion include impacts on water quality and air quality. Exposed soils that are not properly contained or capped increase the potential for increased airborne dust and increased discharge of sediment and other pollutants into nearby stormwater drainage facilities. Risk associated with erosive soils could be reduced by using appropriate controls during construction and properly re-vegetating exposed areas.

As noted above in Section 3.2 Air Quality, compliance with City of Tracy General Plan Air Quality Element would require the implementation of various dust control measures during site preparation and construction activities. In addition to these measures that would reduce the potential for soil erosion and the loss of topsoil, because the proposed project would disturb more than an acre of land it would be required to obtain a Construction General Permit from the SWRCB. The Construction General Permit would require preparation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP would include implementation of BMPs to avoid or minimize adverse water quality impacts from erosion and sedimentation. BMPs fall within the categories of Temporary Soil Stabilization, Temporary Sediment Control, Wind Erosion Control, Tracking Control, Non-Storm Water Management, and Waste Management and Materials Pollution Control.

With these erosion control measures in place, impacts resulting from construction and operational activities would be minimized and project level impacts related to erosion would be less than significant and additional mitigation is not required.

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?

Potentially Significant Unless Mitigation Incorporated. The project site and surround areas are generally flat, which is not anticipated to result in liquefaction, lateral spreading, landslides, or collapse.

Liquefaction also discussed above in *a) iii),* results from the loss of strength during cyclic loading and can occur during ground shaking created by movement on faults. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded and fine-grained sands. The City of Tracy General Plan Draft EIR notes that the central portion of the Tracy Planning Area is moderately susceptible to liquefaction. While the proposed project occurs in the southwesterly portion of the planning area, it would nonetheless be implemented in conformance to the objectives, polices, and actions of the General Plan Safety Element. This, in conjunction with the site-specific geotechnical report, which would address potential for liquefaction and include remedies, if needed, such as excavation, mixing, and recompaction of soils, would ensure impacts remain less than significant.

Lateral spreading typically results when ground shaking moves soils toward an area where 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 susceptible to liquefaction. This potential is considered low because the project site is not adjacent to or in an elevated area that could be affected by spreading. Potential effect would be further reduced by conformance with the goals, polices, and implementation measures from the General Plan Safety element and any recommendations contained in the site-specific geotechnical report.

Collapsible soils undergo a rearrangement of their grains and a lot 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. 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. Soil data from the NRCS Web Soil Survey suggests the project site is underlain by Zacharias clay loam (0 to 2 percent slopes) and based on the characteristics of the soils (NRCS, 2022) and its location approximately 10 miles east of the base of the coast range, would have a low potential for collapsible soils on the project site. Therefore, implementation of the proposed project would result in a less than significant impact in this regard (City of Tracy, 2020).

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 as a result of human activities. Common causes of land subsidence from human activity including pumping water, oil, and gas, and other mining activities from underground reservoirs leaving voids that can be collapse when exposed to seismic activity. However, subsidence is not anticipated at the project site as there are no active oil or gas well in proximity to the project. The nearest well to the project

site is located approximately 0.75 miles to the northwest and is capped (Calgem, 2022). In addition, the proposed project largely overlays an existing roadway and there are no water wells within the alignment. Lastly, as previously discussed, conformance with General Plan policies goals objectives and implementation measures, as well as conformance with the requirements set forth in the site-specific geotechnical report, required in **MM GEO-1,** would ensure these impacts are less than significant.

As previously mentioned, the project site does not overlay any active faults and is not in a liquefaction zone. Therefore, the potential for lateral spreading, subsidence, liquefaction, or collapse is low. To further prevent the above adverse effects all project components would be constructed in accordance with applicable City goals and policies as detailed in the General Plan and implementation of any recommendation contained in the site-specific geotechnical report. In addition, all construction plans and related geotechnical plans and studies would be reviewed by the City further ensuring compliance with all building construction standards. Compliance with all construction standards would reduce the potential for an off-site landslide, lateral spreading, subsidence, liquefaction or collapse and reduce the impacts to a less than significant level.

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?

Potentially Significant Unless Mitigation Incorporated. 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. Expansion is a typical characteristic of clay-type soils. Expansive soils shrink and swell in volume during 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. Soil expansion is dependent on many factors. The more clayey, critically expansive surface soil and fill materials will be subjected to volume changes during seasonal fluctuations in moisture content. There are no expansive (i.e. shrink-swell) soils within the project site. According to the USDA Web Soil survey, the project site contains approximately 85% Zacharias and similar soils with 15% minor components (USDA, 2022). Given the soils identified on site, adherence to applicable Federal, State, and Local rules and regulations, and compliance with **MM GEO-1** impacts would be a less than significant impact.

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?

Less Than Significant Impact. The proposed project is a roadway improvements project and does not include any habitable structures that would require wastewater disposal. The proposed project does not include any elements of an alternative wastewater disposal system.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Unless Mitigation Incorporated. There are no known paleontological resources located in project area. However, development of the proposed project could result in

the discovery and disturbance of previously unknown or undiscovered paleontological resources. While fossils are not expected to be discovered during construction, it is possible that significant fossils could be discovered during excavation activities.

Even in areas with a low likelihood of occurrence. Fossils encountered during excavation could be inadvertently damaged. If a unique paleontological resource is discovered, the impact to the resource could be substantial. **MM GEO-2** would require that a qualified paleontologist monitor grading and excavation activities, and a paleontologist be notified if paleontological resources are found. If any scientifically important large fossil remains are uncovered, the paleontologist would have the authority to divert heavy equipment away from the fossil site. With implementation of **MM GEO-2** and consistency with City ordinances, policies and goals, impacts associated with paleontological resources would be less than significant.

MM GEO-2: **Paleontological Resources.** If paleontological resources are discovered during the course of construction, work shall immediately halt within 50 feet of the discovery and the City of Tracy shall be notified. A qualified paleontologist shall be retained to determine the significance of the discovery. If the paleontological resource is considered significant, a recovery and preservation plan shall be developed by the qualified paleontologist and the resource shall be donated to a local agency, State University, or other applicable institution, where the resources can be studies, curated, and displayed for public education purposes if applicable. and implemented.

Cumulative Impacts

Geology and soil-related impacts are generally site-specific and are determined by a particular site's soil characteristics, topography, and proposed land uses. Cumulative effects related to geology resulting from the implementation of proposed improvements would not expose more persons and property to a substantial increase in the potential to be affected by impacts due to seismic activity and construction of the project would not exacerbate existing geotechnical hazards. Long-term impacts related to geology include the exposure of people to the potential for seismically induced ground shaking. While implementation of the proposed project, taken in conjunction with other past present and reasonably foreseeable projects, the proposed project would not increase the number of people and structures subject to a seismic event or increase the potential for such events to occur. In addition, seismic and geologic significance are considered on a project-by-project basis typically through the preparation of a design-level geotechnical studies, and conformance to applicable policies related to design and conformance to applicable building codes. As such exposures are anticipated to be minimized through strict engineering guidelines that provide protection against known geologic hazards and potential geologic and soil related impacts. Thus, the proposed project would not contribute to a cumulatively considerable geologic and/or soils impacts and impacts would be less than significant.

GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
8. GREENHOUSE GAS EMISSIONS. Would the project:				
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 gases?			**X**	

REGULATORY SETTING

Federal

To date, national standards have not been established for nationwide greenhouse gas (GHG) reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level. Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

Energy Independence and Security Act of 2007. The Energy Independence and Security Act of 2007 (December 2007), among other key measures, requires the following, which would aid in the reduction of national GHG emissions:

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

U.S. Environmental Protection Agency Endangerment Finding. The U.S. Environmental Protection Agency's (EPA) authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Federal Clean Air Act (FCAA) and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, the EPA finalized an

endangerment finding in December 2009. Based on scientific evidence, it found that six GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing FCAA and the EPA's assessment of the scientific evidence that form the basis for the EPA's regulatory actions.

Federal Vehicle Standards. In response to the U.S. Supreme Court ruling discussed above, Executive Order 13432 was issued in 2007 directing the EPA, the Department of Transportation, and the Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, an Executive Memorandum was issued directing the Department of Transportation, Department of Energy, EPA, and NHTSA to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the EPA and NHTSA proposed stringent, coordinated federal GHG and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards projected to achieve 163 grams per mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon 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. On January 12, 2017, the EPA finalized its decision to maintain the current GHG emissions standards for model years 2022–2025 cars and light trucks. It should be noted that the EPA is currently proposing to freeze the vehicle fuel efficiency standards at their planned 2020 level (37 mpg), canceling any future strengthening (currently 54.5 mpg by 2026).

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the EPA 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. According to the EPA, this regulatory program will reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baseline.

In August 2016, the EPA 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 and sizes of buses and work trucks. The final standards are expected to lower CO_2 emissions by approximately 1.1 billion metric tons and reduce oil consumption by up to 2 billion barrels over the lifetime of the vehicles sold under the program.

In 2018, the President and the EPA stated their intent to halt various federal regulatory activities to reduce GHG emission, including the phase two program. California and other states have stated their intent to challenge federal actions that would delay or eliminate GHG reduction measures and have committed to cooperating with other countries to implement global climate change initiatives. On September 27, 2019, the EPA and the NHTSA published the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program." (84 Fed. Reg. 51,310 (Sept. 27, 2019.) The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. On March

31, 2020, the EPA and NHTSA finalized rulemaking for SAFE Part Two sets CO_2 emissions standards and corporate average fuel economy (CAFE) standards for passenger vehicles and light duty trucks, covering model years 2021-2026. The current U.S. EPA administration has repealed SAFE Rule Part One, effective January 28, 2022 and is reconsidering Part Two pursuant to Presidential Executive Order 13390 issued on January 20, 2021.

State

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the coordination and oversight of State and local air pollution control programs in California. Various statewide and local initiatives to reduce California's contribution to GHG emissions have raised awareness about climate change and its potential for severe long-term adverse environmental, social, and economic effects. California is a significant emitter of CO_2e in the world and produced 440 million gross metric tons of CO_2e in 2015. In the state, the transportation sector is the largest emitter of GHGs, followed by industrial operations such as manufacturing and oil and gas extraction.

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation, such as the landmark AB 32 California Global Warming Solutions Act of 2006, was specifically enacted to address GHG emissions. Other legislation, such as Title 24 building efficiency standards and Title 20 appliance energy standards, were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major legislation related to GHG emissions reduction.

Assembly Bill 32 (California Global Warming Solutions Act of 2006). AB 32 instructs the CARB to develop and enforce regulations for the reporting and verification of statewide GHG emissions. AB 32 also directed CARB to set a GHG emissions limit based on 1990 levels, to be achieved by 2020. It set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner.

CARB Scoping Plan. CARB adopted the Scoping Plan to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that would be adopted to reduce California's GHG emissions. CARB determined that achieving the 1990 emissions level would require a reduction of GHG emissions of approximately 29 percent below what would otherwise occur in 2020 in the absence of new laws and regulations (referred to as "business-as-usual"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates early actions and additional GHG reduction measures by both CARB and the state's Climate Action Team, identifies additional measures to be pursued as regulations, and outlines the adopted role of a cap-and-trade program. Additional development of these measures and adoption of the appropriate regulations occurred through the end of 2013. Key elements of the Scoping Plan include:

- Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards.
- Achieving a statewide renewables energy mix of 33 percent by 2020.

- Developing a California cap-and-trade program that links with other programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions (adopted in 2011).
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets (several sustainable community strategies have been adopted).
- Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, heavy-duty truck measures, the Low Carbon Fuel Standard (amendments to the Pavley Standard adopted 2009; Advanced Clean Car standard adopted 2012), goods movement measures, and the Low Carbon Fuel Standard (adopted 2009).
- Creating targeted fees, including a public goods charge on water use, fees on gasses with high global warming potential, and a fee to fund the administrative costs of California's long-term commitment to AB 32 implementation.

In 2012, CARB released revised estimates of the expected 2020 emissions reductions. The revised analysis relied on emissions projections updated considering current economic forecasts that accounted for the economic downturn since 2008, reduction measures already approved and put in place relating to future fuel and energy demand, and other factors. This update reduced the projected 2020 emissions from 596 million metric tons of CO_2e ($MMTCO_2e$) to 545 $MMTCO_2e$. The reduction in forecasted 2020 emissions means that the revised business-as-usual reduction necessary to achieve AB 32's goal of reaching 1990 levels by 2020 is now 21.7 percent, down from 29 percent. CARB also provided a lower 2020 inventory forecast that incorporated state-led GHG emissions reduction measures already in place. When this lower forecast is considered, the necessary reduction from business-as-usual needed to achieve the goals of AB 32 is approximately 16 percent.

CARB adopted the first major update to the Scoping Plan on May 22, 2014. The updated Scoping Plan summarizes the most recent science related to climate change, including anticipated impacts to California and the levels of GHG emissions reductions necessary to likely avoid risking irreparable damage. It identifies the actions California has already taken to reduce GHG emissions and focuses on areas where further reductions could be achieved to help meet the 2020 target established by AB 32. By 2016, California had reduced GHG emissions below 1990 levels, achieving AB 32's 2020 goal four years ahead of schedule.

In January 2017, CARB released the 2017 Climate Change Scoping Plan Update (Second Update) for public review and comment (CARB, 2017). The Second Update sets forth CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below). The Second Update was approved by CARB's Governing Board on December 14, 2017.

Senate Bill 32 (California Global Warming Solutions Act of 2006: Emissions Limit. Signed into law in September 2016, SB 32 codifies the 2030 GHG reduction target in Executive Order B-30-15 (40 percent below 1990 levels by 2030). The bill authorizes CARB to adopt an interim GHG emissions level target to be achieved by 2030. CARB also must adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective GHG reductions.

With SB 32, the Legislature passed companion legislation, AB 197, which provides additional direction for developing the Scoping Plan. On December 14, 2017, CARB adopted a second update to the Scoping Plan (CARB, 2017b). The 2017 Scoping Plan details how the State will reduce GHG emissions to meet the 2030 target set by Executive Order B-30-15 and codified by SB 32. Other objectives listed in the 2017 Scoping Plan are to provide direct GHG emissions reductions; support climate investment in disadvantaged communities; and support the Clean Power Plan and other Federal actions.

SB 375 (The Sustainable Communities and Climate Protection Act of 2008). Signed into law on September 30, 2008, SB 375 provides a process to coordinate land use planning, regional transportation plans, and funding priorities to help California meet the GHG reduction goals established by AB 32. SB 375 requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, aligns planning for transportation and housing, and creates specified incentives for the implementation of the strategies. The applicable sustainable community strategy in the Bay Area is Plan Bay Area 2040.

AB 1493 (Pavley Regulations and Fuel Efficiency Standards). AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011. The regulations establish one set of emission standards for model years 2009–2016 and a second set of emissions standards for model years 2017 to 2025. By 2025, when all rules will be fully implemented, new automobiles will emit 34 percent fewer CO_2e emissions and 75 percent fewer smog-forming emissions.

SB 1368 (Emission Performance Standards). SB 1368 is the companion bill of AB 32, which directs the California Public Utilities Commission (CPUC) to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 limits carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The new law effectively prevents California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the state. The CPUC adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, for 1,100 pounds of CO_2 per megawatt-hour.

SB 1078 and SBX1-2 (Renewable Electricity Standards). SB 1078 required California to generate 20 percent of its electricity from renewable energy by 2017. This goal was accelerated with SB 107, which changed the due date to 2010 instead of 2017. On November 17, 2008, Executive Order S-14-08 established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Executive Order S-21-09 also directed CARB to adopt a regulation by July 31, 2010, requiring the state's load serving entities to meet a 33 percent renewable energy target by 2020. CARB approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23. SB X1-2 codified the 33 percent by 2020 goal.

SB 350 (Clean Energy and Pollution Reduction Act of 2015). Signed into law on October 7, 2015, SB 350 implements the goals of Executive Order B-30-15. The objectives of SB 350 are to increase the

procurement of electricity from renewable sources from 33 percent to 50 percent (with interim targets of 40 percent by 2024, and 45 percent by 2027) and to double the energy efficiency savings in electricity and natural gas end uses of retail customers through energy efficiency and conservation. SB 350 also reorganizes the Independent System Operator to develop more regional electricity transmission markets and improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States.

AB 398 (Market-Based Compliance Mechanisms). Signed on July 25, 2017, AB 398 extended the duration of the Cap-and-Trade program from 2020 to 2030. AB 398 required CARB to update the Scoping Plan and for all GHG rules and regulations adopted by the State. It also designated CARB as the statewide regulatory body responsible for ensuring that California meets its statewide carbon pollution reduction targets, while retaining local air districts' responsibility and authority to curb toxic air contaminants and criteria pollutants from local sources that severely impact public health. AB 398 also decreased free carbon allowances over 40 percent by 2030 and prioritized Cap-and-Trade spending to various programs including reducing diesel emissions in impacted communities.

SB 150 (Regional Transportation Plans). Signed on October 10, 2017, SB 150 aligns local and regional GHG reduction targets with State targets (i.e., 40 percent below their 1990 levels by 2030). SB 150 creates a process to include communities in discussions on how to monitor their regions' progress on meeting these goals. The bill also requires the CARB to regularly report on that progress, as well as on the successes and the challenges regions experience associated with achieving their targets. SB 150 provides for accounting of climate change efforts and GHG reductions and identify effective reduction strategies.

SB 100 (California Renewables Portfolio Standard Program: Emissions of Greenhouse Gases). Signed into Law in September 2018, SB 100 increased California's renewable electricity portfolio from 50 to 60 percent by 2030. SB 100 also established a further goal to have an electric grid that is entirely powered by clean energy by 2045.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs using executive orders. Although not regulatory, they set the state's tone and guide the actions of state agencies.

Executive Order S-3-05. Executive Order S-3-05 was issued on June 1, 2005, which established the following GHG emissions reduction targets:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. Issued on January 18, 2007, Executive Order S-01-07 mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The executive order established a Low Carbon Fuel Standard (LCFS) and directed the

Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. CARB adopted the LCFS on April 23, 2009.

Executive Order S-13-08. Issued on November 14, 2008, Executive Order S-13-08 facilitated the California Natural Resources Agency development of the 2009 California Climate Adaptation Strategy. Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-14-08. Issued on November 17, 2008, Executive Order S-14-08 expands the state's Renewable Energy Standard to 33 percent renewable power by 2020. Additionally, Executive Order S-21-09 (signed on September 15, 2009) directs CARB to adopt regulations requiring 33 percent of electricity sold in the state come from renewable energy by 2020. CARB adopted the Renewable Electricity Standard on September 23, 2010, which requires 33 percent renewable energy by 2020 for most publicly owned electricity retailers.

Executive Order S-21-09. Issued on July 17, 2009, Executive Order S-21-09 directs CARB to adopt regulations to increase California's Renewable Portfolio Standard (RPS) to 33 percent by 2020. This builds upon SB 1078 (2002), which established the California RPS program, requiring 20 percent renewable energy by 2017, and SB 107 (2006), which advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II.

Executive Order B-30-15. Issued on April 29, 2015, Executive Order B-30-15 established a California GHG reduction target of 40 percent below 1990 levels by 2030 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of CO_2e ($MMTCO_2e$). The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by Executive Order S-3-05. The executive order also requires the state's climate adaptation plan to be updated every three years and for the state to continue its climate change research program, among other provisions. With the enactment of SB 32 in 2016, the Legislature codified the goal of reducing GHG emissions by 2030 to 40 percent below 1990 levels.

Executive Order B-55-18. Issued on September 10, 2018, Executive Order B-55-18 establishes a goal to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter. This goal is in addition to the existing statewide targets of reducing GHG emissions. The executive order requires CARB to work with relevant state agencies to develop a framework for implementing this goal. It also requires CARB to update the Scoping Plan to identify and recommend measures to achieve carbon neutrality. The executive order also requires state agencies to develop sequestration targets in the Natural and Working Lands Climate Change Implementation Plan.

Regional

San Joaquin Valley Air Basin Air Quality Management District Thresholds

The proposed project lies within the northern portion of the San Joaquin Valley Air Basin (SJVAB). The San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over most air quality matters in the SJVAB and is tasked with implementing programs and regulations required by the federal and State Clean

Air Acts. According to the SJVAPCD, impacts are less than significant if a project complies with adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions.

Under CEQA, the SJVAPCD is a commenting responsible agency on air quality within its jurisdiction or impacting its jurisdiction. The SJVAPCD reviews projects to ensure that they would: (1) support the primary goals of the latest Air Quality Plan; (2) include applicable control measures from the Air Quality Plan; and (3) not disrupt or hinder implementation of any Air Quality Plan control measures.

Local

City of Tracy Sustainability Action Plan

The City of Trace adopted a Sustainability Action Plan (SAP) on February 1, 2011. The SAP, consistent with the recommendations of the CARB Scoping Plan, establishes a GHG reduction goal of 29 percent of community and municipal GHG emissions from 2020 business-as-usual (BAU) projected levels. The SAP provides a long-range strategy to achieve sustainability in the sectors of GHG emissions, energy, transportation and land use, solid waste, water, agriculture and open space, biological resources, air quality, public health, and economic development. The SAP reduction targets are based on the following objectives:

- 20 percent increase in the percentage of City employees who participate in travel demand management programs from 2006 levels.
- 20 percent increase in the percentage of non-City employees who participate in travel demand management programs from 2006 levels.
- 20 percent reduction in the municipal vehicle miles traveled (VMT) from 2006 levels.
- 20 percent reduction in the community VMT per capita from 2006 levels.

City of Tracy Municipal Code

The City's Municipal Code includes the following regulations that would reduce GHG emissions from future development:

- Green Building Standards Code (Chapter 9.14)
- Energy Code (Chapter 9.64)
- Water Management (Chapter 11.28)

City of Tracy General Plan

The General Plan includes the following GHG reduction policies, which are applicable to the project.

Objective LU-9.1 Undertake measures to reduce greenhouse gas emissions and improve the sustainability of actions by City government, residents and businesses in Tract.

P1: The City shall maintain, implement and monitor the Sustainability Action Plan, and adjust the Sustainability Action Plan as needed based on monitoring results and as funding becomes available.

Objective CC-2 Maximize direct pedestrian, bicycle and vehicle connections in the city.

Objective CC-2.2 Provide connections that reinforce the role and function of the Building Blocks within the City.

P1: The Downtown and Village Centers shall have direct pedestrian, bicycle and vehicular connections to all Neighborhoods or development projects within an Employment Area.

P2: Neighborhoods shall have direct pedestrian, bicycle and vehicular connections to their Focal Points and Village Center, compatible with the character, circulation network, and general configuration of the neighborhoods.

P3: As existing areas redevelop and change over time, new and increased connections to Focal Points and retail areas shall be developed.

P5: Streets shall be continuous within and between Neighborhoods, including those that are built by different developers or builders.

Objective CIR-1.2 Provide a high level of street connectivity.

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 above in Section B of this Element "Roadway Classifications and Standards."

P2: The City shall implement a connected street pattern with multiple route options for vehicles, bikes and pedestrians.

P3: New development shall be designed to provide vehicular, bicycle and pedestrian connections with adjacent developments.

Objectives CIR-1.8: Minimize transportation-related energy use and impacts on the environment.

P1: Transportation projects shall avoid disrupting sensitive environmental resources.

P2: When possible, road construction and repair projects shall use sustainable materials.

P3: The City shall encourage the use of non-motorized transportation and low-emission vehicles.

Objective CIR-3.1: Achieve a comprehensive system of city-wide bikeways and pedestrian facilities.

P1: The City shall incorporate appropriate bicycle and pedestrian facilities on all roadways constructed by the City, Class I to the extent feasible.

P2: To the extent possible, the City shall separate vehicular from bicycle and pedestrian traffic on higher-speed and higher-volume roadways through the use of off-street bicycle and pedestrian facilities.

P3: The City may separate bicycle from pedestrian users on high usage bicycle and pedestrian paths.

P4: The City's bicycle and pedestrian system shall have a high level of connectivity, especially between residences and common local destinations, such as schools, shopping and parks. A higher level of bicycle and pedestrian connectivity is defined as a shorter or similar distance to common destinations for bicycles and pedestrians compared to distances for vehicles.

Objective AQ-1.1: Improve air quality and reduce greenhouse gas emissions through land use planning decisions.

Objective AQ-1.2: Promote development that minimizes air pollutant and greenhouse gas emissions and their impact on sensitive receptors as a result of indirect and stationary sources.

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.

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.

P3. Developers shall implement best management practices to reduce air pollutant emissions associated with the construction and operation of development projects.

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.

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.

Objective AQ-1.3: Provide a diverse and efficient transportation system that minimizes air pollutant and greenhouse gas emissions.

P1. The City shall continue to work with the San Joaquin Council of Governments on regional transportation solutions.

THRESHOLDS

According to the SJVAPCD, impacts are less than significant if a project complies with adopted statewide, regional, or local plan for reduction or mitigation of GHG emissions. The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence on 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).

The SJVAPCD has evaluated different approaches for estimating impacts and summarizing potential GHG emission reduction measures. The SJVAPCD staff has concluded that "existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change." This is readily understood when one considers that global climatic change is the result of the sum total of

GHG emissions, both man-made and natural that occurred in the past; that is occurring now; and will occur in the future. The effects of project specific GHG emissions are cumulative, and unless reduced or mitigated, their incremental contribution to global climatic change could be considered significant.

The *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD, 2015) provides an approach to assessing a project's impacts on greenhouse gas emissions by evaluating the project's emissions to the "reduction targets" established in ARB's AB 32 Scoping Plan. For instance, the SJVACD's guidance recommends that projects should demonstrate that "*project specific GHG emissions would be reduced or mitigated by at least 29%, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period, consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29% GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG*."

