



DRAFT

ENVIRONMENTAL IMPACT REPORT

FOR THE

SINGH PETROLEUM INVESTMENTS
(SCH: 2022120596)

FEBRUARY 2024

Prepared for:

City of Lathrop, Community Development Department
390 Towne Centre Drive
Lathrop, CA 95330
(209) 858-2860

Prepared by:

De Novo Planning Group
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D e N o v o P l a n n i n g G r o u p

A Land Use Planning, Design, and Environmental Firm



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INTRODUCTION

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

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

PROJECT DESCRIPTION

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

- **Project Site (or Annexation Area)** – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road.

The Project site is comprised of flat land with ruderal grasses, fallow ground, a few trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf. The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north.

Implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators. The Phase I

site plan for the proposed Project is shown in Figure 2.0-7 and the Phase II site plan for the proposed Project is shown in Figure 2.0-8.

The proposed Project includes the following amenities:

- Fueling facilities offering 8 truck fuel islands and 8 car fuel islands;
 - Fuel tanks for both trucks and auto will be above ground with chain link fencing with privacy slats around the tanks.
- 246 truck/trailer spaces, 351 passenger vehicle spaces, 4 fueling and gas/diesel spaces, 18 electric vehicle spaces; and 16 ADA spaces;
- A 13,875-sf full service 4 bay truck repair shop;
- A 16,499-sf building that will include the following:
 - Office space;
 - Restroom facilities, 8 showers;
 - Laundry facility with 12 sets of washer/dryer;
 - Retail convenience store that will offer everyday products from truck accessories, toiletry supplies and a number of products for quick shopping needs for traveling and commuter customer base;
 - Dog run area enclosed with a metal fence
 - Two (2) quick service restaurants, one with a drive-thru option.
 - Seating area for patrons to dine.

Phase I of the Project will develop 18.61 acres out of the 19.63-acre Development Area. The Phase I area is designed as an interim basis until the future realignment of Manthey Road, future Roth Road, and interchange improvements for I-5 will be constructed. Phase I will account for the future right-of-way (ROW) dedication for these improvements. The 2.79-acre piece of property between Manthey Road and I-5 will not be part of the Phase I Project site and is identified as future ROW for future interchange improvements.

Phase II of the Project includes: (1) the realignment of Manthey Road from the existing configuration to run along the western boundary of the Project site with a new connection to Roth Road, (2) improvement of Roth Road to the north of the Project site, and (3) improvements of the interchange for I-5. No new buildings are proposed as part of the Phase II development. Portions of Phase I site and circulation-related improvements will be removed which will allow the future improvements to be constructed. Additional parking will also be added for the auto portion of the development to incorporate the abandonment of the old Manthey Road.

The principal objective of the proposed Project is the approval of the proposed Project that includes development of the 19.63-acre Development Area for regional travel serving uses.

See Chapter 2.0 for a complete Project Description.

AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

This Draft EIR addresses environmental impacts associated with the proposed Project that are known to the City of Lathrop, were raised during the NOP process, or raised during preparation of

the Draft EIR. This Draft EIR discusses potentially significant impacts associated with aesthetics, agricultural resources, air quality, biological resources, cultural and tribal resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use, noise, public services and recreation, transportation and circulation, and utilities.

Areas of controversy include the following:

- Loss of habitat for species;
- Pre- and post-project stormwater runoff and the potential drainage impacts to Interstate 5;
- Interstate 5 traffic queuing at the Roth Road interchange during the existing plus project and cumulative plus project conditions;
- Project related construction and operation emissions; and
- Potential impacts related to tribal resources.

The City of Lathrop received five written comment letters on the NOP for the proposed Project. A copy of the letters is provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below. The City also held a public scoping meeting on January 11, 2023.

- California Department of Transportation (January 19, 2023);
- Central Valley Regional Water Quality Control Board (January 20, 2023);
- San Joaquin Council of Governments (December 27, 2022);
- San Joaquin Valley Air Pollution Control District (January 19, 2023);
- State of California Native American Heritage Commission (December 29, 2022).

ALTERNATIVES TO THE PROPOSED PROJECT

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

1. **No Project (No Build) Alternative:** Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
2. **Reduced Project Size and Intensity Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would reduce the project size and overall intensity of commercial activity and circulation patterns. Changes include: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I.

3. **Revised Circulation Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road.
4. **Phase II Only Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the Phase I circulation, access and parking portions of the plan would not be approved. Changes include: 1) eliminating Phase I circulation, access and parking from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II.

Alternatives are described in detail in Chapter 5.0. See Figures 5.0-1 through 5.0-4 in Chapter 5.0.

Table ES-1 presents a comparison of the impacts from the proposed Project relative to the Alternatives.

TABLE ES-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>NO PROJECT (NO BUILD) ALTERNATIVE</i>	<i>REDUCED PROJECT SIZE AND INTENSITY ALTERNATIVE</i>	<i>REVISED CIRCULATION ALTERNATIVE</i>	<i>PHASE II ONLY ALTERNATIVE</i>
Aesthetics and Visual Resources	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Agricultural Resources	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Air Quality	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Slightly Less (4 th Best)
Biological Resources	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Cultural and Tribal Resources	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Geology and Soils	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2 nd Best)	Slightly Less (3 rd Best)	Equal (4 th Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Land Use and Population	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Noise	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Equal (4 th Best)
Public Services and Recreation	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Transportation and Circulation	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Slightly Less (4 th Best)
Utilities	Less (Best)	Less (2 nd Best)	Slightly Less (3 rd Best)	Equal (4 th Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT

LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT

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

As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the

environmentally superior alternative, the environmentally superior alternative among the others must be identified. The Reduced Project Size and Intensity Alternative would reduce or slightly reduce impacts related to 11 environmental issues and would have equal impacts related to three environmental issues. The Revised Circulation Alternative would reduce or slightly reduce impacts related to five environmental issues and would have equal impacts related to nine environmental issues. The Phase II Only Alternative would result slightly reduced impacts to two environmental issues and would have equal impacts related to 12 environmental issues. Therefore, the Reduced Project Size and Intensity Alternative would be the next environmentally superior alternative.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