Subsequent to the SJVAPCD's approval of the *Final Draft Guidance for Assessing and Mitigating Air Quality Impacts* (SJVAPCD 2015), the California Supreme Court issued an opinion that affects the conclusions that should/should not be drawn from a GHG emissions analysis that is based on consistency with the AB 32 Scoping Plan. More specifically, in *Center for Biological Diversity v. California Department of Fish and Wildlife*, the Court ruled that showing a "project-level reduction" that meets or exceeds the Scoping Plan's overall statewide GHG reduction goal is not necessarily sufficient to show that the project's GHG impacts will be adequately mitigated: "*the Scoping Plan nowhere related that statewide level of reduction effort to the percentage of reduction that would or should be required from individual projects...*" According to the Court, the lead agency cannot simply assume that the overall level of effort required to achieve the statewide goal for emissions reductions will suffice for a specific project.

Given this Court decision, reliance on a 29 percent GHG emissions reduction from projected BAU levels compared to a project's estimated 2020 levels as recommended in the SJVAPCD's guidance documents will not be the basis for an impact conclusion in this EIR. Given that the SJVAPCD staff has concluded that "*existing science is inadequate to support quantification of impacts that project specific GHG emissions have on global climatic change*," this analysis instead relies on a qualitative approach to evaluate the project's GHG impacts. Specifically, the analysis relies on an assessment of the proposed project for consistency with relevant planning documents and relevant laws is provided herein.

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

Less than Significant Impact.

Short-Term Construction Greenhouse Gas Emissions

Construction of the project would result in direct emissions of CO_2, N_2O, and CH_4 from the operation of construction equipment and the transport of materials and construction workers to and from the project site. SJVAPCD does not have a threshold for construction GHG emissions, which are one-time, short-term emissions and therefore would not significantly contribute to long-term cumulative GHG emissions impacts of the proposed project. However, the SJVAPCD advises that construction GHG should be disclosed and a determination on the significance of construction

GHG emissions in relation to meeting AB 32 GHG reduction goals should be made. Total GHG emissions generated during all phases of construction were combined and are presented in *Table 4-5: Construction Greenhouse Gas Emissions*. The RCEM outputs are contained within the Appendix A.

Table 4-5: Construction Greenhouse Gas Emissions

Year	$MTCO_2e$[1]
2024	164.82
Total	164.82
Amortized	5.49

$MTCO_2e$ = metric tons of carbon dioxide equivalent.
Source: SMAQMD, Road Construction Emissions Model version 9.0.0. Refer to Appendix A for model outputs.

As shown in *Table 4-5*, project construction-related activities would generate approximately 164.82 $MTCO_2e$ of GHG emissions over the course of construction. One-time, short-term construction GHG emissions are typically summed and amortized over the project's lifetime (assumed to be 30 years). The amortized project emissions would be approximately 5.49 $MTCO_2e$ per year. Once construction is complete, the generation of construction-related GHG emissions would cease.

Long-Term Operational Greenhouse Gas Emissions

The project consists of transportation improvements within Corral Hollo Road, Linne Road, within the intersection of the two roadways, and within portions of adjacent parcels. Corral Hollow Road is currently being widened north of the intersection and private development is anticipated to fund additional widening efforts to both roadways as development progresses and demand becomes is known. Ongoing widening of Corral Hollow Road is occurring to the north, and the proposed project would widen Corral Hollow Road to match the width of this and other improvements to the south of the project site. This is intended to help ensure smooth traffic flow and avoid constriction that would occur under the existing alignment (from two lanes to a single lane). Project implementation is intended to support projected growth in the vicinity and would not directly result in increased trips or vehicle miles traveled. Therefore, increase in operational emissions is not anticipated.

As discussed in impact b), below, the proposed development would be constructed in compliance with the City's SAP. The proposed project, therefore, would be consistent with the City's GHG reduction measures and General Plan and would have a less than significant GHG emissions impact.

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

Less Than Significant Impact.

City of Tracy Sustainability Action Plan Consistency

The City's SAP establishes a GHG emission reduction target that is based on SJVACPD threshold of a 29 percent reduction from BAU emissions. The City's target was also developed following a review of sustainability targets set by other entities, such as the Attorney General's Office, and have been refined iteratively and concurrently with the sustainability measures. The proposed project's consistency with applicable SAP measures is assessed in *Table 4-6: City of Tracy SAP Consistency* below. As shown in *Table 4-6*, the project would be consistent with applicable SAP measures and would not hinger its implementation or effectiveness. As the project would be consistent with the City's SAP, impacts in this regard would be less than significant.

Table 4-6: City of Tracy SAP Consistency

SAP Measures	Project Consistency
E-7: Energy Efficient Retrofits for City Street Lights. Retrofit City street lights to LED or induction lighting.	**Consistent.** The proposed project would conform to City of Tracy standards for street lighting that establish requirements for the use of LED lighting.
T-5.e: Smart Growth, Urban Design and Planning. Add to the Transportation Master Plan a program to close sidewalk gaps on key routes within the developed city, contingent on grant funding.	**Consistent.** New sidewalk and curb and gutter would be installed along Corral Hollow Road north of Linne Road to connect to the existing pedestrian network. In addition, a traffic signal and crosswalks would be installed to further improve the pedestrian network.
SW-1: Diversion of Construction Waste from Landfills. Amend the Municipal Code to require at least 50 percent diversion (i.,e. reuse or recycling) of non-hazardous construction waste from disposal.	**Consistent.** The project would not conflict with implementation of this measure. The project is required to achieve the recycling mandates via compliance with the CALGreen code.
Source: City of Tracy, *Sustainability Action Plan*, February 1, 2011.	

Cumulative Impacts

It is generally the case that an individual project of the project's size and nature is of insufficient magnitude by itself to influence climate change or result in a substantial contribution to the global GHG inventory. GHG impacts are recognized as exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective. The additive effect of project-related GHG emissions would not result in a reasonably foreseeable cumulatively considerable contribution to global climate change. In addition, the project as well as other cumulative related projects, would be subject to all applicable regulatory requirements, which would further reduce GHG emissions. As discussed in GHG-2 discussion above, the project would be consistent with the City's SAP. Thus, the project would not conflict with any GHG reduction plan. Therefore, the project's cumulative contribution of GHG emissions would be less than significant and the project's cumulative GHG impacts would also be less than cumulatively considerable.

HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
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**	

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

Less Than Significant Impact. Construction equipment and construction activities include the use paints and solvents and other petroleum-based products, typically used for on-site construction

equipment and that would be used for the proposed project. These materials would be used during site preparation, removal activities, grading, paving of the new roadways, installation of curb and gutter, utility installation and other construction activities. Heavy construction equipment would be used for excavation and removals of existing hardscape. The use of these materials and equipment is typical for this type of construction and typically do not typically represent a substantial risk when property used. However, if an accident or a release does occur, a spill of these materials could pose a threat to human health and safety and could contaminate water, species habitat, and/or agricultural resources.

Any potentially hazardous materials such as fuels, greases, lubricants, solvents, or other materials would be used during construction of the proposed project would be handled on-site in accordance with applicable recommendation and safe handling requirements. The use or handling of these potentially hazardous materials would be short-term only during the construction phase of proposed project. The transport, removal, and disposal of hazardous materials on the project site would be conducted by a permitted and licensed service provider consistent with federal, state, and local requirements including the EPA, the California Department of Toxic Substances Control (DTSC), the California Occupational Safety and Health Administration (Cal/OSHA), Caltrans, the Resource Conservation and Recovery Act, and the City of Tracy fire department through the Conditionally Exempt Small Quantity Generator (CESQG) Program. With the compliance with local, state, and federal regulations short-term construction impacts associated with the handling, transport, use, and disposal of hazardous materials would be less than significant.

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?

Potentially Significant Unless Mitigation Incorporated. As previously mentioned, the project site is within an existing roadway and previously disturbed undeveloped land and does not contain any known areas that have been reported to have experienced any hazardous materials incidents (see a) above and c), below.) for additional discussion.

The proposed project would occur within an existing roadway, but portions of the adjacent parcels that would be used and acquired are within existing agricultural, industrial, and railroad road right of way. In addition, the proposed project also would make minor modifications to the area containing a UPRR crossing of Corral Hollow Road within the northerly portion of the improvements. As search of both the Department of Toxic Substances Control (DTSC) Envirostor and California Water Boards Geotracker databases did not show any known hazards or previous hazardous releases within the project site (DTSC, 2022, and Waterboards, 2022). Nonetheless, there is the potential that unknown hazards exist below the ground surface and could be disturbed during construction activities. If such areas exist, and workers are exposed to substances, a risk to human health and safety could result. To minimize these effects, if materials are located during construction, work would cease in the area and the construction contractor would notify the City, City Fire Department, and DTSC, as applicable.

The use, clean up, and disposal of any potentially hazardous construction materials encountered during construction will be managed according to standard procedures to protect air quality, water

quality, and the environment as per state laws and is not expected to result in a reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. For example, in such event the project would be subject to the San Joaquin County Department of Environmental Health's Hazardous Materials Business Plan Program, which aims to protect the public health and safety and the environment by establishing business and area plans relating to the handling and release or threatened release of hazardous materials. If materials are located, the area would be evaluated and a clean-up plan would be implemented prior to resumption of construction activities in the vicinity. Mitigation Measure MM HAZ -1, would be implemented and further ensure impacts are less than significant.

Operation of the proposed project would not result in a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. The proposed project includes roadway widening, infrastructure, and associated improvements. The proposed project does not include any uses that would result in the generation or disposal of hazardous materials. While the roadway could be used by vehicles transporting materials, these vehicles would already be using the existing roadways and the project would not substantially increase the use of the roads for such activities. In addition, transport of hazardous materials would be done in accordance with regulations pertaining to their transport.

The needed grading is expected to be a balanced (even quantities of cut and fill) requiring no imported soil to backfill excavated areas. This would eliminate the potential risk of importing potentially contaminated soils to the project site. While the proposed project is not considered a sensitive land use, if imported fill materials are used, they the procedures outlined in the DTSC Information Advisory Clean Imported Material Fact Sheet would be followed. This would minimize the potential of introducing material that may result in a potential risk to human health or the environment at the project site. It should be noted, that fill material from undesirable commercial or industrial sites (e.g. former gasoline service stations, manufacturing facilities, etc.) would not be used. Fill materials would be sourced from nonindustrial areas, and not from sites undergoing an environmental cleanup per DTSC guidance.

A portion of the project site, the approximately 1.6 acres that would contain roadway improvements and the retention basin, and approximately 0.77 acres used for a temporary easement area are adjacent to the westerly alignment of Corral Hollow Road and in an area presently used as an orchard. DTSC has provided guidance related to the use of former agricultural land due the potential for such sites (used after 1950), to have used organochlorides for pest control. As noted in the DTSC Interim Guidance for Sampling Agricultural Properties, the guidance applies to proposed new and/or expanded school sites or other projects where a new land use could result in increased human exposure, especially residential use. The proposed project includes roadway improvements and does not include any habitable structures that would result in long term exposure. Future drivers that would use the roadway would be extremely transitory through the area and would not be exposed to any of the soils.

Thus, compliance with federal, state, and local regulations, the incorporation of the proposed project design features, and **MM HAZ-1**, belove, would reduce impacts associated with the

handling, transport, use, and disposal of hazardous materials and the release of hazardous materials into the environment would be less than significant

MM HAZ-1: In the event that hazardous materials are encountered during construction, the area will be evaluated by a qualified professional and a Soils management plan (SMP) shall be submitted and approved by the City/County of San Joaquin County Department of Environmental Health. The SMP shall require identification of the materials and shall establish management practices for the handling and disposal of the materials. Work shall not resume until the materials are removed and work is reauthorized by the City.

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

Less Than Significant Impact. The proposed project would not create hazardous emissions or handle hazardous materials or increase the handling of materials or waste. The nearest school to the project site is Anthony Traina Elementary School approximately 0.5 miles to the northwest. There are no schools within 0.25 miles of the project site and as noted above the project would be in compliance with federal, state, and local regulations. As such, all preventive measures would be in place to limit the hazardous emissions and waste in such a way that would not impact the neighboring school. As such impacts are expected to be less than significant.

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?

Less than Significant Impact. There are no superfund sites or hazardous waste and substances sites (Cortese List) within the project site boundaries (DTSC, 2022a). Additionally, there are no known hazardous materials sites within the projects boundaries as identified on the State of California Geotracker Map (RWQCB, 2022) or on the DTSC Geotracker website (DTSC, 2022b). Therefore, a less than significant impact associated with hazardous materials sites would occur.

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?

Less than Significant Impact. The proposed project is located within the airport land use area for the Tracy Municipal Airport, which ls located approximately 0.5 miles southwest of the project site. The Tracy Municipal airport is owned and operated by the City of Tracy and is a general aviation airport that provides a range of aviation services jet fuel sales, and hangar and tie down rentals. None of the project areas are within Zone 1 – (Runway Protection Zone), but portions of the project site are located in Compatibility Zones 2 (Inner Approach/Departure Zone), and 3 (Inner Turning Zone), (San Joaquin County, 2018).

According to the Airport Land Use Compatibility Plan, certain actions, such as amendments to the general plan within the airport influence areas, changes to a master plan in the airport influence areas, etc., require mandatory ALUC review. The ALUC also lists 13 other actions that would render

a project potentially subject to ALUC review. Of the 13 project types, two would be potentially applicable to the proposed project and are shown below. :

- Proposals for new development (including buildings, antennas, and other structures) having a height of more than:
  - 35 feet within the Runway Project Zone or Inner Approach/Departure Zone;
  - 70 feet within Extended Approach/Departure Zone; or
  - 150 feet within Sideline Safety or Traffic Pattern Zone.
- Any project having the potential to create electrical or visual hazards to aircraft in flight, including"
  - Electrical interference with radio communications or navigational signals;
  - Lighting which could be mistaken for airport lighting;
  - Glare in the eyes of pilots using the airport; and
  - Impaired Visibility near the airport.

Although the project is not anticipated to use any signal masts of new streetlights greater than 35 feet in height that could inhibit the flight path of aircraft, and although the new lighting is not anticipated to be mistaken for airport lighting, due to the project's location, this document including a description of all proposed lighting and lighting mounts will be provided to the ALUC for their review. If the ALUC provides comments or suggestions needed to minimize potential conflicts, it would be included to the project. This coordination with the ALUC would ensure impacts remain less than significant.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The project site currently connects to an existing network of City streets. The proposed roadway widening and circulation improvements would allow for greater emergency access relative to existing conditions. During construction minor interruptions to service could occur, but full road closures are not anticipated and emergency services both for routine and emergency responses and evaluation would remain usable. Thus, the project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and impacts would be less than significant.

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

Less Than Significant Impact. The project site is not located within an area identified as having a high wildland fire potential. The project site is located in proximity to highly disturbed areas and not adjacent to any wildlands. To the west the project site would occur within a portion of an orchard but this area is not prone to experiencing wildfire. In 2008 CalFire determined that the County has no Very High Fire Hazard Severity Zones (VHFHSZ) within Local Responsibility Area (LRA) and there is no map showing VHFHSZ. Thus, the proposed project is not located in such an area and the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. A Less Than Significant impact would occur.

Cumulative Impacts

The incremental effects of the proposed project related to hazards and hazardous materials, if any, are anticipated to be minimal, and any effects would be site-specific. The proposed project is also not within an area classified as a VHFHSZ. Therefore, the proposed project would not result in incremental effects to hazards or hazardous materials that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future projects. The proposed project would not result in cumulatively considerable impacts to or from hazards or hazardous materials.

HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
10. HYDROLOGY AND WATER QUALITY. Would the project:				
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 or provide substantial additional sources of polluted runoff?		**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**	

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Less Than Significant Impact. The project site falls within the San Joaquin Valley Groundwater Basin. There are no surface waters or wetlands located on the project site per the National Wetlands Inventory (USFWS, 2022). The nearest surface water is the Delta-Mendota Canal which is located approximately 150 south of the southerly boundary of the project site. Thus, the proposed project does not contain any direct drainage connectivity to Waters of the US. During the project grading activities, trenching for utilities, and other standard ground-disturbing activities topsoil would be exposed. After grading and prior to overlaying the ground surface with the new roadway and impervious surfaces, the potential exists for wind and water erosion to discharge sediment and/or urban pollutants into stormwater runoff. If not properly controlled, this could adversely affect water quality.

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, BMPs would be implemented. BMPs would be used to reduce the potential for pollutants in stormwater runoff from leaving the site. BMPs could include, but are not limited to, tracking controls, perimeter sediment controls, drain inlet protection, wind erosion/dust controls, and waste management control. The BMP's would be implemented in accordance with a site-specific Storm Water Pollution Prevention Plan (SWPPP), which would be developed to comply with the National Pollution Discharge Elimination System (NPDES).

The project also includes an approximate 0.35-acre retention basin. The retention basin would contain the surface water runoff and allow sediments to settle out prior to discharge of water. This project element in conjunction with the above compliance with and completion of NPEDS permit, SWPPP, BMPs, and conformance to applicable Federal, State, and Local regulations, the proposed project would have a less than significant impact related to water quality and water discharge requirements with conformance to the listed regulations. Additional mitigation would not be required.

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

Less Than Significant Impact. The proposed project consists of roadway improvements and does not include uses such as residential, commercial, or industrial, that would result in a substantial increased the demand for water, including groundwater. During construction, a minimal amount of water would be used for construction and would be needed for activities such as watering bare ground for erosion control. Water, however, is anticipated to be supplied by existing City water supplies from existing waterlines within Corral Hollow and Linne Road.

In addition, while the proposed project would increase the volume of hardscape, the new areas would not be a substantial of volume such that the potential for groundwater would be significantly reduced. In addition, the proposed project includes a retention basin that would contain stormwater runoff, increase the time to discharge and increase the potential for infiltration and ground water recharge. Thus, impacts from project implementation and operation would be less than significant in this regard.

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?

Less Than Significant Impact. Implementation of the proposed project would not alter a stream or a river. The existing roadway is a pervious surface and water drains to roadside ditches. The project improvements would increase impervious surfaces and incrementally increase the volume of stormwater runoff. As standard practice, the City requires post-project runoff to be equal to or less than pre-project runoff. The retention basin on the westerly side of Corral Hollow Road would help ensure the proposed project would not substantially increase the rate or amount of surface runoff. The retention basin would increase the time of concentration, facilitate recharge, and minimize the potential for flooding that could carry pollutants to off-site areas or other downstream receiving waters. In addition, as discussed in a), above. The proposed project would comply with the NPDES permit and implement a SWPPP with BMPs that would reduce the potential for substantial siltation and erosion.

ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

Less Than Significant Impact. Related to the volumes of surface runoff, the proposed project would be subject to the requirements contained in the City of Tracy Municipal Code – Stormwater Management and Discharge Control which has the purpose of protecting and promoting the health, safety and general welfare of the citizens of the City by controlling non-stormwater discharges to the stormwater conveyance system. These requirements assist with protection of waterbodies through compliance with the Clean Water Act, Porter Cologne Water Quality Control Act, and NPDES permitting process.

To ensure the drainage plans are sufficient, the proposed project would be designed with a site-specific storm drainage plan and improvements would be made consistent with the overall storm drainage infrastructure approach presented in the 2012 City of Tracy Citywide Storm Drainage Master Plan. Prior to project approval, the City of Tracy Development Services Department and Utilities Department would review the storm-water improvement plans to ensure they would be adequate infrastructure capacity to collect and direct stormwater runoff to the conveyance system and to downstream areas such that flooding would not occur on-site or off-site. In addition, as discussed above, the project includes a retention basin on the westerly side of Corral Hollow Road that would contain water from storm events. Incorporation of these project design measures would ensure impacts are less than significant.

iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Potentially Significant Unless Mitigation Incorporated. To further reduce the potential for effect related to flooding and water runoff, the project also would include a SWPPP with BMPs to reduce

the potential for pollutants carried by stormwater from leaving the site and adversely affect downstream receiving water. The BMPs would reduce the volumes of disturbed soils, erosion, sediment, and pollutants from roadways to the extent feasible, to make their way into downstream waters. BMP's during both construction, such as the use of haybales, straw waddles, revegetation/hydroseeding, etc., and operations, such as the use of marked storm drains, filter socks, in drain screening media, etc., would be used during the two phases of the project. Mitigation Measure **MM HYD-1** would be implemented and would require the applicant to complete and coordinate a detailed storm drainage infrastructure plan with the City for review and approval. **MM HYD-1** would require a storm drainage plan to be designed and engineered to ensure that the post-project runoff is equal to or less than pre-project runoff and in on- off-site flooding impacts.

MM HYD-1: The proposed project's storm drainage infrastructure plan shall, to the satisfaction of the City engineer demonstrate adequate infrastructure capacity to collect and direct all stormwater generated on the project site to proposed stormwater conveyance system and demonstrate that the project will not result in-on or off-site flooding impacts. If the City engineer determines that the proposed stormwater drainage system would not be adequate, comments would be provided, and amendments to the plans shall be made to the engineer's satisfaction.

iv) Impede or redirect flood flows?

Less Than Significant Impact. The project site and surrounding areas are mapped in the San Joaquin County Flood Zone Viewer. The project area and surrounding vicinity are mapped within a Zone X. Zone X is defined as, "Areas determined to be outside the 0.2% annual chance (500-year) floodplain. The nearest mapped flood zone is approximately 1.0 miles to the southwest, south of the Tracy Boulevard crossing with the Mendota Canal. Thus, the proposed project located in an area with reduced flood risk and the proposed project would not impede or redirect flood flows. Impacts would be less than significant and mitigation is not required.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant Impact. The proposed project is located approximately 56 miles inland from the Pacific Ocean. As such, the potential for the project site to be inundated by a tsunami is remote. No steep slopes are located in the vicinity proposed project; therefore, the risk of mudflow is negligible. There are no adjacent or nearby contained bodies of water, except the Delta Mendota Canal, that would be affected by seiche or that could result in impacts to the project site. Impacts would be less than significant in this regard and mitigation is not required.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. As previously mentioned, the proposed project is within the San Joaquin Valley Groundwater Basin (SJVGWB). The SJVGWB is within the large San Joaquin River and Tulare Lake Hydrologic Regions. The northern portion of the basin is within the San Joaquin

River Hydrologic Region and consists of nine subbasins. The San Joaquin River Hydrologic Region of the basin covers approximately 5.15 million acres. Groundwater is used extensively in the San Joaquin Valley Groundwater Basin, primarily for agricultural and urban uses. This source accounts for approximately 48% of the groundwater used in the state.

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The major source of recharge within the subbasin is from deep percolation of applied irrigation water and from canals and water storage facilities. Lesser groundwater recharge occurs from percolations from small streams, direct percolation of precipitation, and underflow down stream channels from the east including portions of the Stanislaus and Tuolumne rivers. In 2006, natural recharge to the subbasin was estimated at 86,000 acre-feet annually with an additional 92,000 acre-feet of recharge from applied water annually. Estimated annual extractions include 81,000 acre-feet for urban uses and 145,000 acre-feet for agricultural use. (CVRWQCB, 2006).

Eastern San Joaquin Integrated Regional Water Management Plan

The Eastern San Joaquin Integrated Regional Water Management Plan (IRWMP) defines and integrates key water management strategies to establish protocols and courses of action to implement the Eastern San Joaquin Integrated Conjunctive Use Program. The IRWMP was originally prepared in 2007, and updated in 2014, 2016, and most recently in 2020. Groundwater sustainability within the basin is based on 2014 state legislation enacted by the Sustainable Groundwater Management Act (SGMA) which was in response to overdraft conditions. Sustainability is generally defined as long-term reliability of the groundwater supply and the absence of undesirable result. Although the proposed project and Tracy is outside the ESJ Groundwater Management Area, Tracy receives treated Stanislaus River water through the South County Surface Supply Project and will be allocated up to 10,000 af/year.

Tracy Subbasin Groundwater Sustainability Plan

A Groundwater Sustainability Plan is being developed for the Tracy area. The GSA's have adopted the Final Tracy Subbasin Groundwater Sustainability Plan (GSP), which will be submitted to the California Department of Water Resources (DWR) who has up to two years to review. Prior to final approval the GSA will prepare an Annual Report for the subbasin. The Annual Report is due to the DWR by April 1, 2022 and every year thereafter. The GSAs will also continue to coordinate to monitor conditions in the Subbasin, implement projects and actions to manage the sustainability of the groundwater resources, and update the GSP every five years.

As previously discussed, the proposed project does include the construction of new roadway and hardscapes. While this would reduce the potential for recharge in these specific areas, the reduction would not be substantial. In addition, runoff from these areas would be conducted off-site to the stormwater drainage facilities which would enable ground water infiltration. In addition, the proposed project includes a retention basin which would contain stormwater run-off providing an opportunity for the water to infiltrate and recharge the aquifer. Lastly, the proposed project does not propose uses that would require ground water supplies that could reduce water volumes in the aquifer. Thus, the proposed project would not impede ground water recharge or conflict

with an applicable ground water management plan. Impacts would be less than significant and mitigation is not required.

Cumulative Impacts

The potential impacts related to hydrology and storm water runoff are typically site specific and site specific BMPs are implemented at the project level. The analysis above determined that the implementation of the proposed project would not result in significant impacts. In regard to proposed project impacts that would be considered less than significant, and impacts are not anticipated to result in compounded or increased impacts when considered with similar effects from other past, present, and reasonably foreseeable probable future projects. Other projects also would be subject to similar laws and requirements regarding hydrology practices, and would undergo evaluation and the development review process which would ensure their implementation.

Projects would be required to adhere to applicable General Plans goals, policies, and action statements; the City of Tracy's Municipal Zoning Code; the City's Standard Conditions of Approval; and the City's stormwater management guidelines regarding stormwater runoff and infrastructure. In addition, as discussed above, other projects would be required to implement stormwater pollution best management practices during construction and design measures to reduce water quality impacts and comply with the NPDES Municipal Regional Permit. Future developments in the watershed would also be required to comply with the SWRCB and RWQCB. Depending on the size of future projects, they would be required to obtain and comply with all required water quality permits and the Water Quality Control Plan, as needed and prepare and implement SWPPPS, implement construction BMPs, including BMPs to minimize runoff, erosion, and storm water pollution, comply with other applicable requirements. As part of these requirements, projects would be required to implement and maintain source controls, and treatment measures to minimize polluted discharge and prevent increases in runoff flows that could substantially decrease water quality. Conformance to these measures would minimize runoff from those sites and reduce contamination of runoff with pollutants. Therefore, related projects are not expected to cause substantial increases in storm water pollution. With compliance with State and local mandates, cumulative impacts would be less than significant, and project impacts would not be cumulatively considerable.

LAND USE AND PLANNING

ENVIRONMENTAL IMPACTS Impact		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
11.	**LAND USE AND PLANNING. Would the project:**				
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**	

a) Physically divide an established community?

Less Than Significant Impact. The proposed project is located in the southwest portion of the City and would widen two existing roadways, Corral Hollow Road and Linne Road, make improvements within their intersection, improve the railroad crossing, install new signals and install new streetlights. Physical divisions of established communities, while they may be associated with roadway projects, typically occur when a new use is developed between two areas and severs or reduces a connection between the two. Projects that make travel between the areas more difficult can be considered to physically divide a community. The proposed project is surrounding by existing development including industrial, agriculture, and residential. The proposed project would increase the viability and ease of travel between these and other outlying areas by increased the improved roadway capacity and improving the Level of Service (LOS). Thus, the proposed project would not physically divide any surrounding communities and impacts would be less than significant. No mitigation is required.

The proposed project would result in the acquisition, see *Table 2 1: Project Parcels and Acquisition Areas*. This would consist of existing disturbed roadway and railroad shoulder and easement for railroad line. None of the areas within these parcels would affect any existing residential, businesses, or private structures, and railroad operations would not be affected. All improvements within the railroad easement would be made to ensure continued operations and improvements would be engineered so the existing rails, ties, and crossing are not substantially altered and remain functional. All improvements would be made through coordination with UPRR.

APN 025-311-020 and 025-302-112, would occur within an existing disturbed/mowed undeveloped portion of land that contains billboard, fencing, and gravel /dirt driveway used to access the structures on the property. The proposed project would not result in a taking of any of the existing habitable structures, but would result in the removal of some fencing, the billboard, and installation of a new concrete driveway to replace the dirt/gravel entrance. This also would result in the relocation of existing above ground powerlines but these are in existing right-of-way

on the road shoulder. Thus, while the proposed project would result in acquisition and change to the property, continued use and operation of the site would not be substantially inhibited. The property would still have ingress and egress in and to Corral Hollow Road and connectivity to off-site areas would be maintained.

A new retention basin (approximately 0.35 acres/15,400 sf) would be installed adjacent to the southwest corner of the intersection and would require the removal of approximately 40 orchard trees. The proposed project would not affect ingress or egress from the project site and would not change any of the existing driveways. Removal of the billboard also would not result in a division. Lastly, due to the large size of the orchard, and relatively small number trees that would be removed, the orchard would remain viable and its use is anticipated to continue.

Thus, the acquisition and use of the listed properties would not be physically divided from other existing uses. Additionally, property owners for both uses would be compensated for the acquired property in accordance with City of Tracy policy. Thus, impacts in this regard would be less than significant and mitigation is not required.

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?

Less Than Significant Impact. The key planning documents that are directly related to, or that establish a framework for the development of the proposed project include the City of Tracy General Plan and Tracy Zoning Ordinance. The proposed project site is on land currently designated Commercial, Heavy Industrial, and Urban Reserve, and existing Linne Rd alignment and ROW in the General Plan and under the Zoning District Limited Industrial (IL), Railroad/UPRR ROW, Agriculture-Urban Reserve (AU). The project would be consistent with the City's zoning and General Plan land use designation upon approval of individual project specific use permits dependent on commercial use. The proposed project would not require any changes to any of the existing land uses that would result in impacts to the environment. In addition, the proposed project would not result in any conflicts with existing land use policies adopted for the purpose of avoiding or mitigation an environmental effect. Therefore, potential impacts are considered less than significant.

Cumulative Impacts

Implementation of the proposed project would not create a significant cumulative impact to the surrounding region since its surrounding area is planned for uses that are consistent with the widening of the roadway, installation of traffic signal, and other intersection improvements to improve existing traffic conditions and serve future planned uses. As a result, no cumulative impacts related to land use and planning would occur.

MINERAL RESOURCES

ENVIRONMENTAL IMPACTS Impact		Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
12.	**MINERAL RESOURCES. Would the project:**				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			**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**	

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?

Less Than Significant Impact. 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). These materials are primarily used for construction materials like 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 (San Joaquin County, 1992) that includes the following:

- In the Corral Hollow alluvial fan deposits of south Tracy.
- Along the channel and floodplain deposits of the Mokelumne River
- Along the San Joaquin River near Lathrop.

The proposed project is within the Corral Hollow area and would be located adjacent to an existing sand and gravel operation on the southeast corner of the Corral Hollow intersection with Linne Road. The proposed project would improve Linne Road adjacent to the northerly property boundary of the plant operations. The proposed project, however, would not occur within an area being actively mined or in an area in which mining would be expanded. In addition, the proposed project would not inhibit the continued use of the site for mineral extraction or concrete production. Therefore, the project would not result in the loss of availability of a known mineral resource. This impact is considered less than significant.

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

Less Than Significant Impact. The Surface Mining and Reclamation Act of 1975 (SMARA) requires classification of land into MRZs according to the known or inferred mineral potential of the area. Under SMARA, areas are categorized into MRZs as follows:

MRZ-1 Areas where the available geologic information indicates no significant mineral deposits or a minimal likelihood of significant mineral deposits.

MRZ-2 Areas where the available geologic information indicates that there are significant mineral deposits or that there is a likelihood of significant mineral deposits. However, the significance of the deposit is undetermined.

MRZ-3 Areas where the available geologic information indicates that mineral deposits are inferred to exist; however, the significance of the deposit is undetermined.

MRZ-4 Areas where there is not enough information available to determine the presence or absence of mineral deposits.

In 2012, the California Geological Survey (CGS) published an updated map of aggregate resource sectors within the County and that covered the project site. Portions of project parcels 025-302-012, 024-311-020, and 025-311-029 (to the south, southwest, and southeast of the alignment) are identified as being located within Sectors A-2d and A-2e. According to the published map, these are sectors designated by the state mining and geology board (1988) as containing regionally significant PCC-grade aggregate resources (CGS, 2012).

While these areas are identified, the proposed project would not result in a loss for potential productivity. The area within APN 025-302-012 is presently used for agricultural production, the area within APN 025-311-020 is outside the project footprint, and the area within APN 025-311—029 is outside any area currently used for extraction and would not affect any structures used for processing. As discussed above, the proposed project would not remove any area from potential mineral production and would not inhibit the continued use of the adjacent area for mineral production. Thus, impacts in this regard would be less than significant and mitigation is not required.

Cumulative Impacts

The proposed project would not, make a substantial contribution to the loss of a mineral resource. The proposed project would not preclude any area from use as mineral extraction and it is not feasible to use the project site for mineral resources. Thus, the proposed project would not in conjunction with any other past present or reasonably foreseeable project result in a cumulative significant impact. As a result, no cumulative impacts related to mineral resources would occur and mitigation is not required.

NOISE

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
13. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			**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**	

REGULATORY SETTING

State

California Government Code

California Government Code Section 65302(f) mandates that the legislative body of each county and city adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines established by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of "normally acceptable", "conditionally acceptable", "normally unacceptable", and "clearly unacceptable" noise levels for various land use types. Single-family homes are "normally acceptable" in exterior noise environments up to 60 CNEL and "conditionally acceptable" up to 70 CNEL. Multiple-family residential uses are "normally acceptable" up to 65 CNEL and "conditionally acceptable" up to 70 CNEL. Schools, libraries, and churches are "normally acceptable" up to 70 CNEL, as are office buildings and business, commercial, and professional uses.

Title 24 – Building Code

The State's noise insulation standards are codified in the California Code of Regulations, Title 24: Part 1, Building Standards Administrative Code, and Part 2, California Building Code. These noise standards are applied to new construction in California for interior noise compatibility from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as

residential buildings, schools, or hospitals, are located near major transportation noise sources, and where such noise sources create an exterior noise level of 65 dBA CNEL or higher. Acoustical studies that accompany building plans must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new multi-family residential buildings, the acceptable interior noise limit for new construction is 45 dBA CNEL.

Local

City of Tracy General Plan

TheTracy General Plan identifies goals and policies in the Noise Element. The Noise Element identifies and appraises noise generation in the community in order to minimize problems from intrusive sound and to ensure that development does not expose people to unacceptable noise levels. Relevant policies are listed below:

Objective N-1.2: Control sources of excessive noise.

P1: The City's Noise Ordinance, as revised from time to time, shall prohibit the generation of excessive noise.

P2: 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.

P3: Pavement surfaces that reduce noise from roadways should be considered as paving or repavement opportunities arise.

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 AM to 7:00 PM. 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.

Objective N-1.3: Consider noise issues in the Development Review process.

P1: Development projects shall be evaluated for potential noise impacts and conflicts as part of the Development Review process.

P2: Significant noise impacts shall be mitigated as a condition of project approval.

P3: New development projects shall have an acoustical specialist prepare a noise analysis with recommendations for design mitigation if a noise-producing project is proposed near existing or planned noise-sensitive uses.

P5: Site design techniques shall be considered as the primary means to minimize noise impacts as long as they do not conflict with the goals of the Community Character Element. Techniques include:

- Designing landscaped building setbacks to serve as a buffer between the noise source and receptor.
- Placing noise-tolerant land uses, such as parking lots, maintenance facilities, and utility areas between the noise source, such as highways and railroad tracks, and receptor.
- Orienting buildings to shield noise sensitive outdoor spaces from a noise source.
- Locating bedrooms or balconies on the sides of buildings facing away from noise sources.

Utilizing noise barriers (e.g., fences, walls, or landscaped berms) to reduce adverse noise levels in noise-sensitive outdoor activity areas.

City of Tracy Municipal Code

In addition to the standards set forth within the General Plan, Title 4.12, Article 9, Noise Control Ordinance, the City's Municipal Code provides the following General Sound Level Limits (Section 4.12.750):

- Residential Districts have a noise limit of 55 dBA
- Commercial Districts have a noise limit of 65 dBA
- Industrial Districts have a noise limit of 75 dBA
- Agricultural Districts have a noise limit of 75 dBA
- Aggregate Mineral Overlay Zones have a noise limit of 75 dBA

The City's Municipal Code, Title 4.12, Article 9, Noise Control Ordinance, provides the following construction and operational noise standards (Section 4.12.820):

Construction Noise Prohibition

The operation between the hours of 10:00 PM and 7:00 AM 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.

Business and Residential Relationships

Delivery vehicles shall have their engines turned off when stationary during the regular business hours (6:00 AM to 11:00 PM).

It is unlawful for stores to be loading, unloading, opening or other handling of boxes, crates, containers, building materials, garbage cans, other similar objects and trash compactor operations between the hours of 10:00 PM and 7:00 AM in an area between a business and residential in such a manner to cause a noise disturbance across a residential property line or at any time to violate the general sound level limits.

Store deliveries by motorized refrigeration systems shall not be left running between the hours of 10:00 PM and 7:00 AM within seventy-five feet of a residential zone, residential use, or sleeping quarters.

Note that the noise ordinance requirements cannot be applied to mobile noise sources, such as heavy trucks, when traveling on public roadways. Federal and State laws preempt control of mobile noise sources on public roads and airports.

EXISTING CONDITIONS

Existing Noise Sources

The City of Tracy is impacted by various noise sources. Mobile sources of noise, especially cars and trucks, are the most common and significant sources of noise in the City. Other sources of noise are the various land uses (i.e., residential, commercial, institutional, and recreational and parks activities) throughout the City that generate stationary-source noise.

Existing Stationary Noise

The primary sources of stationary noise in the project vicinity are those associated with the operations of industrial uses to the east, agricultural operations to the west, and nearby residential uses to the northeast and west of the project site. The noise associated with these sources may represent a single-event noise occurrence, short-term noise, or long-term/continuous noise.

Sensitive Receptors

Noise exposure standards and guidelines for various types of land uses reflect the varying noise sensitivities associated with each of these uses. Residences, hospitals, schools, guest lodging, libraries, and churches are treated as the most sensitive to noise intrusion and therefore have more stringent noise exposure targets than do other uses, such as manufacturing or agricultural uses that are not subject to impacts such as sleep disturbance. Adjacent land uses consist of industrial and agricultural operations with single-family residential uses located to the west and northeast. As shown in *Table 4-7: Sensitive Receptors,* sensitive receptors near the project site include multi- and single-family residences. These distances are from the project site to the sensitive receptor property line.

Table 4-7: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
Single-family residential	50 feet east
Multi-family residential	330 feet northeast
Single-family residential	725 feet east
Single-family residential	1,075 feet northwest

ENVIRONMENTAL IMPACTS

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

Less Than Significant Impact. Construction activities have the potential to create temporary, or periodic increases in ambient noise levels in the project vicinity above levels existing without the project. During the construction of the project, noise from construction activities would add to the noise environment in the project vicinity. The roadway construction would include the use of heavy equipment that can generate noise. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction site. This noise increase would be of short duration and would likely occur primarily during daytime hours.

Noise sensitive receptors near the construction site would, at time, experience noise levels from construction activities; however, construction-related noise generally would occur during daytime hours only. The project site and vicinity were assumed for urban development as part of the City's General Plan and evaluated in the General Plan EIR. Build-out of the City's General Plan land use map, including the proposed roadway widening, will inherently result in construction and construction-related noise levels. Adherence to the City General Plan and City Municipal Code (Title 4.12, Article 9, Noise Control Ordinance), would minimize any impacts from noise during construction to the extent practicable. Because of the nature, time, and duration of construction activities near sensitive receptors noise impacts from construction activities would cease upon project completion. Therefore, implementation of the proposed project would have a less than significant impact relative to this topic.

Project construction would occur approximately 50 feet from the nearest sensitive receptor to the east along Corral Hollow Road. However, construction activities would occur throughout the project site and would not be concentrated at a single point near sensitive receptors. Noise levels typically attenuate (or drop off) at a rate of 6 dB per doubling of distance from point sources, such as industrial machinery. Noise generated by construction equipment can reach high levels. Typical noise levels associated with individual construction equipment are listed in *Table 4-8: Typical Construction Noise Levels.*

Table 4-8: Typical Construction Noise Levels

Equipment	Maximum Noise Level (dBA) from Source 50 feet (reference level)
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Mobile	83
Dozer	85
Generator[1]	56
Grader	85
Impact Wrench	85
Jack Hammer	88
Loader	80
Paver	85
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Truck	84

1. Generator would include CAT XQ60 Rental Generator Set.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Objective N-1.2, Policy P4 of the City's General Plan limits construction activities in the vicinity of noise sensitive land uses, such as residences, to 7:00 AM to 7:00 PM. The City's Municipal Code does not establish quantitative construction noise standards. Instead, the Municipal Code establishes limited hours of construction activities. As a result, this analysis conservatively uses the Federal Transit Authority's (FTA) threshold of 80 dBA (8-hour Leq) for residential uses to evaluate construction noise impacts. All motorized equipment used in such activity shall be equipped with functioning mufflers as mandated by the State.

Noise impacts for mobile construction equipment are typically assessed as emanating from the center of the equipment activity or construction site. Due to the nature of the project site and limitations on how many pieces of equipment can operate within the same area, maximum construction noise has been calculated for the loudest piece of equipment at the center of the construction area located nearest to sensitive receptors (approximately 65 feet and 330). The Federal Highway Administration (FHWA) Roadway Construction Noise Model (RCNM) was used to calculate noise levels during construction activities; refer to Appendix E: Noise Data. RCNM is a computer program used to assess construction noise impacts and allows for user-defined

construction equipment and user-defined noise limit criteria. Noise levels were calculated for each construction phase and are based on the equipment used, distance to the nearest property/receptor, and acoustical use factor for equipment.

The noise levels calculated in *Table 4-9: Project Construction Noise Levels*, show estimated exterior construction noise at the closest receptors to east and northeast of the project site. Based on calculations using the RCNM model, construction noise levels would range from approximately 77.7 dBA L_{eq} and 78.7 dBA L_{eq} and the single family residence located along Corral Hollow Road (located 65 feet from the centerline of Corral Hollow Road) and 63.6 dBA L_{eq} to 64.6 dBA L_{eq} at the multi-family residences to the northeast (located approximately 330 feet from the project site); see *Table 4-9*. The construction noise levels would not exceed the applicable FTA construction thresholds. Construction equipment would operate throughout the project site and the associated noise levels would not occur at a fixed location for extended periods of time. Although sensitive uses may be exposed to elevated noise levels during project construction, these noise levels would be acoustically dispersed throughout the project site and not concentrated in one area near sensitive uses. the impact from construction noise would be less than significant level.

Table 4-9: Project Construction Noise Levels

Construction Phase	Receptor Distance	Receptor Direction	Receptor Use	Modeled Exterior Noise Level (dBA L_{eq}) [2]	Noise Threshold (dBA L_{eq}) [3]	Exceeded?
Grubbing/Land Clearing	65	East	Single Family Residential	77.7	80	No
	330	Northeast	Multi-Family Residential	63.6		No
Grading/Excavation	65	East	Single Family Residential	78.7		No
	330	Northeast	Multi-Family Residential	64.6		No
Drainage/Utilities	65	East	Single Family Residential	78.7		No
	330	Northeast	Multi-Family Residential	64.6		No
Paving	65	East	Single Family Residential	77.7		No
	330	Northeast	Multi-Family Residential	63.6		No

Notes:
1. Distance is from the nearest receptors to the nearest construction activity area on the project site.
2. Modeled noise levels assume the operation of the loudest piece of equipment at the center of the construction area located nearest to sensitive receptors.
3. Federal Transit Authority's threshold of 80 dBA (8-hour Leq) for residential uses.

Source: Federal Highway Administration, *Roadway Construction Noise Model,* 2006. Refer to Appendix E: Noise Data for noise modeling results.

Although project construction would occur during normal daytime hours and would not exceed FTA thresholds, construction activities could result in a noticeable increase in ambient noise levels in the area. Therefore, prior to the issuance of any grading permits, the project applicant shall submit and implement a Construction Noise Management Plan that specifies hours of construction, noise and vibration minimization measures, posting and notification of construction schedules, equipment to be used, and designation of a noise disturbance coordinator. The noise disturbance coordinator shall respond to neighborhood complaints and shall be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses. The noise logistic plan shall be submitted to the Community Development Department Director or Director's designee of the Director of the Community Development Department prior to the issuance of any grading permits. The Construction Noise Management Plan would help to reduce noise levels associated with the construction of the proposed project. Thus, the proposed project would have a less than significant impact in this regard.

Construction Noise Management Plan

Noise reduction measures may include, but are not limited to, the following:

a) Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically attenuating shields or shrouds) wherever feasible.

b) Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used. This muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available. this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

c) Temporary power poles shall be used instead of generators where feasible.

d) Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City of provide equivalent noise reduction.

e) The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

f) Delivery of materials shall observe the hours of operation described above.

g) Truck traffic should avoid residential areas to the extent possible.

Construction Traffic Noise

Construction is estimated to be approximately three months. Construction noise may be generated by large trucks moving materials to and from the project site. Large trucks would be necessary to

deliver building materials as well as remove dump materials. The project would export a total of approximately 8,985 cubic yards (cy) and import a total of 217 cy of soil during grading. Based on the Road Construction Emissions Mode (RCEM) default assumptions for this project, the project would generate the highest number of daily trips during the grading phase. The model estimates that the project would generate up to 30 worker roundtrips, 47 daily hauling roundtrips, and five water truck roundtrips per day during grading.

According to Objective N-1.2, Policy P2 of the City's General Plan, mitigation would be required for new development that would cause a permanent noise increase of 3 dBA Ldn or more and exceed the "normally acceptable" level or cause a noise increase of 5 dBA Ldn or more and remain "normally acceptable". For reference, a 3 dBA Ldn noise increase would be expected if the project would double existing traffic volumes along a roadway and a 5 dBA Ldn noise increase would be expected if the project would triple existing traffic volumes along a roadway. Corral Hollow Road has approximately 633 PM peak hour trips.[2] A maximum of 82 peak hour project construction trips (assuming that all workers, haul trucks, and water trucks would travel from the site during the PM peak hour) would not double or triple the existing traffic volume. Therefore, construction related traffic noise would not be noticeable and would not create a significant noise impact.

Operations

The project consists of transportation improvements within Corral Hollo Road, Linne Road, within the intersection of the two roadways, and within portions of adjacent parcels. Corral Hollow Road is currently being widened north of the intersection and private development is anticipated to fund additional widening efforts to both roadways as development progresses and demand becomes is known. Ongoing widening of Corral Hollow Road is occurring to the north, and the proposed project would widen Corral Hollow Road to match the width of this and other improvements to the south of the project site. This is intended to help ensure smooth traffic flow and avoid constriction that would occur under the existing alignment (from two lanes to a single lane). Project implementation is intended to support projected growth in the vicinity and would not directly result in increased traffic noise. Therefore, increase in operational noise is not anticipated.

b) Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. 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 velocity (PPV) in inches per second

[2] City of Tracy, *Tracy Hills Specific Plan Recirculated Draft Subsequent EIR,* Table 4.13-8, October 2015

(in/sec). Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

Human and structural response to different vibration levels is influenced by several factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. FTA data indicates that the threshold for damage to structures ranges from 0.2 to 0.6 in/sec PPV. One-half this minimum threshold or 0.1 in/sec PPV is considered a safe criterion that would protect against architectural or structural damage. The general threshold at which human annoyance could occur is noted as 0.1 in/sec PPV.

Construction

Increases in groundborne vibration levels attributable to the project would be primarily associated with construction-related activities. Construction on the project site would have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and the operations involved. Ground vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The effect on buildings located in the vicinity of the construction site often varies depending on soil type, ground strata, and construction characteristics of the receiver building(s). The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. Groundborne vibrations from construction activities rarely reach levels that damage structures.

The types of construction vibration impacts include human annoyance and building damage. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Building damage can be cosmetic or structural. Ordinary buildings that are not particularly fragile would not experience cosmetic damage (e.g., plaster cracks) at distances beyond 30 feet. This distance can vary substantially depending on soil composition and underground geological layer between vibration source and receiver.

The FTA has published standard vibration velocities for construction equipment operations. In general, depending on the building category of the nearest buildings adjacent to the potential pile driving area, the potential construction vibration damage criteria vary. For example, for a building constructed with reinforced concrete with no plaster, the FTA guidelines show that a vibration level of up to 0.50 inch per second (in/sec) peak particle velocity (PPV) is considered safe and would not result in any construction vibration damage.

Table 4-10: Typical Construction Equipment Vibration Levels, lists vibration levels at 25 feet, 50 feet, and 125 feet for typical construction equipment. Groundborne vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. As indicated in *Table 4-10*, based on FTA data, vibration velocities from typical heavy construction equipment operations that would be used during project construction range from 0.003 to 0.089 in/sec PPV at 25 feet from the source of activity.

Table 4-10: Typical Construction Equipment Vibration Levels

Equipment	Peak Particle Velocity At 25 feet (in/sec)	Peak Particle Velocity At 50 feet (in/sec)	Peak Particle Velocity At 125v feet (in/sec)
Vibratory Roller	0.210	0.074	0.0113
Large Bulldozer	0.089	0.032	0.0048
Loaded Trucks	0.089	0.032	0.0048
Small Bulldozer/Tractors	0.003	0.001	0.0002

1. Calculated using the following formula: PPVequip = PPVref x (25/D)1.5, where: PPVequip = the peak particle velocity in in/sec of the equipment adjusted for the distance; PPVref = the reference vibration level in in/sec from Table 7-4 of the Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018; D = the distance from the equipment to the receiver.

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

As shown in *Table 4-10*, the highest vibration levels are achieved with the vibratory roller operations. This construction activity is expected to take place during grading and paving. The nearest structure is approximately 50 feet from the active construction zone. As indicated in *Table 4-10*, construction vibration levels at the nearest sensitive receptors (50 feet away) would not exceed the FTA's 0.20 PPV threshold for construction vibration damage or the 0.1 in/sec PPV threshold of human annoyance. In addition, construction activities would occur throughout the project site and would not be concentrated at the point closest to the nearest structure. Therefore, vibration impacts associated with the project would be less than significant.

Operations

The project would not generate groundborne vibration that could be felt at surrounding uses. Project operations would not involve railroads or substantial heavy truck operations, and therefore would not result in vibration impacts at surrounding uses. As a result, impacts from vibration associated with project operation would be less than significant.

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?

Less Than Significant Impact. The proposed project is located within the Airport Land Use area for the Tracy Municipal Airport, which is located east of the project site. Tracy Municipal Airport is owned and operated by the City of Tracy. The airport is a general aviation airport and provides a range of aviation services including general aviation and jet fuel sales, and hangar and tie down rentals. The project site is located in the 60 dB event contour for this airport.

The project does not include any permanent residents or other uses that would place workers or other people in long-term exposure or in proximity to noise from the airport. However, in the short-term, workers within the project area could be subject to noise levels up to 60 dB as a result of the Tracy Municipal Airport operations. These noise levels would be short-term and infrequent.

Additionally, the construction workers are subject to loud noises as a result of construction equipment operation. The infrequent, short-term noise exposure along the project alignment would not result in health or safety concerns for the workers in the area. Additionally, construction workers typically use safety equipment, such as ear plugs or earmuffs, which can reduce noise level during particularly noisy activities. Implementation of the proposed project would have a less than significant impact and mitigation is not required.