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

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

TABLE ES-2: PROJECT IMPACTS AND PROPOSED MITIGATION MEASURES

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
AESTHETICS			
Impact 3.1-1: Project implementation would result in substantial adverse effects on scenic vistas	LS		--
Impact 3.1-2: Project implementation would not substantially damage scenic resources within a State Scenic Highway	LS		--
Impact 3.1-3 Project implementation would not conflict with the applicable zoning and other regulations governing scenic quality	LS		--
AGRICULTURAL RESOURCES			
Impact 3.2-1: The proposed Project would not 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 uses	LS		--
Impact 3.2-2: The proposed Project has the potential to involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural	LS		--

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

B – beneficial impact

SU – significant and unavoidable

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
AIR QUALITY			
Impact 3.3-1: Project operation could conflict with or obstruct implementation of the District's air quality plan	PS	<i>None feasible</i>	SU
Impact 3.3-2: The proposed Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is in nonattainment under an applicable federal or State ambient air quality standard	LS		--
Impact 3.3-3: The proposed Project could expose sensitive receptors to substantial pollutant concentrations	PS	<i>None feasible</i>	SU
Impact 3.3-4: The proposed Project would not cause exposure to other emissions (such as those leading to odors) adversely affecting a substantial number of people	LS		--
BIOLOGICAL RESOURCES			
Impact 3.4-1: The proposed Project would not have a substantial direct or indirect effect on special-status invertebrate species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of an	PS	<p>Mitigation Measure 3.4-1: <i>The Project applicant shall implement the following measure to avoid or minimize impacts on special-status bumble bees:</i></p> <ul style="list-style-type: none"> <i>A qualified biologist(s) shall conduct a preconstruction survey with 7 days of the commencement of work. If special-status bees of any species are observed, they shall be photographed for identification. If construction begins between March 1 and November 1, the ground shall also be searched during the survey for active bumble bee colonies. If bee colonies are identified, these colonies shall be</i> 	LS

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animal community, or a drop in population levels below self-sustaining levels		<i>demarcated with a flagged avoidance buffer, as determined by a qualified biologist and shall be avoided during the active season from March 1 through November 1, or until the qualified biologist has determined that the colony is no longer active or until the colony is relocated.</i>	
Impact 3.4-2: The proposed Project has the potential to have substantial direct or indirect effects on special-status reptile and amphibian species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a reptile or amphibian community, or a drop in population levels below self-sustaining levels	PS	Mitigation Measure 3.4-2: Prior to commencement of any grading activities, the Project proponent shall obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.	LS
Impact 3.4-3: The proposed Project has the potential to have substantial direct or indirect effects on special-status bird species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a bird community, or a drop in population levels below self-sustaining levels	PS	Implement Mitigation Measure 3.4-2.	LS
Impact 3.4-4: The proposed Project has the potential for substantial direct or indirect effects on special-status mammal species, including through substantial reduction of habitat, substantial reduction of the number or restriction of the range of a listed species, elimination of a	PS	Implement Mitigation Measure 3.4-2.	LS

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mammal community, or a drop in population levels below self-sustaining levels			
Impact 3.4-5: The potential for substantial direct or indirect effects on candidate, sensitive, or special-status plant species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a plant community, or a drop in population levels below self-sustaining levels	LS		--
Impact 3.4-6: The potential for substantial direct or indirect effects on candidate, sensitive, or special-status fish species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a fish community, or a drop in population levels below self-sustaining levels	LS		--
Impact 3.4-7: The potential to cause a substantial adverse effect on protected wetlands and jurisdictional waters	LS		--
Impact 3.4-8: The potential to result in adverse effects on riparian habitat or other sensitive natural community	NI		--
Impact 3.4-9: The potential to result in interference with the movement of any native	LS		--

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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			
Impact 3.4-10: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan	PS	Implement Mitigation Measure 3.4-2.	LS
Impact 3.4-11: The potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LS		--
CULTURAL AND TRIBAL RESOURCES			
Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5	PS	Mitigation Measure 3.5-1: <i>If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior’s Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural</i>	LS

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		<p><i>resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement.</i></p> <p><i>The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:</i></p> <ul style="list-style-type: none"> <i>• If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required.</i> <i>• If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section 15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by</i> 	

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		<p><i>the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City.</i></p> <ul style="list-style-type: none"> <i>If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the</i> 	

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		<p><i>California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.</i></p>	
Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries	PS	Implement Mitigation Measure 3.5-1.	LS
Impact 3.5-3: Project implementation has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074	PS	Implement Mitigation Measure 3.5-1.	LS
GEOLOGY AND SOILS			
Impact 3.6-1: The proposed Project may expose people or structures to potential substantial	LS		--

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adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides			
Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil	LS		--
Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse	PS	<p>Mitigation Measure 3.6-1: Prior to the start of ground disturbing activities, a geotechnical engineer shall review project improvement plans (including but not limited to grading plans and site plans) to identify potential conflicts and to verify that the recommendations contained in the Geotechnical Engineering Investigation completed for the project (CTE CAL, Inc., 2022) (Appendix D of the Draft EIR) are noted on project improvement plans. The recommendations are generally outlined in Mitigation Measure 3.6-2 while the complete recommendations are included in Chapter 5 of the Geotechnical Engineering Investigation.</p> <p>Mitigation Measure 3.6-1: All grading operations and construction shall be conducted in conformance with the recommendations included in the Geotechnical Engineering Investigation for Singh Petroleum Investments Percolation (CTE CAL, Inc., 2022) (Appendix D of the Draft EIR). Specific recommendations in the Geotechnical Engineering Investigation address the following and shall be incorporated into the final Project plans and construction-level geotechnical report:</p> <ol style="list-style-type: none"> 1. The Project proponent shall ensure that any loose, wet or otherwise unstable soil in the Project site shall be excavated and evaluated by Construction Testing & Engineering, Inc. (CTE) for possible re-use as engineered fill or disposed of offsite. Utilities that extend into the construction area and are scheduled to be abandoned shall be properly capped at the perimeter of the construction zone or moved as directed in the plans. A licensed Geotechnical Engineer shall observe and confirm 	LS