Cumulative Impacts

Cumulative Construction Noise

The project's construction activities would not result in a substantial temporary increase in ambient noise levels. The City limits construction to the hours of 7:00 a.m. to 7:00 p.m. on Monday through Friday. The project would contribute to other proximate construction noise impacts if construction activities were conducted concurrently. However, based on the noise analysis above, the project's construction-related noise impacts would be less than significant following compliance with local regulations and the Construction Noise Management Plan outlined above.

Construction activities at other planned and approved projects would be required to take place during daytime hours, and the City and project applicants would be required to evaluate construction noise impacts and implement mitigation, if necessary, to minimize noise impacts. Each project would be required to comply with the applicable City of Tracy Municipal Code limitations on allowable hours of construction. Therefore, project construction would not contribute to cumulative impacts and impacts in this regard are not cumulatively considerable.

Cumulative Operational Noise

Cumulative noise impacts describe how much noise levels are projected to increase over existing conditions with the development of the project and other foreseeable projects. Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the buildout to of the area. As discussed above, the project would not directly result in an increase in operations at the intersection of Corral Hollow Road and Linne Road. Therefore, no impact would occur.

POPULATION AND HOUSING

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
14. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			**X**	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?			**X**	

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)?

Less Than Significant Impact. The project site is currently designated for industrial, commercial, and urban reserve. The proposed project does not include any residential uses that would directly generate new residents and increase the population within the City or County. The proposed project also would not result in intensification of land uses, or the addition of structures or uses that would differ from the current General Plan, or that would require new employees or uses that would increase demand for permanent employees.

Projects that would not directly increase population still have the potential to result in indirect population growth through the creation of jobs or the extension of infrastructure into areas that were not previously served. While, the proposed project would increase the width and capacity of segments of Corral Hollow Road and Linne Road, install new signalization, and improve LOS, the improvements to the roadway system are a planned effort and coordinate with past and ongoing improvement plans to Corral Hollow Road to the north and south of the project. It should be noted all these improvements are along existing roadway segments. Lastly, in part, those improvements, as well as those of the proposed project would accommodate the future buildout under the General Plan. Thus, in this regard, the project would not result in growth inducement.

Although it is possible that demand for construction workers could induce a few workers to move into the City or Regional area for work opportunities, this is anticipated to be a very small number compared to the workers needed to build the project. In addition, because the size of the project is relatively small, the total demand for construction workers would be corresponding small. It is anticipated that with the recent and continuing growth of the City and County, there are adequate numbers of people already residing in the area and with existing construction companies to fill all

employment needs. Therefore, impacts from the proposed project to unplanned population growth are less than significant.

Lastly, any individual future projects would have to be consistent with the General Plan and are subject to environmental review under CEQA. No substantial population increases would result from implementation of the proposed project. Therefore, implementation of the proposed project would have a less than

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

Less than significant Impact. The proposed project would result in the acquisition of portions of adjacent parcels for a total of approximately 1.59 total acres. The majority of these areas, however, consist of existing roadway shoulder, railroad right-of-way, orchard, and undeveloped property. Approximately 0.53 acres would be acquired from APN 025-311-020, which contains an existing business. The area acquired from this parcel, however, would be from an undeveloped portion of the parcel and no structures or habitable buildings would be removed or require removal. Thus, the proposed project would not displace any existing housing units or structures and would not result in a displacement. No replacement housing would be needed. Impacts would be less than significant, and no mitigation is required.

Cumulative Impacts

Overall, the proposed project would serve the exiting demand from the existing population within the local vicinity and regional travelers. The proposed project is be consistent with the planned land uses in the City's General Plan and the population and employment projections for the City, County, and the region as a whole. While the proposed project result in minor takings, the project would not, in conjunction with other past, present, or reasonably foreseeable projects, make a substantial impact to cumulative growth. The proposed project and other projects that have been, will be developed, or that are in the planning process are considered in the context of their consistency with local and regional planning efforts to include population growth and the need for housing. Therefore, the proposed project would not cause a cumulatively considerable impact on population and housing and no mitigation is required.

PUBLIC SERVICES

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
15. PUBLIC SERVICES. Would the project:				
a) 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**	

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?

Less Than Significant Impact. The project site is currently under the jurisdiction of the San Joaquin County Fire Authority (SSJCFA, 2022). The proposed project would not include additional residential units, or people to the City of Tracy or within the County. The proposed project includes the widening of Corral Hollow Road and Linne Road and signalization of the intersection. These improvements would not result in an intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for emergency services. Accordingly, the proposed project would not require the expansion or development of a new fire station or any other fire

infrastructure, the construction of which could result in impacts to the environment. Thus, Impacts would be less than significant, and no mitigation is required.

ii) Police protection?

Less Than Significant Impact. The project site is currently under the jurisdiction of the Tracy Police Department (TPD) and the San Joaquin Sheriff's Office (SJSO). The proposed project would not include additional residential units, or people to the City of Tracy. The proposed project includes the widening of Corral Hollow Road (within SJSO jurisdiction) and Linne Road and signalization of the intersection (within TPD jurisdiction). These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for law enforcement services. Accordingly, the proposed project would not require the expansion or development of a new police station, or any other police related infrastructure, the construction of which could result in impacts to the environment. In addition, should emergency services be required, because the City and County boundaries would not change, the service areas for each department would not change. Thus, Impacts would be less than significant, and no mitigation is required.

iii) Schools?

Less Than Significant Impact. The San Joaquin County of Education is a regional agency that provides education al leadership, resources, and customized services to assist school districts that includes the Tracy Unified School District (SJCOE, 2022a and b). Residents within the vicinity of the project are served by the Tracy Unified School District for public education needs. The proposed project would not include additional residential units, or people to the City of Tracy. The proposed project includes the widening of Corral Hollow Road and Linne Road and signalization of the intersection. These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for school services. Accordingly, the proposed project would not require the expansion or development of a school or any other education related infrastructure, the construction of which could result in impacts to the environment. Thus, Impacts would be less than significant, and no mitigation is required.

iv) Parks?

Less Than Significant Impact. The proposed project would not include additional residential units, or people to the City of Tracy or within the County. The proposed project includes the widening of Corral Hollow Road and Linne Road and signalization of the intersection. These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for or use of parks within the City or region. Accordingly, the proposed project would not require the expansion or development of any park, the construction of which could result in impacts to the environment. Thus, Impacts would be less than significant, and no mitigation is required.

v) Other public facilities?

Less Than Significant Impact. Other public facilities in the area such as health care, production, commercial, retail, residential, etc. would not be adversely impacted. The proposed project would not include additional residential units, or people to the City of Tracy or within the County. The proposed project includes the widening of Corral Hollow Road and Linne Road and signalization of the intersection. These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for or use of other public services. Accordingly, the proposed project would not require the expansion or development of any of these resources, the construction of which could result in impacts to the environment. Thus, Impacts would be less than significant, and no mitigation is required.

Cumulative Impacts

The proposed project would not include additional residential units, or people to the City of Tracy or the County. The proposed project includes the widening of Corral Hollow Road and Linne Road and signalization of the intersection. These improvements would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan or that would increase the number of residents that could increase demand for or use of public services within the City or region. The proposed project also would not combine with past, present, and reasonably foreseeable project such that a cumulative impact would result. Lastly, the proposed project would not result in substantial incremental effects to public services or facilities that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable projects. The project alone would not result in cumulatively considerable impacts to public services or facilities.

RECREATION

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
16. RECREATION.				
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**	

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?

Less Than Significant Impact. The proposed project does not include any residential units or any other type of use that would increase the population, or park and recreation facility demand in the area, or include any other type of use that would directly increase the use of park and recreation facilities. The proposed project would not result in an intensification of land uses, or the addition of structures or uses that would differ from the current General Plan. Therefore, the proposed project would not result in a substantial increase on the demand for existing recreational resources such that substantial physical deterioration would occur or be accelerated. Thus, impacts of the proposed project would be less than significant in this regard and mitigation is not required.

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?

Less Than Significant Impact. The proposed project consists of a roadway improvements projects but does not include any new recreational resources that could result in impacts on the environment beyond those already evaluated as part of this document. Thus, the proposed project would not have a significant adverse physical effect on the environment, impacts would be less than significant, and no mitigation is required.

Cumulative Impacts

Development of the proposed project would not create a significant cumulative increase of recreational facilities. In addition, the proposed project would not combine with other past, present, or reasonably foreseeable projects and result in significant cumulative impacts. The

project would not impact any existing recreation facilities and would not create a substantial population increase to impact existing recreational facilities. Therefore, no cumulative impacts on recreational facilities would occur.

TRANSPORTATION

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
17. TRANSPORTATION. Would the project:				
a) Conflict with an 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**	

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

Less than Significant Impact. No new structures, uses, or visitor serving areas are included in the project. The proposed project does not result in an overall increase in vehicle trips but would serve existing deficiencies and tie into existing two-lane improvements to the north and south within Corral Hollow Road. The proposed project does not include any trip generating uses that would result in additional vehicle miles travelled or a reduction of LOS. The proposed project also would include sidewalks and bicycle facilities along the widened roadway that would provide residents and users in the area with access to these alternative transportation uses. Impacts in this regard would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. CEQA Guidelines Section 15064.3 states that "vehicle miles traveled" (VMT) is the preferred metric evaluating transportation impacts, rather than LOS. VMT measures the total miles traveled by vehicles generated by a project. While LOS focuses on motor vehicle traffic, VMT accounts for the total environmental impact of a project on transportation, including use of travel modes such as buses or bicycles. Section 15064.3(b) sets forth the criteria for analyzing transportation impacts using the preferred VMT metric.

As discussed in a) above, the proposed project does not include any new uses or structures, or visitor serving areas and it would not result in an overall increase in vehicle trips or vehicle miles

travelled. The proposed project would serve existing uses that are anticipated to be developed in accordance with adopted planning documents and improve the level of service and functionality of the intersection and roadways. Thus, impacts related to increased VMT are less than significant.

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

Less Than Significant Impact. No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that could impede emergency vehicles or emergency access. The project does not include any design features or incompatible used that pose a significant safety risk. The project would create no adverse impacts to emergency vehicle access or circulation. Therefore, project implementation would have a less than significant impact in this regard.

d) Result in inadequate emergency access?

Less Than Significant Impact. Emergency vehicle access would be maintained at all times throughout construction activities, in accordance with the City and County routine/standard construction specifications as applicable. No site circulation or access issues have been identified that would cause a traffic safety problem/hazard or any unusual traffic congestion or delay that would impede emergency access to any local roadways or surrounding properties or result in a safety risk. All driveways and roads would be constructed to accommodate all emergency vehicles and personnel. Therefore, implementation of the proposed project would have a less than significant impact in this regard.

Cumulative Impacts

The proposed project would improve LOS at the intersection with the widening of the roadways to tie into existing and on-going roadway improvements and construction of signals and increase the functionality of travel in the area. The proposed project is intended to serve existing and planned uses and does not include any uses, combined with other past, present, and reasonably foreseeable projects that would contribute to an increase in VMT. Although other future uses in the vicinity including new residential uses may generate new vehicle trips, the proposed project would not generate new trips and would only serve to accommodate travel between existing and planned uses. Therefore, the proposed project would not result in incremental effects to transportation that could be compounded or increased when considered together with similar effects from other past, present, and reasonably foreseeable probable future projects. Potential impacts are not cumulatively considerable and less than significant.

TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
18. TRIBAL CULTURAL RESOURCES. Would the project:				
a) 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: i) Listed or eligible for listing in the California				
i) 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**		
ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?		**X**		

a) 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: i) Listed or eligible for listing in the California:

i) 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)?

And,

ii) 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Potentially Significant Unless Mitigation Incorporated. An *Archaeological Survey Report* for project site was conducted by Horizon Water and Environment in July 2022. As previously mentioned, there were no historical resources found to be impacted by the proposed project, this is substantiated through a CHRIS records search, background research, review of historical topographic and aerial imagery, a Sacred Land File Search, and a pedestrian survey. However, the absence of substantial surface prehistoric or historic-period archeological remains within the project vicinity and the existing level of disturbance does not preclude the possibility of subsurface resources.

The City has notified California Native American tribes who have formally requested notification on CEQA projects under Assembly Bill 52. This included notification to eight tribes (Ione Band of Miwok Indians, The Confederated Villages of Lisjan, Muwekma Ohlone Indian Tribe of the SF Bay Area, North Valley Yokuts Tribe, Tule River Indian Tribe, Buena Vista Rancheria of Me-Wuk Indians, Wilton Rancheria, and Wuksache Indian Tribe/Eshom Valley Band).

These notification letters were distributed to identified Native American Tribes on August 1, 2022. These letters are on file at the City of Tracy Planning Department. As of 30 days after sending the letters and publication of this document. No tribes have requested formal consultation.

Examples of significant archaeological discoveries that may meet the tribal cultural resource definition would include villages and cemeteries. Due to the possible presence of unknown tribal cultural resources within the project site, construction related impacts on tribal cultural resources would be potentially significant. Though the circumstances would present a low possibility, the following mitigation measure (MM) would reduce impacts in the unanticipated discovery of cultural resources during construction. With the implementation of **MM CUL-1**, **MM CUL-2**, and **MM CUL-3** above in Section 4.5 Cultural Resources, impacts would be less than significant.

Cumulative Impacts

The combination of the proposed project as well as past, present, and reasonably foreseeable projects in the local area would be required to comply with all applicable State, federal, and County and local regulations concerning preservation, salvage, or handling of cultural and paleontological resources, including compliance with required mitigation. Similar to the proposed project, these projects also would be required to implement and conform to mitigation measures, which would be likely to reduce impacts to less than significant. Although in the process of roadway improvements, some known or unknown resources may be lost, it is not anticipated that these impacts would be cumulatively considerable. In addition, implementation of Mitigation Measures **MM CUL-1, MM CUL-2,** and **MM CUL-3** would reduce project-specific impacts to a less than significant level. Therefore, the project's contribution to cumulative impacts would be less than significant.

UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
19. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			**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 project's projected demand in addition to the provider's 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 reduction goals?			**X**	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			**X**	

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?

Less Than Significant Impact. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. The proposed project would not include additional residential units, or people to the City of Tracy or within the County such that new or expanded utilities would be required. No additional demand for water, wastewater, storm water drainage, electric power, natural gas, or telecommunications facilities will be created by the project. The project includes the widening of Corral Hollow Road and Linne Road, signalization of the intersection, installation of new lights, and curb and gutter and sidewalk

improvements. These improvements are part of a planned effort to coordinate improvements to accommodate the future buildout of the General Plan. In addition, any individual future projects would have to be consistent with the General Plan and would be subject to environmental review under CEQA. Accordingly, the proposed project would not require the expansion or development of new utilities that, the construction of which could result in impacts to the environment. Impacts would be less than significant, and no mitigation is required.

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

Less Than Significant Impact. The proposed project will not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. The proposed project would not include additional residential units, or people to the City of Tracy or within the County such that new demand for water would occur, or such that new or expanded water infrastructure would be required. The project includes the widening of Corral Hollow Road and Linne Road, signalization of the intersection, installation of new lights, and curb and gutter and sidewalk improvements. These improvements are part of a planned effort to coordinate improvements to accommodate the future buildout of the General Plan. In addition, any individual future projects would have to be consistent with the General Plan and would be subject to environmental review under CEQA.

It should be noted that limited volumes of water would be necessary during construction related activities for watering of soils for dust control, washing vehicles, mixing materials, etc. This use, however, would be temporary in nature for construction related activities only, and would not be in substantial volumes. Thus, the proposed project would not result is substantial use of water from the existing supplies during normal, dry, or multiple dry years. The project water demand would be served through existing entitlements and resources. Impacts would be less than significant in this regard and mitigation is not required.

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

Less Than Significant Impact. As previously stated, the proposed project would not result in intensification of land use, or the addition of structures or uses that would differ from the current General Plan. No additional demand for wastewater treatment, or other water treatment facilities would be needed or are proposed as part of the project. The proposed project could relocate some utilities within the project site to facilitate the transportation improvements such as electrical connections and horizontal movement of other lines (e.g., water, gas, etc.). The proposed project, however; would not increase the service capacity of these lines and the relocation would not be made with the intent to serve undeveloped areas. The movement of lines would, however, be done to accommodate the future buildout of the General Plan. In addition, any individual future projects would have to be consistent with the General Plan and would be subject to environmental review under CEQA. Thus, the proposed project would not result in any new wastewater generators, nor does it propose any improvements that would result in increased treatment demand by

wastewater treatment provider that new capacity would be needed. Impacts would be less than significant, and mitigation is not required.

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

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant Impact. As previously stated, the proposed project will not result in an intensification of land use, or the addition of structures or uses that would result in an increased demand for services. The proposed project is consistent with the General Plan and would be used to serve the existing and planned land uses in the vicinity. The proposed project would not result in a long-term use that would generate substantial volumes of waste that would require disposal. Construction of the proposed project, however, would result the generation of minor volumes of solid waste. Because the project consists of roadway improvements and does not include any structures that require building materials, waste generation would be minimal. Waste that is generated during construction could be self-hauled, or contract services with Tracy Delta Solid Waste Management could be made. Waste would be recycled as possible at the Lovelace Materials Recovery Facility and Transfer Station with non-recyclable materials anticipated to be taken to the Foothill Sanitary Landfill, which is projected to be open until 2082 and the project would not substantially reduce capacity.

Thus, the proposed project would not interfere with regulations related to solid waste or generate waste in excess of the capacity of local infrastructure. The proposed project would have a less than significant impact in this regard.

Cumulative Impacts

Utilities are generally provided or delivered on a local level but often originate from sources outside local areas as most areas are served through the regional distribution system. As discussed above, the proposed project does not include any uses that would require long term utilities services within the exception of a minimal increase in electricity demand for new traffic signals and lights. Taken in conjunction with past, present, and reasonably foreseeable projects the overall increased demand for utilities would be incrementally small and the project would not make a substantial cumulative contribution. Therefore, implementation of the project would not result in a cumulatively considerable contribution to impacts on water supply and wastewater, stormwater, or solid waste generation.

WILDFIRE

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
20. WILDFIRE. 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**	

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The proposed project includes roadway improvements and would not substantially impair an adopted emergency response plan or emergency evacuation plan. The proposed project could, during construction, require short term lane closures, and intermittent reductions in travel volumes and speeds due to the presence of equipment and personnel, but these interruptions would be temporary. After construction, the project would increase continuity between existing segments of both Corral Hollow Road and Linne Road and improve the LOS within the roadways and intersections. This would improve the viability of the roadways for emergency access as well as evacuations. The proposed improvements would intermittently require roadway maintenance; but such work is inherent to roadway operations and would not substantially hinder emergency access or evacuation. Therefore, impacts from project implementation would be considered less than significant in this regard.

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?

Less Than Significant Impact. 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 County has areas with an abundance of flashy fuels (i.e., grassland) in the County. The project would not result in development of structures or housing which would subject residents, visitors, or workers to long-term wildfire danger. Therefore, impacts from project implementation would be considered less than significant in this regard.

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?

Less Than Significant Impact. The proposed project includes standard infrastructure improvements associated a roadway widening. The proposed project is not located in a very high or high wildfire hazard severity zone and is predominantly surrounded by industrial and agricultural uses that are not prone to wildfire. The proposed project does not include the need for construction of use of roadways, fuel breaks, or water sources that could exacerbate wildfire hazards. The project would include relocation of some utilities, but the relocation would not be in any area prone to wildfire, and it would not result in temporary or long-term impacts in this regard. Impacts would be less than significant, and no mitigation is required.

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?

Less Than Significant Impact. The proposed project site is not in a VHFHSZ nor located near steep slopes or hillsides. The proposed project would implement efficient landscape maintenance practices and design measures to decrease the release of stormwater running off the site; therefore, the proposed project site would not expose people to downstream flooding or landslides as a result of runoff. Impacts would be less than significant.

Cumulative Impacts

The proposed project area is not subject to natural wildfire areas. Consequently, implementation of the proposed project would not create a significant cumulative impact that would exacerbate wildfires. Impacts would be less than significant.

MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS Impact	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
21. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:				
a) 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**	

a) 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?

Less Than Significant Impact. The analysis in this Initial Study includes an evaluation of the project impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, utilities and service systems, and wildfire. The analysis covers a broad spectrum of topics relative to the potential for the proposed Project to have environmental impacts. This includes 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, 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.

The proposed project would occur within an existing roadway and other adjacent highly disturbed areas that do not contain resources that would be commonly used by sensitive species or contain sensitive biological resources. In addition, due to past development efforts the potential for cultural resources or tribal cultural resources to be present or located during construction activities is considered to be low. Thus, for the reasons presented throughout this document, the proposed project would not 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, 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.

Nonetheless, the proposed project would be approved with adoption of mitigation to reduce potential impacts to nesting birds and includes mitigation for inadvertent discovery of cultural resources. Thus, it was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures.

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

Less Than Significant Impact. The analysis in this Initial Study includes an evaluation of the project impacts associated with aesthetics, agricultural and forest resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, tribal cultural resources, utilities and service systems, and wildfire. The analysis covers a broad spectrum of topics relative to the potential for the proposed project to have environmental impacts. It was found that the proposed project would have either no impact, a less than significant impact, or a less than significant impact with the implementation of mitigation measures. These mitigation measures would also function to reduce the project's contribution to cumulative impacts.

The proposed project would not increase the population or the use of public services and systems and would not conflict with any applicable plans for the area. The proposed project would increase the capacity of the roadway system, which could allow for future development near the project area. However, all uses accommodated by the widening and LOS improvements, would be in accordance with the General Plan and land use map. Furthermore, any future projects would be subject to environmental review under CEQA. There are no significant cumulative or cumulatively considerable effects that are identified associated with the proposed project after the implementation of all mitigation measures. With the implementation of all mitigation measures

proposed in this Initial Study, the proposed project would have a less than significant impact relative to this topic.

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

Less Than Significant Impact. Potential adverse project effects on human beings were discussed in Section, *Air Quality*; Section, *Geology and Soils (seismic hazards)*; Section, *Hazards and Hazardous Materials*; Section, *Hydrology and Water Quality (flooding);* Section, *Transportation (traffic hazards)*; and Section, *Wildfire*. No potential adverse effects on human beings were identified. Potential adverse effects that were identified would be reduced to levels considered less than significant through compliance with applicable laws, regulations, and City ordinances and standards, along with mitigation measures where necessary.

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Appendix A

Air Quality Modeling

Road Construction Emissions Model **Version 9.0.0**

Data Entry Worksheet

Note: Required data input sections have a yellow background.
Optional data input sections have a blue background. Only areas with a yellow or blue background can be modified. Program defaults have a white background.
The user is required to enter information in cells D10 through D24, E28 through G35, and D38 through D41 for all project types.
Please use "Clear Data Input & User Overrides" button first before changing the Project Type or begin a new project.

To begin a new project, click this button to clear data previously entered. This button will only work if you opted not to disable macros when loading this spreadsheet.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Input Type

Project Name	Corral Hollow and Linne Road	
Construction Start Year	2024	Enter a Year between 2014 and 2040 (inclusive)
Project Type	2	1) New Road Construction : Project to build a roadway from bare ground, which generally requires more site preparation than widening an existing roadway 2) Road Widening : Project to add a new lane to an existing roadway 3) Bridge/Overpass Construction : Project to build an elevated roadway, which generally requires some different equipment than a new roadway, such as a crane 4) Other Linear Project Type: Non-roadway project such as a pipeline, transmission line, or levee construction
Project Construction Time	3.00	months
Working Days per Month	22.00	days (assume 22 if unknown)
Predominant Soil/Site Type: Enter 1, 2, or 3 (for project within "Sacramento County", follow soil type selection instructions in cells E18 to E20 otherwise see instructions provided in cells J18 to J22)	1	1) Sand Gravel : Use for quaternary deposits (Delta/West County) 2) Weathered Rock-Earth : Use for Laguna formation (Jackson Highway area) or the Ione formation (Scott Road, Rancho Murieta) 3) Blasted Rock : Use for Salt Springs Slate or Copper Hill Volcanics (Folsom South of Highway 50, Rancho Murieta)
Project Length	0.50	miles
Total Project Area	1.00	acre
Maximum Area Disturbed/Day	1.00	acre
Water Trucks Used?	1	1. Yes 2. No

Please note that the soil type instructions provided in cells E18 to E20 are specific to Sacramento County. Maps available from the California Geologic Survey (see weblink below) can be used to determine soil type outside Sacramento County.

http://www.conservation.ca.gov/cgs/information/geologic_mapping/Pages/googlemaps.aspx#regionalseries

Material Hauling Quantity Input

Material Type	Phase	Haul Truck Capacity (yd^3) (assume 20 if unknown)	Import Volume (yd^3/day)	Export Volume (yd^3/day)
Soil	Grubbing/Land Clearing			
	Grading/Excavation	20.00	21.70	898.50
	Drainage/Utilities/Sub-Grade			
	Paving			
Asphalt	Grubbing/Land Clearing			
	Grading/Excavation			
	Drainage/Utilities/Sub-Grade			
	Paving			

Mitigation Options

On-road Fleet Emissions Mitigation		Select "2010 and Newer On-road Vehicles Fleet" option when the on-road heavy-duty truck fleet for the project will be limited to vehicles of model year 2010 or newer
Off-road Equipment Emissions Mitigation		Select "20% NOx and 45% Exhaust PM reduction" option if the project will be required to use a lower emitting off-road construction fleet. The SMAQMD Construction Mitigation Calculator can be used to confirm compliance with this mitigation measure (http://www.airquality.org/Businesses/CEQA-Land-Use-Planning/Mitigation). Select "Tier 4 Equipment" option if some or all off-road equipment used for the project meets CARB Tier 4 Standard

The remaining sections of this sheet contain areas that can be modified by the user, although those modifications are optional.

Note: The program's estimates of construction period phase length can be overridden in cells D50 through D53, and F50 through F53.

Construction Periods	User Override of Construction Months	Program Calculated Months	User Override of Phase Starting Date	Program Default Phase Starting Date
Grubbing/Land Clearing	0.50	0.30	6/1/2024	1/1/2024
Grading/Excavation	0.50	1.20	6/15/2024	1/17/2024
Drainage/Utilities/Sub-Grade	0.67	1.05	7/1/2024	2/2/2024
Paving	1.00	0.45	8/1/2024	2/23/2024
Totals (Months)		3		

Please note: You have entered a different number of months than the project length shown in cell D16.
Note: Soil Hauling emission default values can be overridden in cells D61 through D64, and F61 through F64.

Soil Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		47	1410.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grading/Excavation (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Paving (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.09	1.27	9.86	0.35	0.15	0.05	5,264.44	0.00	0.83	5,511.14
Tons per const. Period - Grading/Excavation	0.00	0.01	0.05	0.00	0.00	0.00	28.95	0.00	0.00	30.31
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.01	0.05	0.00	0.00	0.00	28.95	0.00	0.00	30.31

Note: Asphalt Hauling emission default values can be overridden in cells D91 through D94, and F91 through F94.

Asphalt Hauling Emissions User Input	User Override of Miles/Round Trip	Program Estimate of Miles/Round Trip	User Override of Truck Round Trips/Day	Default Values Round Trips/Day	Calculated Daily VMT
Miles/round trip: Grubbing/Land Clearing		30.00		0	0.00
Miles/round trip: Grading/Excavation		30.00		0	0.00
Miles/round trip: Drainage/Utilities/Sub-Grade		30.00		0	0.00
Miles/round trip: Paving		30.00		0	0.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grading/Excavation (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Draining/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Paving (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Draining/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pounds per day - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total tons per construction project	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Note: Worker commute default values can be overridden in cells D121 through D126.

Worker Commute Emissions User Input	User Override of Worker Commute Default Values	Default Values	Calculated Daily Trips	Calculated Daily VMT
Miles/ one-way trip		20		
One-way trips/day		2		
No. of employees: Grubbing/Land Clearing	30	5	60	1,200.00
No. of employees: Grading/Excavation	30	20	60	1,200.00
No. of employees: Drainage/Utilities/Sub-Grade	30	14	60	1,200.00
No. of employees: Paving	30	10	60	1,200.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Grading/Excavation (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Drainng/Utilities/Sub-Grade (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Paving (grams/mile)	0.01	0.84	0.06	0.05	0.02	0.00	306.70	0.00	0.01	308.54
Grubbing/Land Clearing (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Grading/Excavation (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Drainng/Utilities/Sub-Grade (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Paving (grams/trip)	0.98	2.66	0.27	0.00	0.00	0.00	65.99	0.07	0.03	76.61
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.17	2.57	0.20	0.12	0.05	0.01	820.12	0.02	0.02	826.39
Tons per const. Period - Grubbing/Land Clearing	0.00	0.01	0.00	0.00	0.00	0.00	4.51	0.00	0.00	4.55
Pounds per day - Grading/Excavation	0.17	2.57	0.20	0.12	0.05	0.01	820.12	0.02	0.02	826.39
Tons per const. Period - Grading/Excavation	0.00	0.01	0.00	0.00	0.00	0.00	4.51	0.00	0.00	4.55
Pounds per day - Drainage/Utilities/Sub-Grade	0.17	2.57	0.20	0.12	0.05	0.01	820.12	0.02	0.02	826.39
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.02	0.00	0.00	0.00	0.00	6.04	0.00	0.00	6.09
Pounds per day - Paving	0.17	2.57	0.20	0.12	0.05	0.01	820.12	0.02	0.02	826.39
Tons per const. Period - Paving	0.00	0.03	0.00	0.00	0.00	0.00	9.02	0.00	0.00	9.09
Total tons per construction project	0.00	0.08	0.01	0.00	0.00	0.00	24.09	0.00	0.00	24.27

Note: Water Truck default values can be overridden in cells D153 through D156, I153 through I156, and F153 through F156.

Water Truck Emissions User Input	User Override of Default # Water Trucks	Program Estimate of Number of Water Trucks	User Override of Truck Round Trips/Vehicle/Day	Default Values Round Trips/Vehicle/Day	Calculated Trips/day	User Override of Miles/Round Trip	Default Values Miles/Round Trip	Calculated Daily VMT
Grubbing/Land Clearing - Exhaust		1		5	5		8.00	40.00
Grading/Excavation - Exhaust		1		5	5		8.00	40.00
Drainage/Utilities/Subgrade		1		5	5		8.00	40.00
Paving		1		5	5		8.00	40.00

Emission Rates	ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grubbing/Land Clearing (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grading/Excavation (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Drainng/Utilities/Sub-Grade (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Paving (grams/mile)	0.03	0.41	3.02	0.11	0.05	0.02	1,693.55	0.00	0.27	1,772.92
Grubbing/Land Clearing (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading/Excavation (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Drainng/Utilities/Sub-Grade (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving (grams/trip)	0.00	0.00	4.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emissions	**ROG**	**CO**	**NOx**	**PM10**	**PM2.5**	**SOx**	**CO2**	**CH4**	**N2O**	**CO2e**
Pounds per day - Grubbing/Land Clearing	0.00	0.04	0.32	0.01	0.00	0.00	149.35	0.00	0.02	156.34
Tons per const. Period - Grubbing/Land Clearing	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.86
Pounds per day - Grading/Excavation	0.00	0.04	0.32	0.01	0.00	0.00	149.35	0.00	0.02	156.34
Tons per const. Period - Grading/Excavation	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.00	0.00	0.86
Pounds per day - Drainage/Utilities/Sub-Grade	0.00	0.04	0.32	0.01	0.00	0.00	149.35	0.00	0.02	156.34
Tons per const. Period - Drainage/Utilities/Sub-Grade	0.00	0.00	0.00	0.00	0.00	0.00	1.10	0.00	0.00	1.15
Pounds per day - Paving	0.00	0.04	0.32	0.01	0.00	0.00	149.35	0.00	0.02	156.34
Tons per const. Period - Paving	0.00	0.00	0.00	0.00	0.00	0.00	1.64	0.00	0.00	1.72
Total tons per construction project	0.00	0.00	0.01	0.00	0.00	0.00	4.39	0.00	0.00	4.59

Note: Fugitive dust default values can be overridden in cells D183 through D185.

Fugitive Dust	User Override of Max Acreage Disturbed/Day	Default Maximum Acreage/Day	PM10 pounds/day	PM10 tons/per period	PM2.5 pounds/day	PM2.5 tons/per period
Fugitive Dust - Grubbing/Land Clearing		1.00	10.00	0.06	2.08	0.01
Fugitive Dust - Grading/Excavation		1.00	10.00	0.06	2.08	0.01
Fugitive Dust - Drainage/Utilities/Subgrade		1.00	10.00	0.07	2.08	0.02

Off-Road Equipment Emissions

Grubbing/Land Clearing Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.42	2.20	4.75	0.18	0.17	0.01	758.65	0.25	0.01	766.83
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Excavators	0.36	6.53	2.81	0.14	0.13	0.01	1,000.53	0.32	0.01	1,011.32
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Tractors/Loaders/Backhoes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grubbing/Land Clearing		pounds per day		0.84	9.03	7.91	0.34	0.31	0.02	1,808.50	0.57	0.02	1,827.72
Grubbing/Land Clearing		tons per phase		0.00	0.05	0.04	0.00	0.00	0.00	9.95	0.00	0.00	10.05

Grading/Excavation Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0		Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Crawler Tractors	0.42	2.20	4.75	0.18	0.17	0.01	758.65	0.25	0.01	766.83
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Excavators	0.54	9.80	4.21	0.21	0.19	0.02	1,500.80	0.49	0.01	1,516.98
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Graders	0.71	3.31	8.31	0.27	0.25	0.01	1,281.02	0.41	0.01	1,294.82
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.29	3.70	3.05	0.16	0.15	0.01	508.29	0.16	0.00	513.77
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rubber Tired Loaders	0.25	1.50	2.33	0.08	0.07	0.01	605.51	0.20	0.01	612.05
	2		Model Default Tier	Scrapers	1.52	11.93	15.39	0.61	0.56	0.03	2,938.20	0.95	0.03	2,969.87
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	4		Model Default Tier	Tractors/Loaders/Backhoes	0.58	8.94	5.79	0.27	0.24	0.01	1,207.07	0.39	0.01	1,220.05
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Grading/Excavation	pounds per day	4.37	41.68	44.19	1.79	1.65	0.09	8,848.85	2.85	0.08	8,943.93
Grading/Excavation	tons per phase	0.02	0.23	0.24	0.01	0.01	0.00	48.67	0.02	0.00	49.19

Drainage/Utilities/Subgrade Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Air Compressors	0.24	2.41	1.63	0.08	0.08	0.00	375.26	0.02	0.00	376.63
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Generator Sets	0.29	3.66	2.54	0.11	0.11	0.01	623.04	0.03	0.00	625.06
	1		Model Default Tier	Graders	0.35	1.66	4.16	0.13	0.12	0.01	640.51	0.21	0.01	647.41
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pavers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Paving Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Plate Compactors	0.04	0.21	0.25	0.01	0.01	0.00	34.48	0.00	0.00	34.65
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pumps	0.31	3.72	2.58	0.12	0.12	0.01	623.04	0.03	0.00	625.12
			Model Default Tier	Rollers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Rough Terrain Forklifts	0.10	2.29	1.35	0.04	0.04	0.00	333.74	0.11	0.00	337.33
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Scrapers	0.76	5.97	7.70	0.30	0.28	0.02	1,469.10	0.48	0.01	1,484.93
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.43	6.71	4.34	0.20	0.18	0.01	905.30	0.29	0.01	915.04
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles	Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	N/A	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

		ROG	CO	NOx	PM10	PM2.5	SOx	CO2	CH4	N2O	CO2e
Drainage/Utilities/Sub-Grade	pounds per day	2.58	26.93	24.91	1.01	0.96	0.05	5,053.77	1.17	0.04	5,095.75
Drainage/Utilities/Sub-Grade	tons per phase	0.02	0.20	0.18	0.01	0.01	0.00	37.25	0.01	0.00	37.56

Paving Override of Default Number of Vehicles	Default Number of Vehicles *Program-estimate*	Mitigation Option Override of Default Equipment Tier (applicable only when "Tier 4 Mitigation" Option Selected)	Default Equipment Tier	Type	ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
			Model Default Tier	Aerial Lifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Air Compressors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Bore/Drill Rigs	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cement and Mortar Mixers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Concrete/Industrial Saws	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Cranes	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crawler Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Crushing/Proc. Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Excavators	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Generator Sets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Graders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Tractors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Off-Highway Trucks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Construction Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other General Industrial Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Other Material Handling Equipm	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Pavers	0.18	2.89	1.74	0.08	0.07	0.00	455.16	0.15	0.00	460.07
	1		Model Default Tier	Paving Equipment	0.16	2.57	1.50	0.07	0.07	0.00	394.47	0.13	0.00	398.72
			Model Default Tier	Plate Compactors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pressure Washers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	2		Model Default Tier	Rollers	0.29	3.70	3.05	0.16	0.15	0.01	508.29	0.16	0.00	513.77
			Model Default Tier	Rough Terrain Forklifts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Dozers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Rubber Tired Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Scrapers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	1		Model Default Tier	Signal Boards	0.06	0.30	0.36	0.01	0.01	0.00	49.31	0.01	0.00	49.56
			Model Default Tier	Skid Steer Loaders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Surfacing Equipment	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Sweepers/Scrubbers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	3		Model Default Tier	Tractors/Loaders/Backhoes	0.43	6.71	4.34	0.20	0.18	0.01	905.30	0.29	0.01	915.04
			Model Default Tier	Trenchers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			Model Default Tier	Welders	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

User-Defined Off-road Equipment

If non-default vehicles are used, please provide information in 'Non-default Off-road Equipment' tab

Number of Vehicles		Equipment Tier	Type		ROG pounds/day	CO pounds/day	NOx pounds/day	PM10 pounds/day	PM2.5 pounds/day	SOx pounds/day	CO2 pounds/day	CH4 pounds/day	N2O pounds/day	CO2e pounds/day
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00		N/A		0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Paving		pounds per day		1.13	16.17	10.99	0.53	0.49	0.02	2,312.53	0.74	0.02	2,337.16
	Paving		tons per phase		0.01	0.18	0.12	0.01	0.01	0.00	25.44	0.01	0.00	25.71
Total Emissions all Phases (tons per construction period) =>					0.06	0.66	0.59	0.02	0.02	0.00	121.30	0.04	0.00	122.51

Equipment default values for horsepower and hours/day can be overridden in cells D403 through D436 and F403 through F436.

Equipment	User Override of Horsepower	Default Values Horsepower	User Override of Hours/day	Default Values Hours/day
Aerial Lifts		63		8
Air Compressors		78		8
Bore/Drill Rigs		221		8
Cement and Mortar Mixers		9		8
Concrete/Industrial Saws		81		8
Cranes		231		8
Crawler Tractors		212		8
Crushing/Proc. Equipment		85		8
Excavators		158		8
Forklifts		89		8
Generator Sets		84		8
Graders		187		8
Off-Highway Tractors		124		8
Off-Highway Trucks		402		8
Other Construction Equipment		172		8
Other General Industrial Equipment		88		8
Other Material Handling Equipment		168		8
Pavers		130		8
Paving Equipment		132		8
Plate Compactors		8		8
Pressure Washers		13		8
Pumps		84		8
Rollers		80		8
Rough Terrain Forklifts		100		8
Rubber Tired Dozers		247		8
Rubber Tired Loaders		203		8
Scrapers		367		8
Signal Boards		6		8
Skid Steer Loaders		65		8
Surfacing Equipment		263		8
Sweepers/Scrubbers		64		8
Tractors/Loaders/Backhoes		97		8
Trenchers		78		8
Welders		46		8

END OF DATA ENTRY SHEET

The maximum pounds per day in row 11 is summed over overlapping phases, but the maximum tons per phase in row 34 is not summed over overlapping phases.

Road Construction Emissions Model, Version 9.0.0

Daily Emission Estimates for -> Corral Hollow and Linne Road

Project Phases (Pounds)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	Total PM10 (lbs/day)	Exhaust PM10 (lbs/day)	Fugitive Dust PM10 (lbs/day)	Total PM2.5 (lbs/day)	Exhaust PM2.5 (lbs/day)	Fugitive Dust PM2.5 (lbs/day)	SOx (lbs/day)	CO2 (lbs/day)	CH4 (lbs/day)	N2O (lbs/day)	CO2e (lbs/day)
Grubbing/Land Clearing	1.01	11.64	8.43	10.47	0.47	10.00	2.45	0.37	2.08	0.03	2,777.96	0.59	0.06	2,810.45
Grading/Excavation	4.63	45.56	54.56	12.27	2.27	10.00	3.93	1.85	2.08	0.15	15,082.76	2.87	0.95	15,437.81
Drainage/Utilities/Sub-Grade	2.75	29.53	25.42	11.14	1.14	10.00	3.09	1.01	2.08	0.06	6,023.24	1.18	0.09	6,078.48
Paving	1.30	18.78	11.51	0.66	0.66	0.00	0.54	0.54	0.00	0.03	3,282.00	0.75	0.06	3,319.90
Maximum (pounds/day)	5.64	57.20	62.99	22.74	2.74	20.00	6.38	2.22	4.16	0.18	17,860.72	3.46	1.01	18,248.27
Total (tons/construction project)	0.07	0.74	0.66	0.21	0.03	0.18	0.06	0.03	0.04	0.00	178.73	0.04	0.01	181.68

Notes:

Project Start Year ->	2024
Project Length (months) ->	3
Total Project Area (acres) ->	1
Maximum Area Disturbed/Day (acres) ->	1
Water Truck Used? ->	Yes

	Total Material Imported/Exported Volume (yd^3/day)		Daily VMT (miles/day)			
Phase	Soil	Asphalt	Soil Hauling	Asphalt Hauling	Worker Commute	Water Truck
Grubbing/Land Clearing	0	0	0	0	1,200	40
Grading/Excavation	920	0	1,410	0	1,200	40
Drainage/Utilities/Sub-Grade	0	0	0	0	1,200	40
Paving	0	0	0	0	1,200	40

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

Total Emission Estimates by Phase for -> Corral Hollow and Linne Road

Project Phases (Tons for all except CO2e. Metric tonnes for CO2e)	ROG (tons/phase)	CO (tons/phase)	NOx (tons/phase)	Total PM10 (tons/phase)	Exhaust PM10 (tons/phase)	Fugitive Dust PM10 (tons/phase)	Total PM2.5 (tons/phase)	Exhaust PM2.5 (tons/phase)	Fugitive Dust PM2.5 (tons/phase)	SOx (tons/phase)	CO2 (tons/phase)	CH4 (tons/phase)	N2O (tons/phase)	CO2e (MT/phase)
Grubbing/Land Clearing	0.01	0.06	0.05	0.06	0.00	0.06	0.01	0.00	0.01	0.00	15.28	0.00	0.00	14.02
Grading/Excavation	0.03	0.25	0.30	0.07	0.01	0.06	0.02	0.01	0.01	0.00	82.96	0.02	0.01	77.03
Drainage/Utilities/Sub-Grade	0.02	0.22	0.19	0.08	0.01	0.07	0.02	0.01	0.02	0.00	44.39	0.01	0.00	40.64
Paving	0.01	0.21	0.13	0.01	0.01	0.00	0.01	0.01	0.00	0.00	36.10	0.01	0.00	33.13
Maximum (tons/phase)	0.03	0.25	0.30	0.08	0.01	0.07	0.02	0.01	0.02	0.00	82.96	0.02	0.01	77.03
Total (tons/construction project)	0.07	0.74	0.66	0.21	0.03	0.18	0.06	0.03	0.04	0.00	178.73	0.04	0.01	164.82

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns G and H. Total PM2.5 emissions shown in Column I are the sum of exhaust and fugitive dust emissions shown in columns J and K.

CO2e emissions are estimated by multiplying mass emissions for each GHG by its global warming potential (GWP), 1 , 25 and 298 for CO2, CH4 and N2O, respectively. Total CO2e is then estimated by summing CO2e estimates over all GHGs.

The CO2e emissions are reported as metric tons per phase.

Appendix B

Biological Technical Memorandum

BIOLOGICAL TECHNICAL MEMORANDUM

ROADWAY IMPROVEMENTS AND TRAFFIC SIGNAL INSTALLATION AT CORRAL HOLLOW ROAD AND LINNE ROAD INTERSECTION PROJECT

CML-5192(050)

CITY OF TRACY CIP NO. 72104

July 2022

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Acronyms and Abbreviations

ADA	Americans with Disabilities Act
AMMs	avoidance and minimization measures
BSA	Biological Study Area
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
City	City of Tracy
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Rank
CWA	Clean Water Act
ESA	Endangered Species Act
EO	Executive Order
F&G Code	California Fish and Game Code
Horizon	Horizon Water and Environment, LLC
IPaC	Information for Planning and Conservation
ISCC	California Invasive Species Council
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
Project	Traffic Signal Installation at the Corral Hollow Road and Linne Road Intersection Project
ROW	right of way
RWQCB	Regional Water Quality Board
SWRCB	State Water Resources Control Board
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
°F	degrees Fahrenheit
USGS	U.S. Geological Survey

1 Introduction and Project Description

1.1 Introduction

The Roadway Improvements for Traffic Signal Installation at the Corral Hollow Road and Linne Road Intersection Project (Project or proposed Project) is located in the City of Tracy (City) within San Joaquin County, California (see Figure 1). More specifically, the project site is located within the existing road grades at the intersection of Corral Hollow Road and Linne Road. Both roads will be widened at the intersection to provide both through lanes and right-turn lane pockets, which will require the acquisition of new right of way (ROW), as well as utility relocation. The Union Pacific Railroad (UPRR) runs perpendicular (east-west) to W. Linne Road directly north of the intersection, where it is crossed by Corral Hollow Road.

1.2 Purpose and Need

The proposed road widening and signalization along Corral Hollow Road would maintain road width consistency along Corral Hollow Road and increase the intersection level of service (LOS) at the intersection with W. Linne Road. Corral Hollow Road is currently being widened north of the intersection with W. Linne Road and private development will fund the widening east and south of the intersection. The Project would widen Corral Hollow Road to match the width of these other projects. The intersection of Corral Hollow Road currently operates at a deficient LOS. The improvements, including widening, addition of a dedicated turn lane, and addition of signalization, would improve the LOS. Intersection improvements would improve mobility, alleviate traffic congestion, and improve traffic efficiency along Corral Hollow Road.

1.3 Project Description

The proposed Project would make transportation improvements to Corral Hollow Road and Linne Road, within the intersection of the two roadways and within portions of adjacent parcels. Improvements would include widening Corral Hollow Road and Linne Road, and the addition of signals within the intersection.

Corral Hollow Road would be widened to two (2) travel lanes in each direction. These project improvements would start immediately north of the UPRR ROW and extend southerly to approximately 500 feet south of the intersection with W. Linne Road. Other improvements proposed along Corral Hollow Road would include the construction of a center median, curbs, and sidewalks. New sidewalk and curb and gutter would be installed on the westerly side of the roadway and at the two corners of the intersections. Standard sidewalks and curb ramps would be Americans with Disabilities Act (ADA) compliant. In addition, the driveways to the adjacent properties would be improved with new concrete driveways. A total of four new driveways would be installed.

A new retention basin (approximately 0.35 acres/15,400 square feet) would be installed adjacent to the southwest corner of the intersection and would require the removal of approximately 40 orchard trees. Other standard improvements would include the installation of new signage, roadway striping, and crosswalks. All roadway improvements would conform to Caltrans and City standards as applicable.

Minor improvements to W. Linne Road would be made, primarily in the westbound lanes. The road would be widened to enable paving and striping of a new right turn only lane. The existing left lane

would remain and be used as a left only lane to southbound Corral Hollow Road. The proposed Project would also install new traffic signals at the intersection of Corral Hollow Road and W. Linne Road as well as streetlights and a pre-signal north of the UPRR crossing for southbound traffic along Corral Hollow Road. Signals would be connected to existing infrastructure on the north side of Corral Hollow Road. Signal timing between the proposed traffic signal, the pre-signal, and raising and lowering of guard arms, would be created in coordination with UPRR.

Some ROW acquisitions would be required. In addition to the listed 40 orchard trees above, approximately 151 other trees would be removed, for new ROW and a temporary construction easement. The project would also require removal of some existing hardscape and fencing, grinding and matching with existing pavement grades, and utility relocation.

It should be noted that Corral Hollow Road is currently being widened north of the intersection and private development is anticipated to fund additional widening efforts to both roadways as development progresses and demand becomes known. Ongoing widening of Corral Hollow Road is occurring to the north, and the proposed Project would widen Corral Hollow Road to match the width of this and other improvements to the south of the Project site. This is intended to help ensure smooth traffic flow and avoid constriction that would occur under the existing alignment (from two lanes to a single lane).

1.3.1 Stormwater

The proposed Project would include new stormwater facilities and would utilize an approximate 0.35-acre retention basin to contain stormwater flows, promote water infiltration, and reduce potential for increased downstream stormwater flows.

1.3.2 Utilities

The proposed Project would tie into existing utilities for electrification of the new signals, streetlights, and other roadway and railroad crossings, as needed. As applicable, it would tie into existing water, stormwater, sewer, gas, electrical, and telecommunications utilities. Substantial alterations are not needed because the Project does not include new land uses. The proposed Project would realign the existing above ground utility lines and poles adjacent to the new roadways.

1.4 Construction

Some demolition, excavation, and grading would be required for this Project. Equipment that may be used to accomplish Project work is listed in Table 1 below. Some excavation to a maximum depth of 14 feet for the installation of traffic signal poles, six feet for the drainage feature, and four feet for road widening would be required only where these Project elements are proposed.

Table 1. Equipment

Bobcat/skid steer loader	Gradall (multi-purpose excavator)
Compactor (Ground)	Jackhammer
Concrete Mixer Truck	Pavement Scarifier/Roller
Concrete Saw	Pneumatic Tools
Crane or bucket truck	Truck (Dump/Flat Bed)
Dozer/Grader/Excavator/Scraper	

1.5 Biological Study Area

The Biological Study Area (BSA) includes the Corral Hollow Road and W. Linne Road intersection and adjacent areas (Figure 1). **Appendix A** provides representative site photographs.

2 Study Methods

2.1 Regulatory Requirements

2.1.1 Federal Endangered Species Act

The federal Endangered Species Act (ESA) is administered by the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS). Overall, NMFS is responsible for protection of ESA-listed marine species and anadromous fish species, while other listed species fall under USFWS jurisdiction.

2.1.2 California Endangered Species Act

The California Endangered Species Act (CESA) incorporates provisions that permit impacts to species listed in California as rare, threatened, or endangered. CESA declares that it is the policy of the State that State agencies should not approve projects that would jeopardize the continued existence of a species listed under CESA as endangered or threatened or result in the destruction or adverse modification of habitat essential to the continued existence of those species, if reasonable and prudent alternatives are available consistent with conserving the species or its habitat that would prevent jeopardy (California Fish and Game Code [CFGC] Section 2053).

Section 2080 of the CFGC prohibits the take of any species that is state-listed as endangered or threatened, or designated as a candidate for such listing. "Take" is defined by Section 86 of the California Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" an individual of a listed species. Under the CESA, the CDFW may issue an incidental take permit authorizing the take of listed and candidate species that is incidental to an otherwise lawful activity, subject to specified conditions.

2.1.3 Clean Water Act (CWA)

The federal Clean Water Act (CWA) provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. CWA requirements pertaining to the proposed project are described below.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S., must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Boards (RWQCB) administer the certification program in California.

Section 404 establishes United States Army Corps of Engineers (USACE) jurisdiction over fill materials in essentially all water bodies, including wetlands. All federal agencies are to avoid impacts to wetlands whenever there is a practicable alternative. Section 404 established a permit program administered by USACE regulating the discharge of dredged or fill material into waters of the U.S. (including wetlands).