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		<p>that all asphalt and concrete debris, vegetation, and other organic material has been adequately removed in all proposed improvement areas.</p> <ol style="list-style-type: none"> 2. Reinforced continuous and isolated spread footing foundations shall be used to support the proposed structures as the subject site consistent with the recommendations provided in Section 5.4, Lateral Load Resistance, provided in the Geotechnical Engineering Investigation. 3. Shallow footings shall be designed to resist lateral loads using the coefficient of friction. 4. Free draining retaining walls backfilled using permeable onsite soils or import fill, shall be designed using the equivalent fluid weights consistent with the recommendations provided in Section 5.5, Retaining Walls, provided in the Geotechnical Engineering Investigation. 5. Utility trenches placed along the perimeter of proposed foundations shall be constructed consistent with Section 5.6, Foundation Setback, provided in the Geotechnical Engineering Investigation. 6. All concrete slabs-on-ground placed beneath the structures shall be constructed consistent with Section 5.7, Concrete Slabs-On-Grade, provided in the Geotechnical Engineering Investigation. 7. All pavements shall be designed and constructed according to California Department of Transportation (Caltrans) standards consistent with Section 5.9, Pavement Section Alternatives, recommendations provided in the Geotechnical Engineering Investigation. The subgrade beneath all pavements shall be moisture conditioned and compacted in accordance with Table 5.2 of the Geotechnical Engineering Investigation as per ASTM D1557. 	

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		<p>8. Ground conditions shall be consistent with Section 5.10, Drainage, provided in the Geotechnical Engineering Investigation.</p> <p>9. The project shall be consistent with Section 5.8, Seismic Design Criteria, provided in the Geotechnical Engineering Investigation.</p> <p>10. The exposed over excavated surface shall then be scarified to a depth of approximately 12 inches, moisture conditioned and recompacted to the moisture and relative compaction required in Table 5.2 of the Geotechnical Engineering Investigation. Moisture density relationship shall be established in accordance with ASTM D1557. The compaction percent listed in Table 5.2 shall be based on percent relative compaction when compared to the maximum dry density determined in accordance with ASTM D1557. Additional engineered fill, if required, shall then be placed in 8 inch loose lifts, moisture conditioned and compacted in accordance with Table 5.2.</p> <p>After stripping in pavement improvement areas is conducted, the stripped areas shall be over excavated to 12 inches below the proposed pavement subgrade. The excavated surface shall then be scarified to a minimum depth of 12 inches, moisture conditioned and recompacted to the moisture and relative compaction required in Table 5.2. Moisture-density relationship shall be established in accordance with ASTM D1557. Proof rolling with heavy equipment shall be performed with CTE Cal present to confirm that subgrade is compacted, stable and does not deflect under heavy equipment loads. Additional engineered fill, if required, shall then be placed in 8-inch loose lifts, moisture conditioned and compacted in accordance with Table 5.2.</p> <p>Import soils proposed for engineered fill shall consist of soil deposits having an Expansion Index $EI < 20$ or liquid limit less than 30 ($LL < 12$), with no particles greater than 3 inches and 20 to 80% of the soil particles passing the #200 sieve. Imported fill meeting these requirements shall be placed in 8 inch loose lifts,</p>	

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		<p><i>moisture conditioned and compacted to the moisture content and percent relative compaction stated in table 5.2. A CTE representative shall approve all imported soils prior to delivery to the site.</i></p> <p><i>If unanticipated, unsuitable or unstable materials are encountered at the surface improvement subgrade or structure over-excavation such that proper compacted and stable materials cannot be obtained, over-excavations to remove such materials may be required. A licensed Geotechnical Engineer shall inspect and approve all structure over-excavations, pavement and surface improvement subgrade areas to confirm that adequate soil conditions have been reached. The geotechnical engineer shall also observe and approve the scarification, moisture conditioning and recompaction of the excavated surfaces and the placement of all engineered fill.</i></p> <p><i>11. All earthworks shall be observed and tested by a licensed Geotechnical Engineer to verify that grading activity has been performed according to the recommendations contained within the Geotechnical Engineering Investigation prepared for the Project. The project engineer shall evaluate all footing excavations before reinforcing steel placement. To assure that the recommendations contained within the Geotechnical Engineering Investigation are adhered to the following minimum inspection and testing services shall be performed with regard to the geotechnical design of the project.</i></p> <ul style="list-style-type: none"> <i>a. Continuous observation and testing during mass grading.</i> <i>b. Footing excavation inspection.</i> <i>c. Periodic Utility trench backfill testing for moisture and relative compaction.</i> <i>d. Slab subgrade inspection and testing prior to the placement of capillary moisture break materials for moisture and relative compaction.</i> <i>e. Pavement Class 2 Base inspection and testing prior to the placement of asphalt or concrete pavement.</i> 	

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		<p><i>f. Asphalt relative compaction testing during pavement placement.</i></p> <p><i>12. During Project construction, the Project proponent shall ensure that the areas underlying proposed structures be over excavated to the depth stated in Table 5.2 of the Geotechnical Engineering Investigation prepared for the Project by Construction Testing & Engineering, Inc. (CTE). The building pad over excavation shall extend to a minimum distance of at least 5 feet outside of all proposed structure areas if possible.</i></p>	
<p>Impact 3.6-4: The proposed Project has the potential to result in development 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</p>	<p>LS</p>		<p>--</p>
<p>Impact 3.6-5: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature</p>	<p>PS</p>	<p>Mitigation Measure 3.6-3: <i>Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."</i></p>	<p>LS</p>
<p>GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY</p>			
<p>Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant</p>	<p>LS</p>		<p>--</p>