Section 404 guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

2.1.4 Porter-Cologne Water Quality Control Act

The 1969 Porter–Cologne Water Quality Control Act (known as the Porter–Cologne Act) dovetails with the CWA. It established the State Water Resources Control Board (SWRCB) and divided the state into nine regions, each overseen by its own RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface water and groundwater supplies; however, much of the SWRCB's daily implementation authority is delegated to the nine RWQCBs, which are responsible for implementing CWA Sections 402 and 303[d]. In general, the SWRCB manages water rights and regulates statewide water quality, whereas RWQCBs focus on water quality within their respective regions.

The Porter–Cologne Act requires that the RWQCB develop water quality control plans (also known as Basin Plans) that designate beneficial uses of California's major surface-water bodies and groundwater basins and establish specific narrative and numerical water quality objectives for those waters. Beneficial uses represent the services and qualities of a waterbody (i.e., the reasons that the waterbody is considered valuable). Water quality objectives reflect the standards necessary to protect and support those beneficial uses. Basin Plan standards are primarily implemented by regulating waste discharges so that water quality objectives are met. Under the Porter–Cologne Act, Basin Plans must be updated every three years. Project activities that result in point-source discharges into state-regulated waters are subject to the RWQCB's Waste Discharge Requirements Program in order to ensure compliance with Basin Plan standards and water quality objectives.

2.1.5 Migratory Bird Treaty Act

The Migratory Bird Treaty with Canada, Mexico and Japan makes it unlawful to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid Federal permit. The federal Migratory Bird Treaty Act (MBTA) applies to the removal of nests occupied by migratory birds during the breeding season.

2.1.6 California Fish and Game Code

Section 3503

Section 3503 of the CFGC prohibit the take, possession, or needlessly destruction of a nest or eggs of any bird, except as otherwise provided by CFGC or any regulation made pursuant thereto.

2.1.7 Executive Order 13112 – Invasive Species

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States. The order defines invasive species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration guidance issued August 10, 1999 directs the use of the State's invasive species list, maintained by the California Invasive Species Council (ISCC) to define the invasive plants that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.2 Studies Required

2.3 Literature and Database Review

Biological resources and potential impacts were identified through a literature and database review. A literature review was used to develop a list of special-status plant and wildlife species and natural communities. For purposes of this evaluation, special-status species are those that are listed under or included in:

- the federal ESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- the California Endangered Species Act (CESA) as threatened, endangered, rare, or a candidate species;
- the California Native Plant Society (CNPS)'s California Rare Plant Rank (CRPR) designations as rare or endangered with ranks of 1A, 1B, 2A, 2B, or 3;
- Designated by CDFW as a California species of special concern; or
- Listed in the California Fish and Game (F&G) Code as a fully protected species (birds at Section 3511, mammals at Section 4700, reptiles and amphibians at Section 5050, and fish at Section 5515).

The following data sources on special-status species were queried:

- USFWS list of federally endangered and threatened species that may occur in the proposed Project, and/or may be affected by the proposed Project (USFWS 2022a);
- USFWS's Critical Habitat Portal (USFWS 2022b);
- National Wetland Inventory (NWI) results (USFWS 2022c);
- California Department of Fish and Wildlife's California Natural Diversity Database (CNDDB) queries for the nine U.S. Geological Survey (USGS) 7.5-minute Quadrangles surrounding and encompassing the BSA (Tracy, Veralis, Lathrop, Union Island, Clifton Court Forebay, Midway, Cedar Mountain, Lone Tree Creek, and Solyo);
- CNPS Inventory of Rare and Endangered Plants of California queries for the for the nine USGS 7.5-minute Quadrangles surrounding and encompassing the BSA; and
- eBird records for the study area (Cornell Lab of Ornithology 2022).

Results from the database queries are provided in **Appendix B**. A NMFS species list is not required, as the Proposed Project is outside of NMFS jurisdiction. Based on the results of the searches, preliminary field surveys were then conducted to evaluate the listed special-status plants, wildlife, and fish species and their potential to occur within the BSA, included in **Appendix C.**

Maps of existing biological resources, including an aerial photographic overview of the BSA (Figure 1), CNDDB special-status species occurrence records within five miles of the BSA (Figures 2 and 3), and critical habitat (Figure 4), were created based on the literature review. No critical habitat is present within the BSA.

2.4 Field Reviews

2.4.1 Survey Methods and Dates

Previous Surveys

Three surveys were conducted in 2018 for the Corral Hollow Road Widening Phase 2 Linne Road to I-580 Project. This road widening project overlaps the Proposed Project along Corral Hollow Road, and within the orchard. These surveys were conducted by Steve McMurtry of De Novo Planning Group to evaluate biological conditions within the project area (De Novo Planning Group 2020).

Current Survey

Horizon biologists Robin Hunter and Erica Caddell conducted a reconnaissance survey of the BSA on May 2, 2022. The survey was conducted on-foot in all accessible areas within BSA. Natural and anthropogenic features, land cover types, and the presence of common and special-status species were visually surveyed. Visual aids, such as binoculars, were used to better assess survey areas and wildlife species when appropriate.

2.5 Agency Coordination and Professional Contacts

No coordination with regulatory agencies has occurred.

3 Biological Study Area Description

3.1 Environmental Setting

3.1.1 Physical Conditions

Topography

Topography in the vicinity of the BSA is largely flat. Elevations in the BSA range from approximately 160-170 feet above mean sea level, sloping up towards the southwest (USGS 1981).

Climate

The study area has a Mediterranean climate characterized by cool, wet winters and hot, dry summers. Average temperatures range from a low of 36 degrees Fahrenheit (°F) in January to a high of 85°F in July (Natural Resources Conservation Service [NRCS] 2022a). Average annual precipitation is approximately 9.9 inches, with the majority of precipitation occurring from October through April (NRCS 2022a).

Soils

The Project area is underlain by Zacharias clay loam, 0 to 2 percent slopes (NRCS 2022b). This soil is not classified as a hydric soil (NRCS 2022c).

3.1.2 Land Use

The land uses in the vicinity of the BSA consist of a mix of agriculture, industrial, residential, and infrastructure (canals and airport). Residential uses are dominant to the north as new development is expanding southerly from the main City center. Residential development is located to the northwest of the Project site and additional homes are under construction. Further to the northwest the primary land use is agricultural production. To the southeast, south, and southwest, the Project is surrounded by a mix of land uses. This includes industrial uses for concrete production, the Tracy Municipal Airport, American Legion Park, the Tracy Water Treatment Plan, the northerly reach of the Delta Mendota Canal, and agricultural land.

Adjacent land uses to the north of Linne Road include highly disturbed roadway shoulder and the UPRR. This area is nearly devoid of vegetation and does not contain any structures. To the south of Linne Road is an industrial site with numerous buildings used for sand and gravel operations and manufacturing concrete products. To the southeast of the corner of Linne Road and Corral Hollow Road is a lot that is partially developed with three small single-story structures. The westerly side of this lot is adjacent to the eastern alignment of Corral Hollow Road. The northerly portion of the lot contains an undeveloped but disturbed area with an existing billboard. The southerly half of this parcel contains three structures. To the west of Corral Hollow Road is agricultural land that is cultivated with an orchard. There are above ground power lines strung on wooden power poles along both the southerly sides of Linne Road and the easterly side of Corral Hollow Road.

3.2 Biological Resources

3.2.1 Land Cover Types

This section describes habitats and land cover present within the BSA. The reconnaissance survey identified four land cover types in the study area: developed, landscaped, orchard, and ruderal. Vegetation within the study area was surveyed on foot. Botanical nomenclature follows the second edition of the Jepson Manual (Baldwin et al. 2012). The characteristics of each land cover type are described below.

Developed

Developed land cover includes W. Linne Road, Corral Hollow Road, adjacent driveways, and the UPRR tracks. Vegetation in these areas, if present at all, is usually sparse and dominated by opportunistic weedy herbaceous species. Wildlife species typically associated with developed areas include striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), and Virginia opossum (*Didelphis virginiana*).

Landscaped

Landscaped areas of the BSA are characterized by ornamental vegetation. Due to its close proximity to the more expansive developed areas, wildlife associated with landscaped vegetation is the same as associated developed cover.

Orchard

An almond (*Prunus dulcis*) orchard is present in the western portion of the BSA. The understory vegetation that would provide food and cover for wildlife is sparse in this orchard, limiting the abundance and diversity of wildlife species that may be found there. Species such as the side-blotched lizard (*Uta stansburiana*), pocket gopher (*Thomomys bottae*), squirrel (*Citellus* spp.), and western brush rabbit (*Sylvilagus bachmani*) can occur in this habitat type.

Ruderal

Ruderal vegetation is characterized by non-native forbs and grasses in a disturbed habitat typically along the edges of development or areas with frequent anthropogenic impacts (e.g., mowing/discing). This vegetation type is present to the north of the orchard and in the disced field located to the southeast of the intersection.

3.2.2 Aquatic resources

No aquatic resources were present within the BSA. A rock-lined constructed detention basin is located just outside the BA, to the northwest of the intersection.

3.2.3 Invasive species

Table 2 identifies the invasive species observed in BSA during the field survey. The species listed in the table were observed at numerous locations in the BSA and are considered invasive based on the ISCC invasive plant species list.

Table 1: Invasive Species Observed in the BSA

Scientific Name	Common Name	Cal-IPC Ranking*
Bromus madritensis ssp. rubens	red brome	High
Carduus pycnocephalus	Italian thistle	Moderate
Centaurea solstitialis	yellow star thistle	High
Convolvulus arvensis	field bindweed	Not listed
Festuca perennis	Italian ryegrass	Moderate
Hordeum murinum	Foxtail barley	Moderate
Lactuca serriola	Prickly lettuce	Not listed
Malva parviflora	Cheeseweed mallow	Not listed

* California Invasive Plant Council (Cal-IPC) ranking for ecological impacts.

3.2.4 Habitat Connectivity

Habitat within and in the vicinity of the BSA is largely isolated, and connectivity is substantially restricted due to the surrounding land uses. The BSA is largely developed, landscaped, disturbed, or in orchard cultivation. The overall degree of noise and human presence and activity within and adjacent to the BSA further reduces the quality of habitat within the BSA.

3.3 Special-Status Species

3.3.1 Plants

Special-status plants known to occur in the vicinity of the BSA were evaluated for their potential to occur (**Appendix C**). No special-status plants are anticipated to occur in the BSA.

3.3.2 Wildlife

Special-status wildlife known to occur in the vicinity of the BSA were evaluated for their potential to occur are described in detail in Appendix C and summarized below. Additional detail is provided in Chapter 4.

San Joaquin kit fox (*Vulpes macrotis mutica*) is known to occur in the vicinity of the BSA (Figure 3). Burrowing owl (*Athene cunicularia*) and Swainson's hawk (*Buteo swainsoni*) are known to occur at several locations within 5 miles of the Proposed Project (Figure 3). A Swainson's hawk was also observed perching on a power pole in the BSA during the May reconnaissance survey.

Several species of special-status bats may forage over the BSA, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), and western mastiff bat (*Eumops perotis californicus*).

3.3.3 Critical Habitat

No Critical Habitat is designated within the study area (USFWS 2022b).

3.4 Regional Species and Habitats and Natural Communities of Concern

This section describes special-status species, their habitats, their potential to occur within the BSA. Table 3 includes the species that have potential to occur in the BSA. Complete lists of all special-status plant, wildlife, and fish species considered are included in Appendix C.

Table 2: Species with Potential to Occur.

Scientific Name **Common Name**	**Status (Federal / State)**	**General Habitat Description**	**Potential to Occur at the Project Site** **Effect Finding for Federally Listed Species**
Vulpes macrotis mutica San Joaquin kit fox	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing and suitable prey base.	**May occur.** No dens were observed during the May 2022 reconnaissance survey; however, this species is known from the vicinity of the BSA and could travel through the BSA. **May affect, not likely to adversely affect.**
Buteo swainsoni Swainson's Hawk	-/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Present.** Potentially suitable foraging habitat is present in the vicinity of the BSA. This species is not anticipated to nest within the BSA, but may nest in the vicinity. No suitable nest trees are present within the BSA. One individual observed perching in the BSA during the May 2022 reconnaissance survey.
Athene cunicularia burrowing owl	-/SCC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	**May occur.** Potentially suitable foraging habitat is present and there are known CNDDB occurrences within 5 miles of the BSA (CDFW 2022). The BSA is not anticipated to provide suitable nesting habitat due to the lack of burrows observed during May 2022 reconnaissance survey.

Scientific Name **Common Name**	**Status (Federal / State)**	**General Habitat Description**	**Potential to Occur at the Project Site** **Effect Finding for Federally Listed Species**
Antrozous pallidus pallid bat	-/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	**Possible.** Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.
Corynorhinus townsendii Townsend's big-eared bat	-/SCC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. This species generally roosts in caves, abandoned mines, and occasionally buildings and is extremely sensitive to human disturbance (Pierson and Rainey 1998).	**May occur.** Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.
Eumops perotis californicus western mastiff bat	-/SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	**May occur.** Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.

Status Legend

Federal:

FE = federally listed as endangered

- = no listing status

State

ST = state threatened

SSC = species of special concern

4 Results: Biological Resources, Discussion of Impacts and Mitigation

4.1 Habitats and Natural Communities of Special Concern

Natural communities of special concern include those that are regulated by federal, state, or local jurisdictions, have limited distributions, and/or support populations of special-status plants or wildlife. Federal and state agencies also consider wetlands and waters of the United States as features of special concern. No natural communities of special concern, wetlands, or waters of the United States were identified within the BSA. Therefore, no impacts would occur.

4.2 Critical Habitat

USFWS and NMFS designated critical habitat to protect areas that are essential to the survival of federally listed species of plants and wildlife. No critical habitat is present within the BSA. Therefore, no impacts would occur.

4.3 Special Status Plant Species

Many special-status plant species were identified by the CNDDB, CNPS, and USFWS databases as having potential to occur in the region (see Appendix B). However, no special-status plant species are expected to occur in the BSA due to the lack of suitable habitat. No special-status plant species were observed during the biological reconnaissance-level survey, or in previous surveys conducted within the BSA. Since special-status plant species are not expected to occur within the BSA, the Project would not impact any special-status plants.

4.4 Special Status Animal Species

The CNDDB and USFWS databases identified special-status wildlife species that have potential to occur in the region (see Appendix B). Based on the observations made during the biological reconnaissance-level surveys, all but eight species were determined to have no potential or were not expected to occur within the BSA due to the lack of suitable habitat. The special-status species with potential to occur include San Joaquin kit fox, Swainson's hawk, burrowing owl, pallid bat, Townsend's big-eared bat, and western mastiff bat.

4.4.1 San Joaquin Kit Fox

Survey Results

The BSA is mainly comprised of roadways and orchard. These areas may be utilized by San Joaquin kit fox for dispersal and occasional foraging, but are generally not suitable for extended periods of occupation (USFWS 2010). No dens were observed during reconnaissance surveys. Due to the very limited extent of suitable habitat, this species is considered unlikely to occur in the BSA.

Project Impacts

Although it is unlikely that San Joaquin kit fox would occur within the BSA, construction activities could create temporary barriers to movement and dispersal of this species.

Avoidance and Minimization Efforts

Potential impacts to San Joaquin kit fox would be minimized by implementing Avoidance and Minimization Measure (AMM)-1, which requires pre-construction surveys for San Joaquin kit fox dens and additional avoidance or minimization measures.

AMM-1: Avoid and Minimize Impacts to San Joaquin kit fox:

- A qualified biologist will conduct preconstruction surveys no less than 14 days and no more than 30 days before the commencement of activities to identify potential dens more than 5 inches in diameter within 200 feet of ground disturbing activities. The City will implement USFWS' (2011) Standardized Recommendations for Protection of San Joaquin Kit Fox Prior to or During Ground Disturbance. The City will notify USFWS in writing of the results of the preconstruction survey within 30 days after these activities are completed.
- If potential dens are located within the proposed work area and cannot be avoided during construction activities, a USFWS-approved biologist will determine if the dens are occupied. If occupied dens are present within the proposed work, their disturbance will be avoided. Exclusion zones will be implemented following the most current USFWS procedures (currently USFWS 2011). The City will notify USFWS immediately if a natal or pupping den is found in the survey area, and will present the results of pre-activity den searches within 5 days after these activities are completed and before the start of construction activities in the area.

Compensatory Mitigation

No compensatory mitigation is necessary because impacts to San Joaquin kit fox would be avoided through the implementation of AMM-1.

4.4.2 Swainson's Hawk

Survey Results

A Swainson's hawk was observed perching on a power pole in the BSA during the May reconnaissance survey. No suitable nesting habitat for this species is present within the BSA. Marginally suitable nesting habitat is present in the tree located to the northeast of the intersection of Corral Hollow Road and the Delta Mendota Canal, to the southeast of the BSA. Trees that provide marginally suitable nesting habitat area also present in the residential development to the north of W. Linne Road. This species may also forage within or adjacent to the BSA.

Project Impacts

Although no nesting habitat is present within the BSA, this species could nest in the marginally suitable habitat that is present within ½ mile of the BSA. Construction could disturb nesting Swainson's hawk through generation of noise or visual distraction. No suitable nesting habitat would be removed by the Project.

The Project would not remove foraging habitat for Swainson's hawk, but would result in temporary noise and visual disturbance during construction that could cause these species to avoid foraging within or adjacent to the BSA. Due to the large amount of foraging habitat available in the region, this would not be a significant impact.

Avoidance and Minimization Efforts

Implementation of AMM-2 would minimize impacts on Swainson's hawk.

> **AMM-2: Conduct Swainson's Hawk Surveys**
>
> If construction occurs between February 1 and August 31, the City or its contractor(s) shall require that a qualified biologist conduct surveys no more than 10 days before the start of construction for Swainson's hawk in accordance with the recommended timing and methodology developed by the Swainson's Hawk Technical Advisory Committee (2000 or most recent). Surveys will cover a minimum ½-mile radius around the construction area. If nesting Swainson's hawk are detected, buffers shall be established around active nests that are sufficient to ensure that breeding is not likely to be disrupted or adversely affected by construction. Buffers around active nests will be ½ mile unless a qualified biologist determines, based on a site-specific evaluation, that a smaller buffer is sufficient to avoid impacts on nesting raptors. Factors to be considered when determining buffer size include the presence of natural buffers provided by vegetation or topography, nest height, locations of foraging territory, and baseline levels of noise and human activity. Buffers shall be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival.

Compensatory Mitigation

No compensatory mitigation is necessary because impacts to Swainson's hawk would be avoided through the implementation of AMM-2.

4.4.3 Burrowing Owl

Survey Results

No burrows potentially suitable for burrowing owl were observed during reconnaissance surveys, and no burrowing owls, whitewash, or other evidence of occupation by burrowing owls was observed. Burrowing owl could forage within the vicinity of the BSA. However, this species may disperse and colonize suitable habitat within the BSA.

Project Impacts

If present in the vicinity of the BSA, construction could disturb burrowing owls through noise, visual distraction, or direct impacts to occupied habitat.

Avoidance and Minimization Efforts

Implementation of AMM 3 would minimize the potential for impacts on burrowing owls

> **AMM-3: Nesting Bird Avoidance:**
>
> To the extent feasible, construction activities should be scheduled to avoid the nesting season. If Project activities are scheduled to take place outside the nesting season, impacts to nesting

birds protected under the MBTA and California Fish and Game Code would be avoided. The nesting season for most birds in San Joaquin County extends from February 1 through August 31. If it is not possible to schedule Project activities outside the nesting season, then the following measures will be implemented:

- A qualified biologist will conduct pre-construction surveys for nesting birds. These surveys shall be conducted no more than seven days prior to the initiation of Project activities, including tree and vegetation removal. During these surveys, the biologist shall inspect all trees and other potential nesting habitats (e.g., shrubs, ruderal areas, burrows, and structures) in and immediately adjacent to the construction areas for nests.
- If an active nest is found sufficiently close to work areas to be disturbed by these activities, a non-disturbance buffer zone will be established around the nest at the biologist's discretion and in accordance with regulatory permits and conditions to ensure that no nests of special-status species or species protected by the MBTA and California Fish and Game Code shall be disturbed during Project implementation. Buffers zones will remain until the birds have fledged or the nest is no longer active as determined by a qualified biologist.

Compensatory Mitigation

No compensatory mitigation is necessary because impacts to burrowing owl would be avoided through the implementation of AMM-3.

4.4.4 Special-status Bats

Survey Results

Several species of special-status bats may forage over the BSA, including pallid bat, Townsend's big-eared bat, and western mastiff bat. Suitable roosting habitat for these species is not present within the BSA.

Project Impacts

Construction of the Project is anticipated to have minimal impacts on bat foraging, and no impacts on bat roosting. Therefore, impacts would not be significant and no avoidance or minimization measures or compensatory mitigation would be required.

4.5 Nesting Birds

Migratory birds and their occupied nests, young, and eggs are protected under federal and state laws. The BSA and immediately surrounding area includes a few trees and shrubs that provide suitable nesting habitat for a variety of bird species protected under the CFGC and the MBTA.

4.5.1 Survey Results

Two inactive nest structures were observed in a shrub within the BSA during the May 2022 survey. Trees and shrubs within and adjacent to the BSA provide suitable nesting substrate for bird species protected by MBTA.

4.5.2 Project Impacts

Impacts to active nests belonging to MBTA- and CFGC-protected bird species could occur throughout the BSA and immediately surrounding nesting substrate from construction activities. Indirect effects including project-related noise and vibration generated from nearby construction activities may disrupt nesting activity or nest fitness that could result in nest abandonment, potentially to the point of nestling mortality. Suitable nesting substrate occurs in shrubs and trees in and surrounding the BSA, and MBTA-protected bird species could nest within and adjacent to the BSA. Therefore, active nests of MBTA-protected species could be impacted by the Project.

4.5.3 Compensatory Mitigation

No compensatory mitigation is necessary because impacts to nesting birds would be avoided through the implementation of AMM-3.

4.5.4 Avoidance and Minimization Efforts

Active bird nests protected by CFGC sections 3503 and 3503.5, as well as the MBTA will be avoided through the implementation of AMM-3

5 Summary and Conclusions

5.1 Federal Endangered Species Act Consultation Summary

Horizon biologists obtained a USFWS list of federally listed species potentially occurring in the BSA and vicinity on April 27, 2022, available in **Appendix B**. Additionally, the biologists obtained CNDDB and CNPS lists of special-status species occurrences in the BSA and surrounding vicinity, including federally listed species, prior to biological surveys. No other coordination with USFWS has occurred. This Project is located outside of NMFS jurisdiction; therefore, a NMFS species list is not required and no effects to NMFS species would occur.

Evaluations of federally listed species resulted in one species with a "may affect, but not likely to adversely affect" determination. The Project may affect, but is not likely to adversely affect San Joaquin kit fox. AMMs are proposed that would avoid and minimize effects on San Joaquin kit fox resulting from construction of the Project. No other federally-listed species will be impacted by this Project. Full species tables are provided in **Appendix C**. No coordination with U.S. Fish and Wildlife Service has occurred.

5.2 Essential Fish Habitat Consultation Summary

No Essential Fish Habitat is present within the BSA. Therefore, no impacts would occur.

5.3 California Endangered Species Act Consultation Summary

Swainson's hawk is listed as threatened under CESA, and was observed within the BSA. With implementation of AMMs, the Project would not impact CESA-listed species. Therefore, an Incidental Take Permit is not required. No consultation with CDFW has occurred to date.

5.4 Wetlands and Other Waters Coordination Summary

No wetlands or other waters are present within the BSA; therefore, no coordination is required.

5.5 Other

5.5.1 Migratory Bird Treaty Act

The Migratory Bird Treaty Act protects migratory bird nests from disturbances that leads to nest abandonment and/or loss of nest success. CFGC sections 3503 and 3503.5 also protect active bird nests from being taken, possessed, or needlessly destroyed. Birds have potential to nest within trees and structures within the BSA; however, the implementation of AMM-3 ensures that active nests are avoided by project-related disturbance. Project activities will avoid the nesting season (February 1 to August 31) to the extent feasible. Should Project activities be required to occur during the nesting season, a pre-construction survey will identify active nests and establish no disturbance buffers. Therefore, the Project will have no effect on active bird nests protected by the MBTA or CFGC section 3503 and 3503.5.