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impact on the environment and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases			
Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources, and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency	LS		--
HAZARDS AND HAZARDOUS MATERIALS			
Impact 3.8-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	PS	<p>Mitigation Measure 3.8-1: Prior to approval of the final map for the Project site, the Project applicant shall hire a qualified consultant to perform additional soil and site testing. The following areas of the Project site have already been deemed to have potentially hazardous conditions present:</p> <ul style="list-style-type: none"> • <i>Petroleum:</i> The eastern portion of the Project site where several drums of waste oil, oil, oil filters and paint were previously dumped and impacted the soil. • <i>Agrichemicals:</i> The portions of the Project site which were previously used for agricultural uses. <p>The intent of the additional testing is to investigate whether soils contain hazardous materials, including petroleum products or agrichemicals (including pesticides, herbicides, diesel, petrochemicals, etc.).</p> <p>A soil sampling and analysis workplan shall be submitted for approval the San Joaquin County Environmental Health Department prior to the work. The sampling and analysis plan shall meet the requirements of the Department of Toxic Substances Control Interim Guidance for Sampling Agricultural Properties (2008), and the County Department of</p>	LS

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		<p><i>Environmental Resources Recommended Soil and Groundwater Sampling for Underground Tank Investigations (2013).</i></p> <p><i>If the sampling results indicate the presence of agrichemicals that exceed commercial screening levels, a removal action workplan shall be prepared in coordination with San Joaquin County Environmental Health Department. The removal action workplan shall include a detailed engineering plan for conducting the removal action, a description of the onsite contamination, the goals to be achieved by the removal action, and any alternative removal options that were considered and rejected and the basis for that rejection. A no further action letter shall be issued by San Joaquin County Environmental Health Department upon completion of the removal action. The removal action shall be deemed complete when the confirmation samples exhibit concentrations below the commercial screening levels, which will be established by the agencies.</i></p> <p>Mitigation Measure 3.8-2: <i>Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to the San Joaquin County Environmental Health Department (CUPA) for review and approval. If during the construction process the applicant or any subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).</i></p> <p>Mitigation Measure 3.8-3: <i>Prior to initiation of any ground disturbance activities within 50 feet of a well, the applicant shall hire a licensed well contractor to obtain a well destruction permit from San Joaquin County Environmental Health Department, and properly abandon and destruct the onsite wells, pursuant to review and approval of the City Engineer and the San Joaquin County Environmental Health Department.</i></p>	
Impact 3.8-2: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within	LS		--

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one-quarter mile of an existing or proposed school			
Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	LS		--
Impact 3.8-4: Potential for the Project to result in a safety hazard or excessive noise an airport for people residing or working in the Project area	LS		--
Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	LS		--
HYDROLOGY AND WATER QUALITY			
Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality	LS		--
Impact 3.9-2: Project implementation could deplete groundwater supplies or interfere substantially with groundwater recharge	LS		--
Impact 3.9-3: The proposed Project would not alter the existing drainage pattern of the site or	LS		--

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area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff			
Impact 3.9-4 The proposed Project has the potential to, in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation	LS		--
Impact 3.9-5: The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	LS		--
LAND USE			
Impact 3.10-1: The proposed Project would not physically divide an established community	LS		--
Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect	LS		--
NOISE			
Impact 3.11-1: The proposed Project has the potential to generate a substantial temporary or	PS	Mitigation Measure 3.11-1: The proposed noise barrier at the northern boundary of the project must be extended an additional 35 feet to the west to adequately shield the entire	LS

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<p>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</p>		<p><i>outdoor area of the sensitive receptor to the north. The total wall length should be at least 250 feet. The extended barrier is depicted in Figure 3.11-3.</i></p> <p>Mitigation Measure 3.11-2: <i>The following multi-part mitigation measure shall be implemented during construction of the Project:</i></p> <ul style="list-style-type: none"> • <i>Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be prohibited between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays.</i> • <i>Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers’ recommendations. Equipment engine shrouds shall be closed during equipment operation.</i> • <i>When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.</i> • <i>Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise-related impacts.</i> <p><i>These requirements shall be noted on the Project improvement plans and implemented prior to approval of grading and/or building permits. The City of Lathrop Community Development Department shall review and approve the improvements plans.</i></p>	
<p>Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels</p>	<p>LS</p>		<p>--</p>
<p>Impact 3.11-3: The proposed Project is not located within the vicinity of a private airstrip or an airport land use plan, within two miles of a</p>	<p>NI</p>		<p>--</p>

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
public airport or public use airport, and would not expose people residing or working in the Project area to excessive noise levels			
PUBLIC SERVICES AND RECREATION			
Impact 3.12-1: The proposed Project will not result in or require the construction of police department facilities which may cause substantial adverse physical environmental impacts	LS		--
Impact 3.12-2: The proposed Project will not require the construction of fire department facilities which may cause substantial adverse physical environmental impacts	LS		--
Impact 3.12-3: The proposed Project will not 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, but the proposed Project will require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts	LS		--

CC – cumulatively considerable

LCC – less than cumulatively considerable

LS – less than significant

PS – potentially significant

B – beneficial impact

SU – significant and unavoidable

<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
Impact 3.12-4: Project implementation will not result in the need for the construction of new schools which have the potential to cause substantial adverse physical environmental impacts	LS		--
Impact 3.12-5: The proposed Project will not have significant effects on other public facilities	LS		--
TRANSPORTATION AND CIRCULATION			
Impact 3.13-1: Implementation of the proposed Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities	PS	<p>Mitigation Measure 3.13-1: The Project applicant shall coordinate with the City to construct sidewalks along the Project frontage on Roth Road and Manthey Road and also preserve right-of-way along the future Manthey Road re-alignment. The driveways on Manthey Road and Roth Road shall be designed to provide visibility to eliminate potential hazards to pedestrians and adjacent parcels / homes. The design of the driveways shall be reviewed and approved by the Director of Engineering/City Engineer. The Project applicant shall work with the City to refine the design of the re-aligned Manthey Road at the Project driveway to provide the following:</p> <ul style="list-style-type: none"> • One southbound through travel lane; • One 150-foot southbound left-turn lane; • One northbound through travel lane’ • One northbound shared through / right-turn lane; • One westbound left-turn lane; • One westbound right-turn lane; and • One southbound refuge / acceleration lane for vehicles (cars and trucks) exiting the project site and making a left-turn onto southbound Manthey Road. <p>This requirement shall be noted on the Project improvement plans.</p>	LS

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
Impact 3.13-2: Implementation of the proposed Project would not conflict with or be inconsistent with CEQA Guideline section 15064.3, subdivision (b)	LS		--
Impact 3.13-3: Implementation of the proposed Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	PS	<p><i>Implement Mitigation Measure 3.13-1.</i></p> <p><i>Mitigation Measure 3.13-2: The Project applicant shall coordinate with the City to begin the Project Study Report / Project Development Support (PSR/PDS) project initiation document which shall be used to program the project development support for State Transportation Improvement Program (STIP) and San Joaquin Council of Governments (SJCOG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) funding.</i></p> <p><i>Mitigation Measure 3.13-3: The Project applicant shall coordinate with the City of Lathrop Public Works Department to construct the fourth (west) leg of the Manthey Road / Roth Road intersection and modify the intersection from a side-street stop controlled to an all-way stop controlled intersection. This requirement shall be noted on the Project improvement plans.</i></p> <p><i>Mitigation Measure 3.13-4: The Project applicant shall coordinate with the City of Lathrop Public Works Department to ensure access and egress from the existing driveway / house located directly south of the proposed full access driveway on the current alignment of Manthey Road is maintained and adequate site distance is provided. This requirement shall be noted on the Project improvement plans.</i></p>	LS
Impact 3.13-4: Implementation of the proposed Project would not result in inadequate emergency access	LS		--

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
UTILITIES			
Impact 3.14-1: The proposed Project would not require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	LS		--
Impact 3.14-2: The proposed Project does not have the potential to result in a determination by the wastewater treatment and/or collection provider which serves the Project that the provider does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments	LS		--
Impact 3.14-3: The proposed Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects	LS		--
Impact 3.14-4: The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources	LS		--
Impact 3.14-5: The proposed Project would not require or result in the relocation or construction of new or expanded stormwater drainage	LS		--

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
facilities, the construction or relocation of which could cause significant environmental effects			
Impact 3.14-6: The landfills that would serve the proposed Project have sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and the proposed Project will comply with federal, State, and local statutes and regulations related to solid waste	LS		--
CUMULATIVE IMPACTS			
Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway	LS		--
Impact 4.2: Cumulative Conflicts with the Applicable Zoning and Other Regulations Governing Scenic Quality	LS		--
Impact 4.3: Cumulative Impact on Light and Glare	LS		--
Impact 4.4: Cumulative Impact on Agricultural Resources	LS		--
Impact 4.5: Cumulative Impact on the Region's Air Quality	PS		CC and SU
Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special Status Species	LS		--

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural Resources	LS		--
Impact 4.8: Cumulative Impact on Geologic and Soils Resources	LS		--
Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions	LS		--
Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials	LS		--
Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project site	LS		--
Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality	LS		--
Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge	LS		--
Impact 4.14: Cumulative Impacts Related to Flooding	LS		--
Impact 4.15: Cumulative Impact on Communities and Local Land Uses	LS		--
Impact 4.16: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development	LS		--

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<i>ENVIRONMENTAL IMPACT</i>	<i>LEVEL OF SIGNIFICANCE WITHOUT MITIGATION</i>	<i>MITIGATION MEASURE</i>	<i>RESULTING LEVEL OF SIGNIFICANCE</i>
Impact 4.17: Cumulative Impact on Public Services	LS		--
Impact 4.18: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)	LS		--
Impact 4.19: Under Cumulative conditions, the proposed Project would not adversely affect pedestrian and bicycle facilities	LS		--
Impact 4.21: Cumulative Impact on Wastewater Utilities	LS		--
Impact 4.22: Cumulative Impact on Water Utilities	LS		--
Impact 4.23: Cumulative Impact on Stormwater Facilities	LS		--
Impact 4.24: Cumulative Impact on Solid Waste Facilities	LS		--

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1.1 PURPOSE AND INTENDED USES OF THE EIR

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

An EIR must disclose the expected environmental impacts, including impacts that cannot be avoided, growth-inducing effects, impacts found not to be significant, and significant cumulative impacts, as well as identify mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. CEQA requires government agencies to consider and, where feasible, minimize significant environmental impacts of proposed development. CEQA also requires agency decision-makers, when considering the approval of projects with significant unavoidable environmental effects, to balance a variety of public objectives, including economic, environmental, and social factors.

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

1.2 TYPE OF EIR

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

1.3 RESPONSIBLE AND TRUSTEE AGENCIES

CEQA generally requires that Notices of Preparation (NOPs) and Draft EIRs be circulated to “responsible agencies” and “trustee agencies.” As required by CEQA, this EIR defines lead, responsible, and trustee agencies. The City of Lathrop is the “Lead Agency” for the project because it holds principal responsibility for approving the project. The term “Responsible Agency” includes all public agencies other than the Lead Agency that have discretionary approval power over the project or an aspect of the project (CEQA Guidelines Section 15381). For the purpose of CEQA, a “Trustee” agency has jurisdiction by law over natural resources that are held in trust for the people of the State of California. CEQA Guidelines Section 15386 recognizes four particular trustee agencies: (a) the California Department of Fish and Wildlife with regard to the fish and wildlife of the State, to designated rare or endangered native plants, and to game refuges, ecological reserves, and other areas administered by the department; (b) the State Lands Commission with regard to State owned “sovereign” lands such as the beds of navigable waters and State school lands; (c) the State Department of Parks and Recreation with regard to units of the State Park System; and (d) The University of California with regard to sites within the Natural Land and Water Reserves System.

The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approvals in connection with the Project include, but are not limited to, the following:

- San Joaquin Local Agency Formation Commission (LAFCO) - Annexation;
- San Joaquin Council of Governments (SJCOG) - Compliance with Airport Land Use Compatibility Plan (ALUCP) and San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) Compliance;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits. Additionally, as an industrial development, the Project may be subject to Indirect Source Review (ISR) by the SJVAPCD;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act and water quality certification pursuant to Section 401 of the Clean Water Act;
- San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) - Participation in the program to mitigate biological impacts of converting open space land;
- Lathrop Manteca Fire District - Plan check of the site plan and roadway improvements for adequate emergency vehicle access and fire flow capabilities.