6 References

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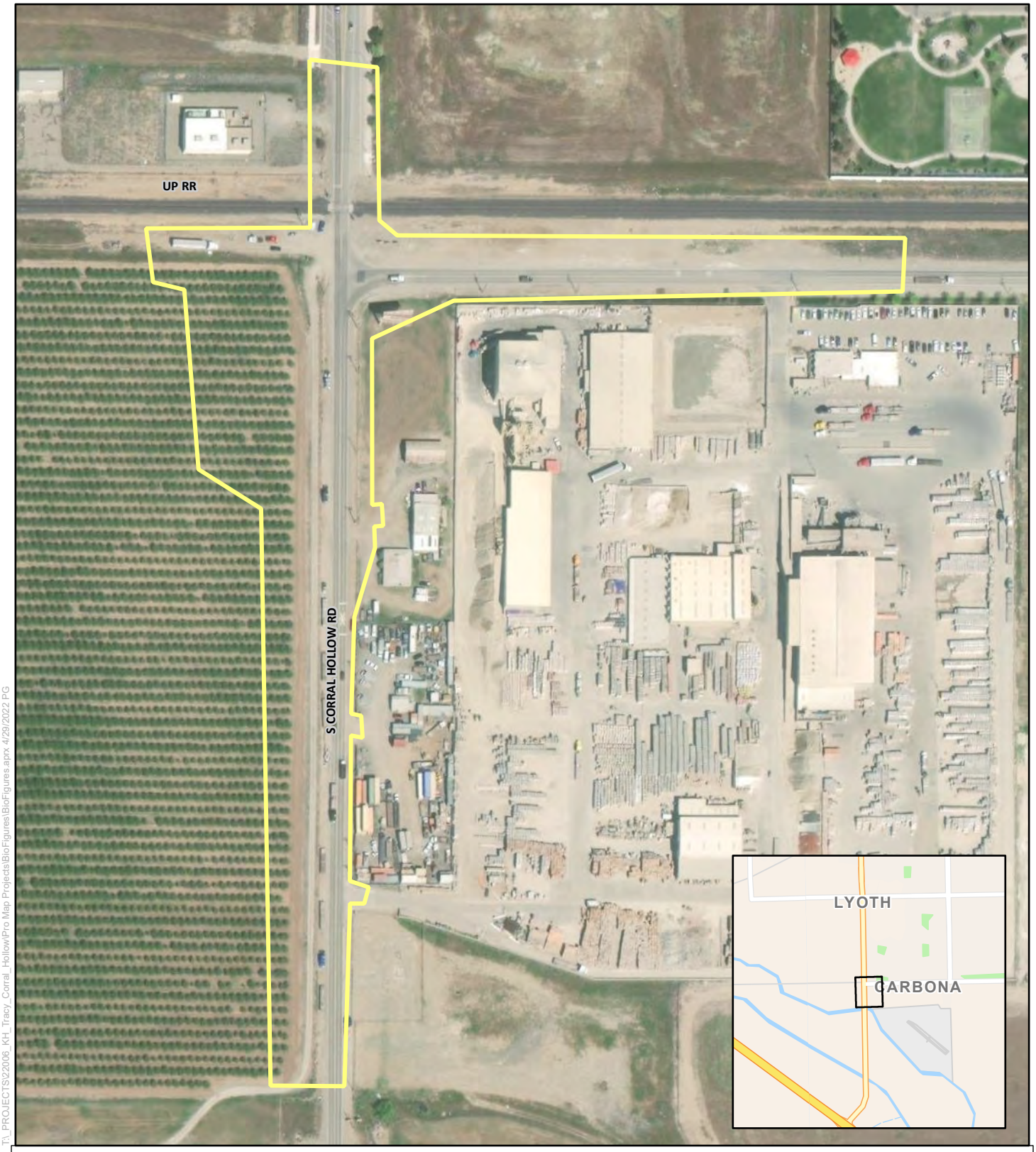
Figures



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Notes: USGS 7.5" Oakland West Quad; T1S, R4W, Section 27; 1.72-Acre Project Area

N

0 100 200
Feet

Figure 1
Project Limits

Horizon WATER and ENVIRONMENT

Tracy Corral Hollow/
Linne Rd Project

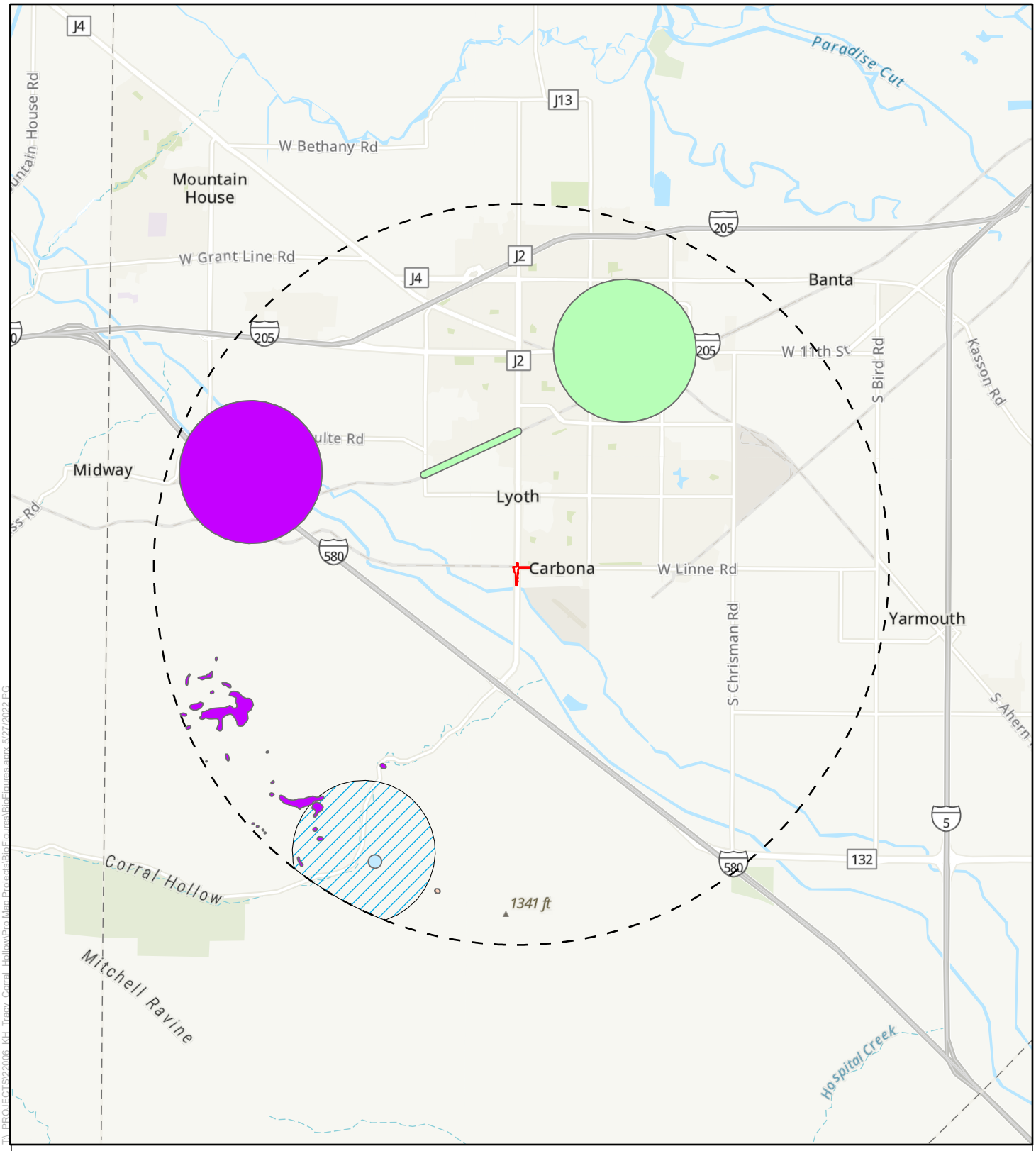
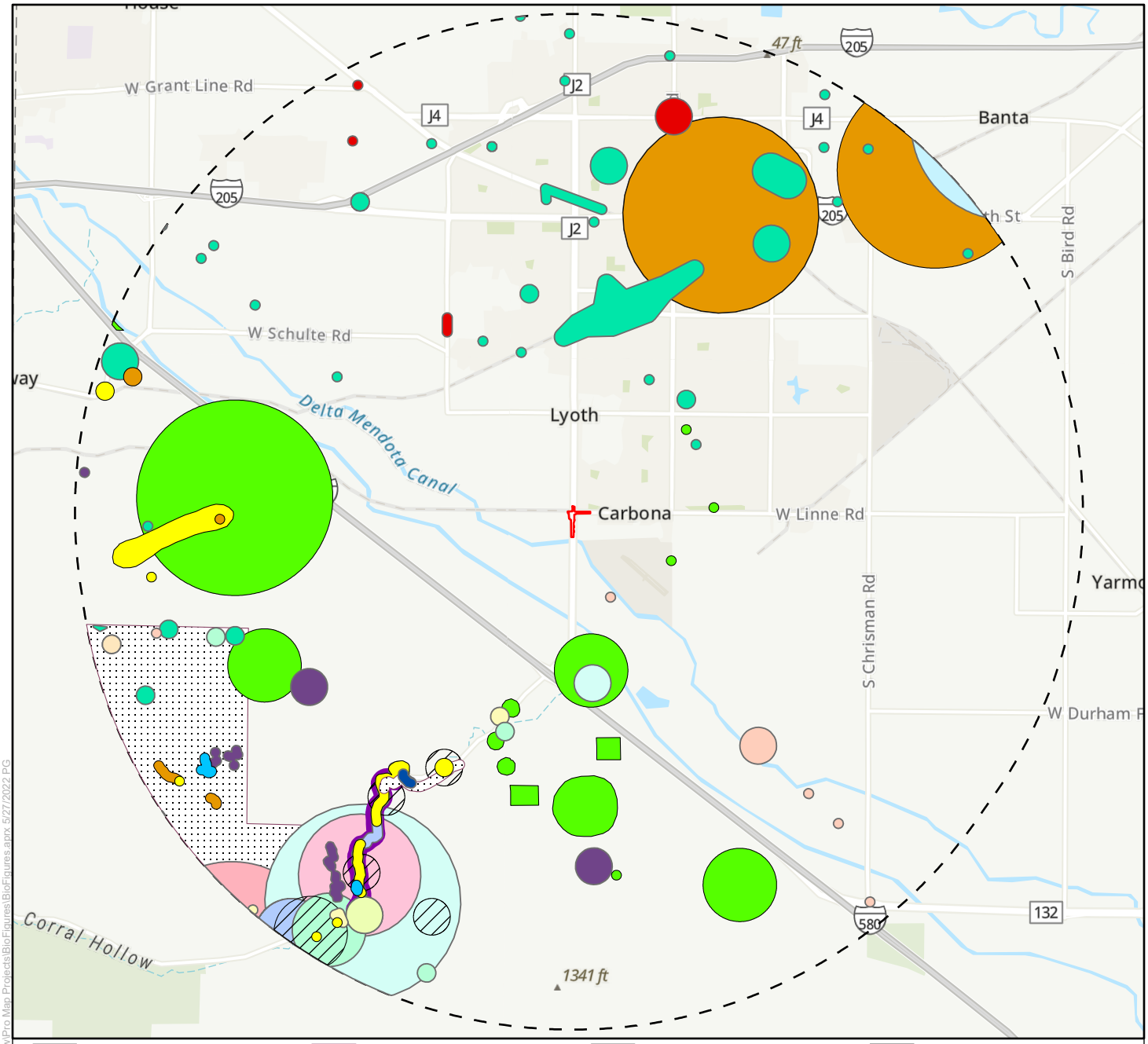


Figure 2
Special-Status Plant Occurrences

Tracy Corral Hollow



- American badger
- California glossy snake
- California horned lark
- California red-legged frog
- California tiger salamander - central California DPS
- Crotch bumble bee
- San Joaquin coachwhip
- San Joaquin kit fox
- San Joaquin pocket mouse
- Swainson's hawk
- Townsend's big-eared bat
- burrowing owl
- coast horned lizard
- ferruginous hawk
- foothill yellow-legged frog
- least Bell's vireo
- pallid bat
- song sparrow ("Modesto" population)
- tricolored blackbird
- valley elderberry longhorn beetle
- western mastiff bat
- western pond turtle
- western spadefoot

Source: CDFW CNDDB, May 2022 update.

Figure 3
Special-Status Wildlife Occurrences

N

0 1 2
Miles

Project Area
5-mile Buffer

Horizon WATER and ENVIRONMENT

Tracy Corral Hollow

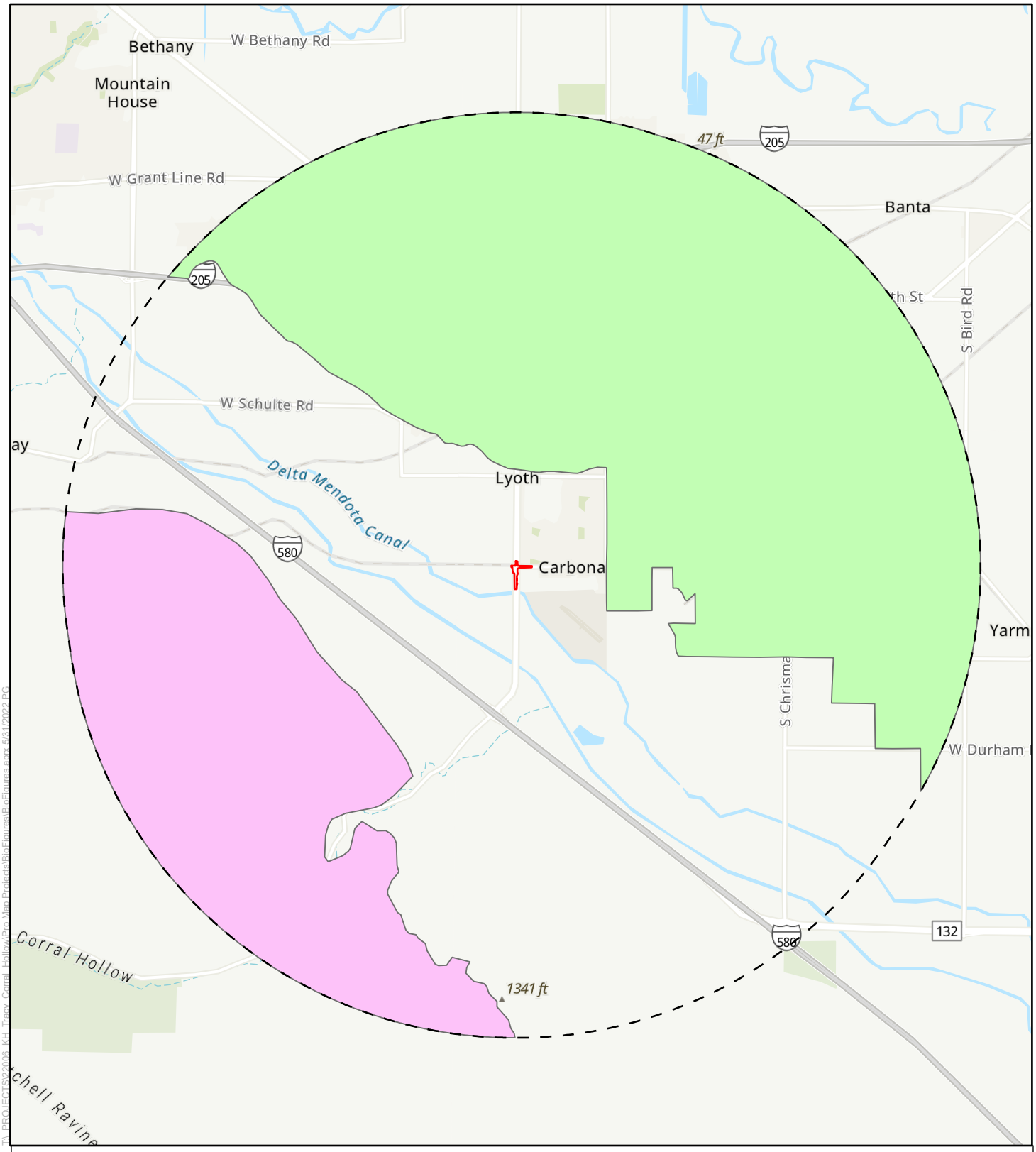


Figure 4
Critical Habitat

Horizon WATER and ENVIRONMENT

Tracy Corral Hollow

Appendix A
Site Photographs

Appendix A. Site Photographs

Photo No. 1	Date: 5/2/2022

Description:
The Biological Study Area (BSA) facing west and on the south side of W. Linne Road. A recently disced field shown to the left of the white fence.

Photo No. 2	Date: 5/2/2022

Description:
BSA, facing north and on the west side of Corral Hollow Road. An almond (*Prunus dulcis*) orchard pictured here spans the western side and stops at the intersection of W. Linne Road and Corral Hollow Road. Small burrows were identified along the berm pictured here on the left, parallel to Corral Hollow Road.

Appendix A. Site Photographs

Photo No. 3	Date: 5/2/2022

Description:
BSA, facing west and on the north side of W. Linne Road. Photo taken from the the BSA northeastern boundary line. Developed land cover dominates this area with sparse opportunistic weedy herbaceous species (not pictured) further east.

Photo No. 4	Date: 5/2/2022

Description:
BSA, facing west and on the south side of W. Linne Road. View from from near the BSA southeastern boundary line. Landscaped area of the BSA pictured here on the left.

Appendix A. Site Photographs

Photo No. 5	Date: 5/2/2022

Description: BSA, facing west and to the northwest of the intersection. This photo shows a rock-lined constructed detentioin basin visible in the foreground, just outside the BSA limits. No aquatic recources were present within the BSA.

Photo No. 6	Date: 5/2/2022

Description: BSA, facing west. An almond (*Prunus dulcis*) orchard visible on the left runs along the southwestern portion of the BSA, and north of the intersection.

Appendix B
USFWS, CNPS, and CNDDB Species Lists

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

San Joaquin County, California

Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

---

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
San Joaquin Kit Fox Vulpes macrotis mutica Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Reptiles

NAME	STATUS
Giant Garter Snake Thamnophis gigas Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander Ambystoma californiense There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle Desmocerus californicus dimorphus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS

Large-flowered Fiddleneck Amsinckia grandiflora Endangered

Wherever found

There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5558

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern https://www.fws.gov/program/migratory-birds/species
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your

project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Common Yellowthroat *Geothlypis trichas sinuosa* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Nuttall's Woodpecker *Picoides nuttallii* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20

Tricolored Blackbird *Agelaius tricolor* — Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Yellow-billed Magpie *Pica nuttalli* — Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

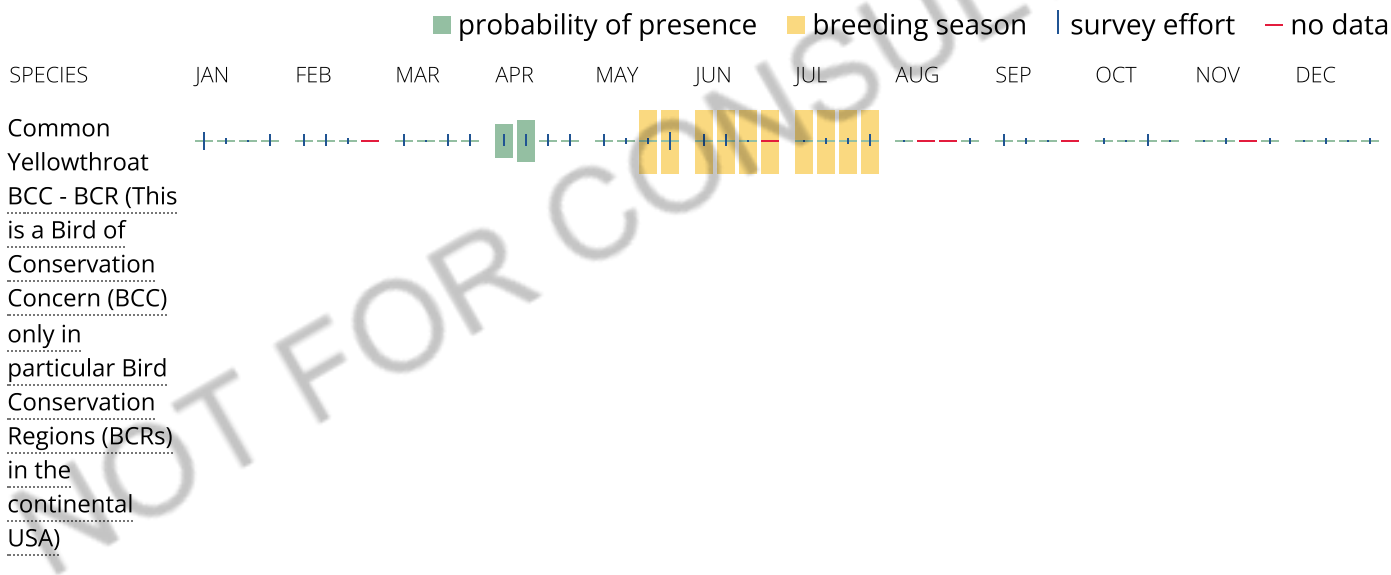
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

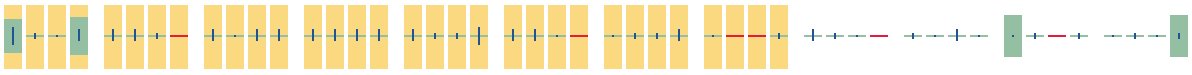
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

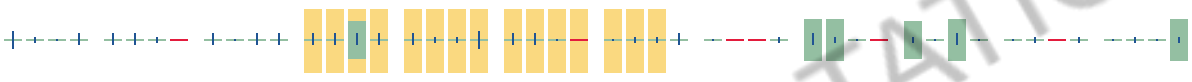
Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



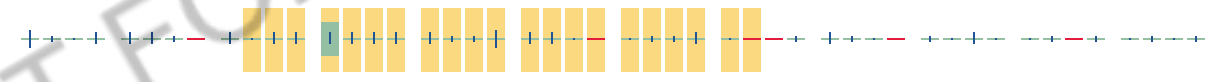
Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



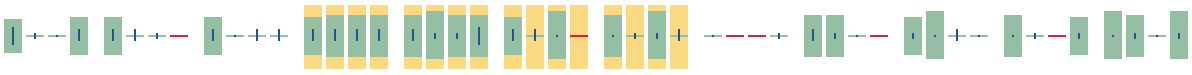
Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

WETLAND INFORMATION IS NOT AVAILABLE AT THIS TIME

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Tracy (3712164) OR Vernalis (3712163) OR Lathrop (3712173) OR Union Island (3712174) OR Clifton Court Forebay (3712175) OR Midway (3712165) OR Cedar Mtn. (3712155) OR Lone Tree Creek (3712154) OR Solyo (3712153))
 AND Taxonomic Group IS (Fish OR Amphibians OR Reptiles OR Birds OR Mammals OR Mollusks OR Arachnids OR Crustaceans OR Insects OR Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Allium sharsmithiae Sharsmith's onion	PMLIL02310	None	None	G2	S2	1B.3
Ambystoma californiense pop. 1 California tiger salamander - central California DPS	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
Ammodramus savannarum grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
Amsinckia grandiflora large-flowered fiddleneck	PDBOR01050	Endangered	Endangered	G1	S1	1B.1
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Anthicus sacramento Sacramento anthicid beetle	IICOL49010	None	None	G1	S1	
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Arizona elegans occidentalis California glossy snake	ARADB01017	None	None	G5T2	S2	SSC
Asio flammeus short-eared owl	ABNSB13040	None	None	G5	S3	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex cordulata var. cordulata heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
Blepharizonia plumosa big tarplant	PDAST1C011	None	None	G1G2	S1S2	1B.1
Bombus crotchii Crotch bumble bee	IIHYM24480	None	None	G2	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	None	G2G3	S1	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Branchinecta lynchi vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
Branchinecta mesovallensis midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
Buteo regalis ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL
Buteo swainsoni Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
Campanula exigua chaparral harebell	PDCAM020A0	None	None	G2	S2	1B.2
Caulanthus lemmonii Lemmon's jewelflower	PDBRA0M0E0	None	None	G3	S3	1B.2
Chlorogalum pomeridianum var. minus dwarf soaproot	PMLIL0G042	None	None	G5T3	S3	1B.2
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cirsium crassicaule slough thistle	PDAST2E0U0	None	None	G1	S1	1B.1
Cirsium fontinale var. campylon Mt. Hamilton thistle	PDAST2E163	None	None	G2T2	S2	1B.2
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Delphinium californicum ssp. interius Hospital Canyon larkspur	PDRAN0B0A2	None	None	G3T3	S3	1B.2
Delphinium recurvatum recurved larkspur	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Desmocerus californicus dimorphus valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eriastrum tracyi Tracy's eriastrum	PDPLM030C0	None	Rare	G3Q	S3	3.2
Eryngium racemosum Delta button-celery	PDAPI0Z0S0	None	Endangered	G1	S1	1B.1

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eryngium spinosepalum spiny-sepaled button-celery	PDAPI0Z0Y0	None	None	G2	S2	1B.2
Eschscholzia rhombipetala diamond-petaled California poppy	PDPAP0A0D0	None	None	G1	S1	1B.1
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Falco columbarius merlin	ABNKD06030	None	None	G5	S3S4	WL
Fritillaria falcata talus fritillary	PMLIL0V070	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hesperolinon breweri Brewer's western flax	PDLIN01030	None	None	G2	S2	1B.2
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
Hygrotus curvipes curved-foot hygrotus diving beetle	IICOL38030	None	None	G1	S1	
Hypomesus transpacificus Delta smelt	AFCHB01040	Threatened	Endangered	G1	S1	
Lanius ludovicianus loggerhead shrike	ABPBR01030	None	None	G4	S4	SSC
Leptosyne hamiltonii Mt. Hamilton coreopsis	PDAST2L0C0	None	None	G2	S2	1B.2
Lilaeopsis masonii Mason's lilaeopsis	PDAPI19030	None	Rare	G2	S2	1B.1
Limosella australis Delta mudwort	PDSCR10030	None	None	G4G5	S2	2B.1
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Madia radiata showy golden madia	PDAST650E0	None	None	G3	S3	1B.1
Malacothamnus hallii Hall's bush-mallow	PDMAL0Q0F0	None	None	G2	S2	1B.2
Masticophis flagellum ruddocki San Joaquin coachwhip	ARADB21021	None	None	G5T2T3	S2?	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia pop. 1 song sparrow ("Modesto" population)	ABPBXA3013	None	None	G5TNRQ	S3?	SSC
Navarretia nigelliformis ssp. radians shining navarretia	PDPLM0C0J2	None	None	G4T2	S2	1B.2
Neotoma fuscipes riparia riparian (=San Joaquin Valley) woodrat	AMAFF08081	Endangered	None	G5T1Q	S1	SSC
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Perognathus inornatus San Joaquin pocket mouse	AMAFD01060	None	None	G2G3	S2S3	
Phacelia phacelioides Mt. Diablo phacelia	PDHYD0C3Q0	None	None	G2	S2	1B.2
Phrynosoma blainvillii coast horned lizard	ARACF12100	None	None	G3G4	S3S4	SSC
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Spea hammondii western spadefoot	AAABF02020	None	None	G2G3	S3	SSC
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Sylvilagus bachmani riparius riparian brush rabbit	AMAEB01021	Endangered	Endangered	G5T1	S1	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thaleichthys pacificus eulachon	AFCHB04010	Threatened	None	G5	S2	
Trichocoronis wrightii var. wrightii Wright's trichocoronis	PDAST9F031	None	None	G4T3	S1	2B.1
Tropidocarpum capparideum caper-fruited tropidocarpum	PDBRA2R010	None	None	G1	S1	1B.1
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Vulpes macrotis mutica San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	
Xanthocephalus xanthocephalus yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 82

CNPS Rare Plant Inventory

California Native Plant Society

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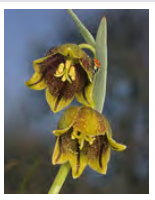
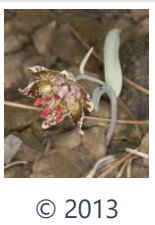
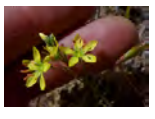
56 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [**3712173:3712153:3712163:3712174:3712175:3712154:3712155:3712164:3712165**]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	PHOTO
Acanthomintha lanceolata	Santa Clara thorn-mint	Lamiaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	 © 2005 Barry Breckling
Allium sharsmithiae	Sharsmith's onion	Alliaceae	perennial bulbiferous herb	Mar-May	None	None	G2	S2	1B.3	 © 2017 John Doyen
Amsinckia grandiflora	large-flowered fiddleneck	Boraginaceae	annual herb	(Mar)Apr-May	FE	CE	G1	S1	1B.1	 © 2015 Zoya Akulova
Androsace elongata ssp. *acuta*	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5? T3T4	S3S4	4.2	 © 2008 Aaron Schusteff
Aspidotis carlotta-halliae	Carlotta Hall's lace fern	Pteridaceae	perennial rhizomatous herb	Jan-Dec	None	None	G3	S3	4.2	No Photo Available
Astragalus tener var. *tener*	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	No Photo Available
Atriplex cordulata var. *cordulata*	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	 © 1994 Robert E. Preston, Ph.D.