Finally, the Project may also require a Clean Water Act Section 404 permit from the United States Army Corps of Engineers (USACE) and/or an Endangered Species Act Section 7 permit from the U.S. Fish and Wildlife Service (USFWS). As federal agencies not subject to California law, the USACE and USFWS, strictly speaking, is neither a responsible agency nor a trustee agency. Instead, as a federal agency, they are each subject to the National Environmental Policy Act (NEPA) rather than CEQA.

The following agency is considered Trustee Agencies for this project, and may be required to issue permits or approve certain aspects of the proposed Project:

- California Department of Fish and Wildlife – Trustee of California fish and wildlife.

The City is unaware of any other trustee agency, or State owned “sovereign” lands, any units of the State Park System, or any sites within the University of California’s Natural Land and Water Reserves System.

1.4 ENVIRONMENTAL REVIEW PROCESS

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

NOTICE OF PREPARATION

The City of Lathrop circulated a NOP of an EIR for the proposed Project on December 22, 2022 to the State Clearinghouse, State Responsible Agencies, State Trustee Agencies, Other Public Agencies, and Organizations and Interested Persons. A public scoping meeting was held on January 11, 2023 to present the project description to the public and interested agencies, and to receive comments from the public and interested agencies regarding the scope of the environmental analysis to be included in the Draft EIR. Concerns raised in response to the NOP were considered during preparation of the Draft EIR. The IS and NOP comments are presented in Appendix A.

DRAFT EIR

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

PUBLIC NOTICE/PUBLIC REVIEW

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

Attn: Rick Caguiat, Community Development Director
City of Lathrop, Community Development Department
390 Towne Centre Drive
Lathrop, CA 95330
(209) 941-7290
planning@ci.lathrop.ca.us

RESPONSE TO COMMENTS/FINAL EIR

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to significant environmental issues raised either in written comments received during the public review period or in oral comments received at a public hearing during such review period.

CERTIFICATION OF THE EIR/PROJECT CONSIDERATION

CEQA Guidelines Section 15090 requires that, prior to approving a project, a lead agency's decisionmaker or decision making body must first "certify" the Final EIR prepared for the project. Here, for this proposed Project, the City Council City will be the City's ultimate decision-making body. In order to certify the Final EIR, the City Council will have to specifically certify that (i) the Final EIR has been completed in compliance with CEQA; (ii) that the Final EIR was presented to the decision-making body (the City Council), which reviewed and considered the information contained in the Final EIR prior to approving the project; and (iii) that the Final EIR reflects the lead agency's independent judgment and analysis. In general, an EIR has been completed "in compliance with CEQA" if the document meets applicable legal content requirements; shows a good faith effort at full disclosure of environmental information; and provides sufficient analysis to allow decisions to be made regarding the proposed project in contemplation of environmental considerations.

The level of detail contained throughout this EIR is consistent with Section 15151 of the CEQA Guidelines and recent court decisions, which provide the standard of adequacy on which this document is based. That provision state as follows:

"An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of the environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure."

Following review and consideration of the Final EIR, the City Council may take action to approve, modify, or reject the Project. If the City Council approves or modifies the proposed Project, or chooses to approve one of the project alternatives set forth in this EIR, the City Council will have to adopt "CEQA Findings" pursuant to CEQA Guidelines section 15091. These findings are necessary to effectuate the substantive mandate of CEQA, as set forth Public Resources Code section 21002.

That statute provides that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects.”

The mandate announced in section 21002 is implemented, in part, through the requirement that agency decisionmakers must adopt findings before approving projects for which EIRs are required. For each significant environmental effect identified in an EIR for a project, the approving body must issue a written finding reaching one or more of three permissible conclusions. The first such finding is that changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR. The second permissible finding is that such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding, and that such changes have been adopted by such other agency or can and should be adopted by such other agency. The third potential conclusion is that specific economic, legal, social, technological, or other considerations, including provision of employment opportunities, make infeasible the mitigation measures or project alternatives identified in the Final EIR. (See CEQA Guidelines Section 15091[a]; see also Public Resources Code Section 21081[a].)

Here, because the Project as proposed and the alternatives other than “No Project” would have significant unavoidable environmental impacts, the City Council would also have to adopt, as part of any approval action, a Statement of Overriding Considerations. It must identify the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, that the City Council determines outweigh the Project’s or Alternative’s unavoidable adverse environmental effects, thereby rendering them “acceptable.” (See CEQA Guidelines Section 15093.)

Finally, as part of project approval, CEQA will require the City Council to adopt a Mitigation Monitoring and Reporting Program prepared in accordance with Public Resources Code Section 21081.6(a) and CEQA Guidelines Section 15097. This Mitigation Monitoring and Reporting Program must include all of the mitigation measures that have been incorporated into or imposed upon the Project to reduce or avoid significant effects on the environment, and must be designed to ensure that these measures are actually carried out during project implementation.

1.5 ORGANIZATION AND SCOPE

Sections 15122 through 15132 of the State CEQA Guidelines identify the content requirements for Draft and Final EIRs. An EIR must include a description of the environmental setting, an environmental impact analysis, mitigation measures, alternatives, significant irreversible environmental changes, growth-inducing impacts, and cumulative impacts. Discussion of the environmental issues addressed in the Draft EIR was established through review of environmental and planning documentation developed for the proposed Project, environmental and planning documentation prepared for recent projects located within the City of Lathrop, applicable local and regional planning documents, and responses to the NOP.

This Draft EIR is organized in the following manner:

EXECUTIVE SUMMARY

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

CHAPTER 1.0 – INTRODUCTION

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

CHAPTER 2.0 – PROJECT DESCRIPTION

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

CHAPTER 3.0 – ENVIRONMENTAL SETTING, IMPACTS AND MITIGATION MEASURES

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

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

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

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

The following environmental topics are addressed in this section:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural and Tribal Resources
- Geology and Soils
- Greenhouse Gases, Climate Change and Energy
- Hazards and Hazardous Materials

- Hydrology and Water Quality
- Land Use
- Noise
- Public Services and Recreation
- Transportation and Circulation
- Utilities

CHAPTER 4.0 – OTHER CEQA-REQUIRED TOPICS

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

CHAPTER 5.0 – ALTERNATIVES TO THE PROJECT

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

CHAPTER 6.0 – REPORT PREPARERS

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

APPENDICES

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

1.6 COMMENTS RECEIVED ON THE NOTICE OF PREPARATION

The City of Lathrop received five written comment letters on the NOP for the proposed Project. A copy of the letters is provided in Appendix A of this Draft EIR. The commenting agency/citizen is provided below.

TABLE 1.0-1: LIST OF COMMENTORS

<i>LETTER NUMBER</i>	<i>INDIVIDUAL OR SIGNATORY</i>	<i>AFFILIATION</i>	<i>DATE OF LETTER</i>
1	Tom Dumas	California Department of Transportation	1-19-23
2	Peter Minkel	Central Valley Regional Water Quality Control Board	1-20-23
3	Laurel Boyd	San Joaquin Council of Governments	12-27-22
4	Brian Clements	San Joaquin Valley Air Pollution Control District	1-19-23
5	Pricilla Torres-Fuentes	State of California Native American Heritage Commission	12-29-22

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2.1 PROJECT LOCATION

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

- **Project Site** (or **Annexation Area**) – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. Figures 2.0-1 and 2.0-2 show the Project's regional location and vicinity. Figure 2.0-3 provides the APN map.

2.2 PROJECT SETTING

SITE TOPOGRAPHY

The Project site topography ranges greatly in elevation from approximately 8 to 21 feet above sea level. The high area is located in the eastern portion of the site while the low area is located in the western portion of the site. The majority of the Project site is generally characterized as flat.

EXISTING SITE USES

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), a foundation from a previously demolished abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf.

EXISTING SURROUNDING USES

The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. An aerial view of the Project site and its surrounding uses is provided in Figure 2.0-4.

GENERAL PLAN LAND USE DESIGNATIONS AND ZONING

The Project site is currently located within San Joaquin County. The Project site is outside the Lathrop city limits, but within the City's Primary Sphere of Influence (SOI).

Existing City of Lathrop General Plan Land Use Designations

The Project site is currently designated Freeway Commercial (FC) by the City of Lathrop General Plan Land Use Map and Agriculture/General (A/G) by the San Joaquin County General Plan Land Use Map. The FC designation generally allows building densities of 1-2 stories and building intensity up to 60% site area coverage. This classification of commercial activity is somewhat of a hybrid in that it caters to uses which serve the regional market for specialized sales and service activities as well as uses which cater more strictly to the needs of the highway traveler. Specialized activities might include factory store centers, discount centers for home furniture, appliances, home improvement and sports, and commercial recreation centers for such activities such as bowling, skating, tennis, racquetball, water-oriented amusements and miniature golf. Uses which cater to the highway traveler include motels, restaurants, auto and truck sales and service, fuel stations, auto repair, RV sales and service, boat sales and service, sports equipment, bank service, truck stops and terminals, bus stops and facilities for overnight camping and RV parking.

The A/G designation provides for large-scale agricultural production and associated processing, sales, and support uses. The A/G Designation generally applies to areas outside areas planned for urban development where soils are capable of producing a wide variety of crops and/or support grazing. Typical building types include low-intensity structures associated with farming and agricultural processing and sales. The A/G designation provides for the following commercial agricultural operations and associated support uses:

- Crop production, grazing, and livestock raising facilities
- Agricultural processing facilities (e.g., canning operations, stockyards, feedlots)
- Agricultural support and sales (e.g., feed/grain storage, crop spraying, sale yards)
- Single-family detached dwellings
- Farm-employee housing and farm labor camps
- Accessory second units and ancillary residential structures
- Compatible public, quasi-public, and special uses
- Natural open space areas

The existing General Plan Land Use Map designations for the Project site and surrounding area is shown on Figure 2.0-5.

Existing San Joaquin County Zoning Designations

The Project site is currently zoned for Freeway Service Commercial (C-FS) and Agricultural (AG-40) uses by the San Joaquin County Zoning Code (Development Title). The C-FS zone provides for a wide range of manufacturing, distribution and storage uses which have moderate to high nuisance characteristics such as noise, heat, glare, odor, and vibration, and which require segregation from other land uses, and/or may require outside storage areas. New lots in this zone are a minimum of 10,000 sf. The AG-40 zone provides for the continuation of commercial agricultural enterprises. The existing zoning for the Project site and surrounding areas are shown in Figure 2.0-6.

SURROUNDING GENERAL PLAN DESIGNATIONS

Within San Joaquin County, lands to the west of the Project site are designated Agriculture/General (A/G). Lands to the north, east, and south of the Project site are designated as Freeway Commercial (FC) by the City of Lathrop General Plan Land Use Map. The City of Lathrop and San Joaquin County General Plan land use designations for the Project site and surrounding areas are shown on Figure 2.0-5.

2.3 PROJECT GOALS AND OBJECTIVES

Consistent with CEQA Guidelines Section 15124(b), a clear statement of objectives and the underlying purpose of the proposed Project shall be discussed. The principal objective of the proposed Project is the approval of the proposed Project that includes development of the 19.63-acre Development Area for regional travel serving uses. Implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators.

The proposed Project identifies the following objectives:

- To develop a property of sufficient size to accommodate all of the following: a travel center that consists of a truck and auto repair shop, convenience store, adjoining fast food restaurants, restrooms, and auto and truck fuel dispensing area able to accommodate cars and semi-trucks per day;
- To provide visitor-serving facilities that maximize the benefits of the Project site's proximity to I-5 for all buildings and tenants and thereby minimize traffic generation on local streets by visitors exiting and reentering the freeway;
- To construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations;
- To accommodate the planned Roth Road / I-5 interchange improvements and realignment of Manthey Road;
- To create new jobs that can be filled wholly or partly by local residents; and
- To maximize tax revenues to the City of Lathrop.

2.4 PROJECT DESCRIPTION

The principal objective of the proposed Project is the approval of the proposed Project that includes development of the 19.63-acre Development Area for regional travel serving uses. Implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators. The Phase I site plan for the proposed Project is shown in Figure 2.0-7 and the Phase II site plan for the proposed Project is shown in Figure 2.0-8.