Atriplex coronata var. *coronata*	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	 © 1994 Robert E. Preston, Ph.D.
Blepharizonia plumosa	big tarplant	Asteraceae	annual herb	Jul-Oct	None	None	G1G2	S1S2	1B.1	No Photo Available
Campanula exigua	chaparral harebell	Campanulaceae	annual herb	May-Jun	None	None	G2	S2	1B.2	No Photo Available
Caulanthus lemmonii	Lemmon's jewelflower	Brassicaceae	annual herb	Feb-May	None	None	G3	S3	1B.2	No Photo Available
Centromadia parryi ssp. *congdonii*	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	None	None	G3T2	S2	1B.1	No Photo Available
Chlorogalum pomeridianum var. *minus*	dwarf soaproot	Agavaceae	perennial bulbiferous herb	May-Aug	None	None	G5T3	S3	1B.2	No Photo Available
Cirsium crassicaule	slough thistle	Asteraceae	annual/perennial herb	May-Aug	None	None	G1	S1	1B.1	No Photo Available
Cirsium fontinale var. *campylon*	Mt. Hamilton thistle	Asteraceae	perennial herb	(Feb)Apr-Oct	None	None	G2T2	S2	1B.2	No Photo Available
Clarkia breweri	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2	No Photo Available
Clarkia concinna ssp. *automixa*	Santa Clara red ribbons	Onagraceae	annual herb	(Apr)May-Jun(Jul)	None	None	G5?T3	S3	4.3	No Photo Available
Convolvulus simulans	small-flowered morning-glory	Convolvulaceae	annual herb	Mar-Jul	None	None	G4	S4	4.2	No Photo Available
Delphinium californicum ssp. *interius*	Hospital Canyon larkspur	Ranunculaceae	perennial herb	Apr-Jun	None	None	G3T3	S3	1B.2	No Photo Available
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2?	1B.2	No Photo Available
Eriastrum tracyi	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	None	CR	G3Q	S3	3.2	 © 2012 Neal Kramer
Eriogonum	bay buckwheat	Polygonaceae	perennial herb	Jul-Sep	None	None	G5T3	S3	4.2	

umbellatum var. *bahiiforme*										No Photo Available
Eriophorum gracile	slender cottongrass	Cyperaceae	perennial rhizomatous herb (emergent)	May-Sep	None	None	G5	S4	4.3	 ©2011 Steven Perry
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	perennial herb	Apr-Jun	None	None	G3	S3	4.3	No Photo Available
Eryngium racemosum	Delta button-celery	Apiaceae	annual/perennial herb	(May)Jun-Oct	None	CE	G1	S1	1B.1	No Photo Available
Eryngium spinosepalum	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	No Photo Available
Eschscholzia hypecoides	San Benito poppy	Papaveraceae	annual herb	Mar-Jun	None	None	G4	S4	4.3	No Photo Available
Eschscholzia rhombipetala	diamond-petaled California poppy	Papaveraceae	annual herb	Mar-Apr	None	None	G1	S1	1B.1	No Photo Available
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G2	S2	1B.2	No Photo Available
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	None	None	G3	S3	4.2	 © 2016 Aaron Schusteff
Fritillaria falcata	talus fritillary	Liliaceae	perennial bulbiferous herb	Mar-May	None	None	G2	S2	1B.2	 © 2013 Aaron Schusteff
Galium andrewsii ssp. *gatense*	phlox-leaf serpentine bedstraw	Rubiaceae	perennial herb	Apr-Jul	None	None	G5T3	S3	4.2	 © 2021 Steve Matson
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	None	None	G2	S2	1B.2	 © 2013 Christopher Bronny
Hesperevax caulescens	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	

										© 2017 John Doyen
Hesperolinon breweri	Brewer's western flax	Linaceae	annual herb	May-Jul	None	None	G2	S2	1B.2	 © 2014 Neal Kramer
Hibiscus lasiocarpos var. *occidentalis*	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	None	None	G5T3	S3	1B.2	 © 2020 Steven Perry
Hoita strobilina	Loma Prieta hoita	Fabaceae	perennial herb	May-Jul(Aug-Oct)	None	None	G2?	S2?	1B.1	 © 2004 Janell Hillman
Lasthenia ferrisiae	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	 © 2009 Zoya Akulova
Leptosiphon ambiguus	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	 © 2010 Aaron Schusteff
Leptosyne hamiltonii	Mt. Hamilton coreopsis	Asteraceae	annual herb	Mar-May	None	None	G2	S2	1B.2	 ©2012 Aaron Schusteff
Lessingia tenuis	spring lessingia	Asteraceae	annual herb	May-Jul	None	None	G4	S4	4.3	 © 2020 Keir Morse
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	None	CR	G2	S2	1B.1	No Photo Available
Limosella australis	Delta mudwort	Scrophulariaceae	perennial stoloniferous herb	May-Aug	None	None	G4G5	S2	2B.1	 © 2020 Richard Sage
Madia radiata	showy golden madia	Asteraceae	annual herb	Mar-May	None	None	G3	S3	1B.1	No Photo Available
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial deciduous shrub	(Apr)May-Sep(Oct)	None	None	G2	S2	1B.2	

										© 2017 Keir Morse
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	None	None	G3G4	S3S4	3.2	 © 2008 Aaron Arthur
Microseris sylvatica	sylvan microseris	Asteraceae	perennial herb	Mar-Jun	None	None	G4	S4	4.2	No Photo Available
Myosurus minimus ssp. *apus*	little mousetail	Ranunculaceae	annual herb	Mar-Jun	None	None	G5T2Q	S2	3.1	No Photo Available
Navarretia nigelliformis ssp. *radians*	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr-Jul	None	None	G4T2	S2	1B.2	No Photo Available
Phacelia phacelioides	Mt. Diablo phacelia	Hydrophyllaceae	annual herb	Apr-May	None	None	G2	S2	1B.2	 ©2019 Steve Matson
Piperia michaelii	Michael's rein orchid	Orchidaceae	perennial herb	Apr-Aug	None	None	G3	S3	4.2	No Photo Available
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G3	S2	1B.2	No Photo Available
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	None	None	G3	S2	2B.2	No Photo Available
Spergularia macrotheca var. *longistyla*	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May	None	None	G5T2	S2	1B.2	No Photo Available
Trichocoronis wrightii var. *wrightii*	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	None	None	G4T3	S1	2B.1	No Photo Available
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	Mar-Apr	None	None	G1	S1	1B.1	No Photo Available

Showing 1 to 56 of 56 entries

Suggested Citation:

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Appendix C
Special-status Species Tables

Appendix C: Special-status Species Tables

Table C-1: Special-status Plants

Scientific/Common Name	Status (Federal/ State/CRPR)	Habitat	Potential to Occur in the Project Area
Amsinckia grandiflora large-flowered fiddleneck	FE/SE/1B.1	Cismontane woodland, valley and foothill grassland. Annual grassland in various soils. 275-550 meters.	None. Suitable habitat is not present in the BSA
Allium sharsmithiae Sharsmith's onion	-/-/1B.3	Chaparral, Cismontane woodland, ultramafic. Rocky, serpentine slopes. 425-975 meters.	None. Suitable habitat is not present in the BSA
Atriplex cordulata var. cordulata heartscale	-/-/1B.2	Chenopod scrub, valley and foothill grassland, meadows. Alkaline flats and scalds in the Central Valley, sandy soils. 0-560 meters. Blooms April to October.	None. Suitable habitat is not present in the BSA
Astragalus tener var. tener Alkali milk-vetch	-/-/1B.2	Alkali playa, valley and foothill grassland, vernal pools. Low ground, alkali flats, and flooded lands; in annual grassland or in playas or vernal pools. 0-170 meters.	None. Suitable habitat is not present in the BSA
Blepharizonia plumosa big tarplant	-/-/1B.1	Valley and foothill grassland. Dry hills and plains in annual grassland. Clay to clay-loam soils; usually on slopes and often in burned areas. 30-505 meters. Blooms July to October.	Not expected. Marginally suitable habitat is present in the BSA.
Campanula exigua chaparral harebell	-/-/1B.2	Chaparral. Rocky sites, usually on serpentine in chaparral. 90-1375 m.	None. Suitable habitat is not present in the BSA.
Caulanthus lemmonii Lemmon's jewelflower	-/-/1B.2	Pinyon and juniper woodland, valley and foothill grassland. 75-1,585 meters. Blooms February to May.	None. Suitable habitat is not present in the BSA.
Centromadia parryi ssp. Congdonii Congdon's tarplant	-/-/1B.1	Valley & foothill grassland. Alkaline soils, sometimes described as heavy white clay. 0-245 m.	None. Suitable habitat is not present in the BSA.

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State/CRPR)	Habitat	Potential to Occur in the Project Area
Chlorogalum pomeridianum var. minus dwarf soaproot	-/-/1B.2	Chaparral. Serpentine. 120-1220 m.	None. Suitable habitat is not present in the BSA.
Cirsium crassicaule slough thistle	-/-/1B.1	Chenopod scrub, marshes and swamps, riparian scrub. Sloughs, riverbanks, and marshy areas. 3-95 m.	None. Suitable habitat is not present in the BSA.
Cirsium fontinale var. campylon Mt. Hamilton thistle	-/-/1B.2	Cismontane woodland, chaparral, valley and foothill grassland. In seasonal and perennial drainages on serpentine. 75-890 m.	None. Suitable habitat is not present in the BSA.
Delphinium californicum ssp. Interius Hospital Canyon larkspur	-/-/1B.2	Cismontane woodland, chaparral, coastal scrub. In wet, boggy meadows, openings in chaparral and in canyons. 195-1095 m.	None. Suitable habitat is not present in the BSA.
Delphinium recurvatum Recurved larkspur	-/-/1B.2	Chenopod scrub, valley and foothill grassland, cismontane woodland. On alkaline soils; often in valley saltbush or valley chenopod scrub. 3-790 m.	None. Suitable habitat is not present in the BSA.
Eriastrum tracyi Tracy's eriastrum	-/SR/3.2	Chaparral, cismontane woodland, valley and foothill grassland. Gravelly shale or clay; often in open areas. 315-2400 m.	None. Suitable habitat is not present in the BSA.
Eryngium racemosum Delta button-celery	-/SE/1B.1	Riparian scrub. Seasonally inundated floodplain on clay. 3-75 meters. Blooms June to October.	None. Suitable habitat is not present in the BSA.
Eryngium spinosepalum Spiny-sepaled button-celery	-/-/1B.2	Vernal pools, valley and foothill grassland. Some sites on clay soil of granitic origin; vernal pools, within grassland. 15-1270 m.	None. Suitable habitat is not present in the BSA.
Eschscholzia rhombipetala diamond-petaled California poppy	-/-/1B.1	Valley and foothill grassland. Alkaline, clay slopes and flats. 30-625 meters. Blooms March to April.	None. Suitable habitat is not present in the BSA.

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State/CRPR)	Habitat	Potential to Occur in the Project Area
Extriplex joaquinana San Joaquin spearscale	-/-/1B.2	Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with Distichlis spicata, Frankenia, etc. 0-800 m.	None. Suitable habitat is not present in the BSA.
Fritillaria falcata Talus fritillary	-/-/1B.2	Chaparral, cismontane woodland, lower montane coniferous forest. Mostly on serpentine talus, but occasionally found on granitics. 425-1435 m.	None. Suitable habitat is not present in the BSA.
Helianthella castanea Diablo helianthella	-/-/1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland. Usually in chaparral/oak woodland interface in rocky, azonal soils. Often in partial shade. 45-1070 m.	None. Suitable habitat is not present in the BSA.
Hesperolinon breweri Brewer's western flax	-/-/1B.2	Chaparral, cismontane woodland, valley and foothill grassland. Often in rocky serpentine soil in serpentine chaparral and serpentine grassland. 195-910 m.	None. Suitable habitat is not present in the BSA.
Hibiscus lasiocarpos var. occidentalis woolly rose-mallow	-/-/1B.2	Marshes and swamps (freshwater). Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0-155 m.	None. Suitable habitat is not present in the BSA.
Hoita strobilina Loma Prieta hoita	-/-/1B.1	Chaparral, cismontane woodland, riparian woodland. Serpentine; mesic sites. 60-975 m.	None. Suitable habitat is not present in the BSA.
Leptosyne hamiltonii Mt. Hamilton coreopsis	-/-/1B.2	Cismontane woodland. On steep shale talus with open southwestern exposure. 535-1280 m.	None. Suitable habitat is not present in the BSA.
Lilaeopsis masonii Mason's lilaeopsis	-/-/1B.1	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.	None. Suitable habitat is not present in the BSA.

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State/CRPR)	Habitat	Potential to Occur in the Project Area
Limosella australis Delta mudwort	-/-/2B.1	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.	None. Suitable habitat is not present in the BSA.
Madia radiata showy golden madia	-/-/1B.1	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 75-1220 m.	None. Suitable habitat is not present in the BSA.
Malacothamnus hallii Hall's bush-mallow	-/-/1B.2	Chaparral, coastal scrub. Some populations on serpentine. 10-735 m.	None. Suitable habitat is not present in the BSA.
Micropus amphibolus Mt. Diablo cottonweed	-/-/3.2	Valley and foothill grassland, cismontane woodland, chaparral, broadleafed upland forest. Bare, grassy or rocky slopes. 45-825 m.	None. Suitable habitat is not present in the BSA.
Navarretia nigelliformis ssp. radians shining navarretia	-/-/1B.2	Cismontane woodland, valley and foothill grassland, vernal pools. Apparently in grassland, and not necessarily in vernal pools. 60-975 m.	None. Suitable habitat is not present in the BSA.
Phacelia phacelioides Mt. Diablo phacelia	-/-/1B.2	Chaparral, cismontane woodland. Adjacent to trails, on rock outcrops and talus slopes; sometimes on serpentine. 605-1345 m.	None. Suitable habitat is not present in the BSA.
Puccinellia simplex California alkali grass	-/-/1B.2	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernally mesic. Sinks, flats, and lake margins. 1-915 meters. Blooms March to May	None. Suitable habitat is not present in the BSA.
Senecio aphanactis Chaparral ragwort	-/-/2B.2	Chaparral, cismontane woodland, coastal scrub. Drying alkaline flats. 20-1020 m.	None. Suitable habitat is not present in the BSA.
Spergularia macrotheca var. longistyla Long-styled sand-spurrey	-/-/1B.2	Marshes and swamps, meadows and seeps. Alkaline. 0-220 m.	None. Suitable habitat is not present in the BSA.

Scientific/Common Name	Status (Federal/ State/CRPR)	Habitat	Potential to Occur in the Project Area
Trichocoronis wrightii var. wrightii Wright's trichocoronis	-/-/2B.1	Marshes and swamps, riparian forest, meadows and seeps, vernal pools. Mud flats of vernal lakes, drying river beds, alkali meadows. 5-435 m.	None. Suitable habitat is not present in the BSA.
Tropidocarpum capparideum Caper-fruited tropidocarpum	-/-/1B.1	Valley and foothill grassland. Alkaline clay. 0-360 m.	None. Suitable habitat is not present in the BSA.

Status Legend

Federal:

FE = federally listed as endangered

FT = federally listed as threatened

- = no listing status

State:

SE = state listed as endangered

SR = state designated as rare

CRPR (California Rare Plant Rank):

1B = Plants Rare, Threatened, or Endangered in California and Elsewhere

2B = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3 = Plants about which more information is needed, a review list

Threat Ranks =

0.1 = Seriously threatened in California

0.2 = Moderately threatened in California

Table C-2. Special-status Animal Species

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
Invertebrates			
Branchinecta lynchi vernal pool fairy shrimp	FT/-	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	**None.** Suitable habitat is not present in the BSA.
Danaus plexippus monarch butterfly	SC	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, cypress), with nectar and water sources nearby. Closed-cone coniferous forest.	**None.** Suitable habitat is not present in the BSA.
Desmocerus californicus dimorphus valley elderberry longhorn beetle	FT/-	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus mexicana*). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for "stressed" elderberries.	**None.** Suitable habitat is not present in the BSA. No elderberry plants are present.
Lepidurus packardi vernal pool tadpole shrimp	FE/-	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	**None.** Suitable habitat is not present in the BSA.
Amphibians and Reptiles			
Ambystoma californiense California tiger salamander	FT/ST, SSC	Central Valley distinct population segment (DPS) federally listed as threatened. Santa Barbara and Sonoma County DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	**Not expected.** Suitable aquatic habitat is not present in the BSA. The BSA is greater than 1.3 miles (migratory distance) from known occurrences of this species.
Anniella pulchra Northern California legless lizard	-/SSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential. They prefer soils with a high moisture content.	**None.** Suitable habitat is not present in the BSA.
Arizona elegans occidentalis California glossy snake	SSC	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular	**None.** Suitable habitat is not present in the BSA.

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
		ranges, south to Baja California. Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils.	
Emys marmorata western pond turtle	-/SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 1,830 meters elevation. Need basking sites and suitable upland habitat (sandy banks or grassy open fields) up to 0.5 kilometer from water for egg-laying.	None. Suitable habitat is not present in the BSA.
Masticophis flagellum ruddocki San Joaquin coachwhip	-/-/SSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and oviposition sites.	Not expected. Marginally suitable habitat is present in the BSA.
Masticophis lateralis euryxanthus Alameda whipsnake	FT/ST	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices or abundant rodent burrows, where shrubs form a vegetative mosaic with oak trees and grasses.	None. Suitable habitat is not present in the BSA.
Phrynosoma blainvillii Coast horned lizard	SSC	Frequents a wide variety of habitats, most common in lowlands along sandy washes with scattered low bushes. Open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	Not Expected. Marginally suitable habitat is present in the BSA.
Rana draytonii California red-legged frog	FT/SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	None. Suitable habitat is not present in the BSA.
Spea hammondii Western spadefoot toad	SSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	None. Suitable habitat is not present in the BSA.
Thamnophis gigas giant garter snake	FT/ST	Prefers freshwater marsh and low-gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	None. Suitable habitat is not present in the BSA.

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
Birds			
Agelaius tricolor Tricolored Blackbird	-/SC, SSC	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Not expected. Marginally suitable foraging habitat is present in the vicinity of the BSA. Suitable nesting habitat is not present. CNDDB known occurrences within 5 miles of the BSA (CDFW 2022).
Athene cunicularia burrowing owl	-/SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Possible. Potentially suitable foraging habitat is present and there are known CNDDB occurrences within 5 miles of the BSA (CDFW 2022). The BSA is not anticipated to provide suitable nesting habitat due to the lack of burrows observed during May 2022 reconnaissance survey.
Ammondramus savannarum Grasshopper sparrow	SSC	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes. Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	None. Suitable habitat is not present in the BSA.
Asio flammeus Short-eared owl	SSC	Found in swamp lands, both fresh and salt; lowland meadows; irrigated alfalfa fields. Tule patches/tall grass needed for nesting/daytime seclusion. Nests on dry ground in depression concealed in vegetation.	None. Suitable habitat is not present in the BSA.
Buteo swainsoni Swainson's Hawk	-/ST	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Present. Potentially suitable foraging habitat is present in the vicinity of the BSA. This species is not anticipated to nest within the BSA, but may nest in the

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
			vicinity. No suitable nest trees are present within the BSA. Observed one individual during reconnaissance survey May 2022.
Circus hudsonius Northern harrier	SSC	Coastal salt and freshwater marsh. Nest and forage in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation, usually at marsh edge; nest built of a large mound of sticks in wet areas.	None. Suitable habitat is not present in the BSA.
Coccyzus americanus occidentalis Western yellow-billed cuckoo	FT/SE	Riparian forest nester along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	None. Suitable habitat is not present in the BSA.
Elanus leucurus White-tailed kite	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Not expected. Marginally suitable foraging habitat is present in the vicinity of the BSA. Suitable nesting habitat is not present.
Lanius ludovicianus loggerhead shrike	-/SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	Not expected. Marginally suitable foraging habitat is present in the BSA.
Melospiza melodia Song Sparrow ("Modesto" population)	-/SSC	Emergent freshwater marshes, riparian willow thickets, riparian forests, and vegetated irrigation. Inhabits cattails (*Typha* spp.), bulrush (*Schoenoplectus* spp.) and other sedges; also known to frequent tangles bordering sloughs.	None. Suitable habitat is not present in the BSA.
Vireo bellii pusillus Least Bell's Vireo	FE/SE	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 610 meters (2,000 feet). Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, *Baccharis*, mesquite.	None. Suitable habitat is not present in the BSA.
Fish			

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
Hypomesus transpacificus Delta smelt	FT/SE	Sacramento–San Joaquin River Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 parts per thousand; most often at salinities < 2 parts per thousand.	None. Suitable habitat is not present in the BSA.
Oncorhynchus mykiss irideus steelhead – Central Valley DPS	FT/-	Populations in the Sacramento and San Joaquin Rivers and their tributaries.	None. Suitable habitat is not present in the BSA.
Mammals			
Antrozous pallidus Pallid bat	-/SSC	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Possible. Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.
Corynorhinus townsendii Townsend's big-eared bat	-/SSC	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. This species generally roosts in caves, abandoned mines, and occasionally buildings and is extremely sensitive to human disturbance (Pierson and Rainey 1998).	Possible. Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.
Eumops perotis californicus western mastiff bat	-/SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral. Roosts in crevices in cliff faces, high buildings, trees, and tunnels.	Possible. Suitable roosting habitat is not present in the BSA. This species may forage in the BSA.
Neotoma fuscipes riparia riparian (=San Joaquin Valley) woodrat	FE/SSC	Riparian areas along the San Joaquin, Stanislaus, and Tuolumne Rivers. Needs areas with mix of brush and trees. Needs suitable nesting sites in trees, snags, or logs.	None. Suitable habitat is not present in the BSA.
Sylvilagus bachmani riparius riparian brush rabbit	FE/SE	Riparian areas on the San Joaquin River in northern Stanislaus County. Dense thickets of wild rose, willows, and blackberries.	None. Suitable habitat is not present in the BSA.
Taxidea taxus American badger	-/SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not Expected. Marginally suitable habitat is present in the BSA. No dens were observed during the reconnaissance survey.

Appendix C: Special-status Species Tables

Scientific/Common Name	Status (Federal/ State)	Habitat	Potential to Occur in the Project Area
Vulpes macrotis mutica San Joaquin kit fox	FE/ST	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs loose-textured sandy soils for burrowing and suitable prey base.	**Possible.** No dens were observed during the May 2022 reconnaissance survey; however, this species is known from the vicinity of the BSA.

Status Legend

Federal:

FE = federally listed as endangered

FT = federally listed as threatened

- = no listing status

State:

SC = state candidate for listing as threatened or endangered

SE = state listed as endangered

SSC = California species of special concern

ST = state listed as threatened

FP = fully protected

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Appendix C

Historical Resources Evaluation Report

Appendix D

Archaeological Survey Report

Appendix E

Nosie Data

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/25/2022
Case Description: Grubbing/Land Clearing

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family Residential	Residential	55.5	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		65	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Multi Family Residential	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		330	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/25/2022
Case Description: Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family Residential	Residential	55.5	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		65	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Noise Limit Exceedance (dBA) Evening Lmax	Leq	Night Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Multi Family Residential	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		330	0

Results

Equipment	Calculated (dBA) *Lmax	Leq	Day Lmax	Leq	Evening Lmax	Leq	Night Lmax	Leq	Day Lmax	Leq	Noise Limit Exceedance (dBA) Evening Lmax	Leq	Night Lmax	Leq
Grader	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/25/2022
Case Description: Drainage/Utilities

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family Residential	Residential	55.5	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		65	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	82.7	78.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Multi Family Residential	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		330	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	68.6	64.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 7/25/2022
Case Description: Paving

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Single family Residential	Residential	55.5	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		65	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Multi Family Residential	Residential	55	55	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Tractor	No	40	84		330	0

Results

	Calculated (dBA)		Noise Limits (dBA)						Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Tractor	67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	67.6	63.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.