The proposed Project includes the following amenities:

- Fueling facilities offering 8 truck fuel islands and 8 car fuel islands (12 dispensers);
 - Fuel tanks for both trucks and auto will be above ground with chain link fencing with privacy slats around the tanks.

2.0 PROJECT DESCRIPTION

- Various parking areas during Phases I and II, including:
 - 148 truck/trailer spaces, 163 passenger vehicle spaces (including 128 regular spaces, 28 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase I; and
 - 98 truck/trailer spaces, 203 passenger vehicle spaces (including 176 regular space, 20 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase II;
- A 13,846-sf full service 4-bay truck and automobile repair shop;
- A 16,668-sf building that will include the following:
 - Office space;
 - Restroom facilities, 8 showers;
 - Laundry facility with 12 sets of washer/dryer;
 - Retail convenience store that will offer everyday products from truck accessories, toiletry supplies and a number of products for quick shopping needs for traveling and commuter customer base;
 - Two quick service restaurants, one with a drive-thru option;
 - Seating area for patrons to dine;
- Two dog run areas enclosed with metal fences.

PHASE I DEVELOPMENT

Phase I of the Project will develop 18.61 acres out of the 19.63-acre Development Area. The Phase I area is designed as an interim basis until the future realignment of Manthey Road, future Roth Road, and interchange improvements for I-5 will be constructed. Phase I will account for the future right-of-way (ROW) dedication for these improvements. The 2.79-acre piece of property between Manthey Road and I-5 will not be part of the Phase I Project site and is identified as future ROW for future interchange improvements.

PHASE II DEVELOPMENT

Phase II of the Project includes: (1) the realignment of Manthey Road from the existing configuration to run along the western boundary of the Project site with a new connection to Roth Road, (2) improvement of Roth Road to the north of the Project site, and (3) improvements of the interchange for I-5. No new buildings are proposed as part of the Phase II development. Portions of Phase I site and circulation-related improvements will be removed which will allow the future improvements to be constructed. Additional parking will also be added for the auto portion of the development to incorporate the abandonment of the old Manthey Road.

SIGNAGE

A high rise pylon sign is proposed for this development for site identification and advertising located at the northeast corner of the site. The sign will house the TA logo, unleaded and diesel prices, and spaces to advertise the two quick service restaurants. There will also be an additional ground monument signs placed just north of the truck fuel islands for facility identification from the roadway. Signage is not part of the proposed entitlement request and will be reviewed separately at a future date. However, the

potential environmental impacts of the construction and operation of the proposed signage is analyzed within the CEQA document for the Project.

OPERATIONS

Both the Travel America and Repair Shop facility will be a 24/7 operations with at least 15 employees per shift. The repair shop will have 4 employees per shift. The quick service restaurant within Travel America will have 6 employees per shift and 4 employees per shift managing the store. There will be one supervisor and manager per shift. Total employee count will be 45 to 50 for all operations.

CIRCULATION

Background

Planned and previously-approved development projects within San Joaquin County, the City of Manteca, and the City of Lathrop will cause the Roth Road / I-5 interchange to operate at an unacceptable level. To address this, the City of Lathrop is working with the California Department of Transportation (Caltrans) to improve the Roth Road / I-5 interchange and realign Manthey Road.

These planned interchange improvements are not a part of the proposed Project. The intent for the proposed Project is that the site would be developed in Phase I, including the buildings (i.e., convenience store, including tenant spaces and the truck repair building, restrooms, etc.) and that in Phase II, the site would be modified to accommodate the planned Manthey Road realignment. The buildings developed during Phase I would remain and will not be modified as part of Phase II. As discussed below. Phase II would include circulation improvements related to site access, off-street parking, etc. Ultimately, the Manthey Road realignment will be triggered at a future point and as determined by the City via the Transportation Monitoring Program (TMP).

Phase I

Phase I includes four access points: a truck exit only driveway on Roth Road, an auto exit only driveway on the future Roth Road, a truck exit and entrance driveway on Manthey Road, and an auto exit and entrance driveway on Manthey Road. All auto vehicles will enter the site via the two driveways on Manthey Road. Passenger vehicles will exit on the north side of the property from a driveway located on the future Roth Road. Trucks will have two exits located at the southern driveway on Manthey Road and the driveway on future Roth Road. The truck exit on Manthey Road will reduce the number of trucks using the exit only on future Roth Road where the auto exit driveway will be located.

Phase II

Phase II includes three access points: an auto exit and entrance driveway at the southeastern corner of the site off a proposed cul-de-sac, an auto exit and driveway on the future Roth Road, and a truck exist and entrance driveway on the future realized Manthey Road. All auto vehicles will enter the site via two driveways (one on the future Roth Road and one at the cul-de-sac terminus). Trucks will have one exit located at the driveway on future Roth Road. The interim driveways included in Phase I will be abandoned. To minimize trucks/auto vehicle conflict, the ingress/egress were placed on different streets.

UTILITIES

Electricity, gas and telephone services are located immediately adjacent to the Project site along Manthey Road. Development of the proposed Project would not require the expansion of these facilities or any off-site improvements. Water and sewer connections would need to be extended onsite to serve the Project. Storm water service will be provided by a private storm water infiltration basin located within the Project boundaries.

PLANNED INFRASTRUCTURE IMPROVEMENTS

The construction of onsite and offsite infrastructure improvements would be required to accommodate development of the proposed Project, as described below.

Potable Water

Water services for the proposed Project would be extended to the Project site from existing services from the intersection of Harlan Road and Roth Road east of I-5. The water lines would need to be extended west under the overpass along Roth Road to the Project site.

Sewer

Sewer would be extended from the Project site from the intersection of Harlan Road and Roth Road east of I-5. The sewer lines would need to be extended west under the overpass along Roth Road to the Project site. The sanitary sewer line would be constructed within the existing ROW and no additional off-site ROW would be required for Project implementation.

Storm Drainage

A 7.5-foot-deep private storm water retention basin would be located in the southern portion of the Project site, as shown in Figure 2.0-7. A landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin.

ANNEXATION

The Project site is currently within San Joaquin County, and within the City of Lathrop's Primary Sphere of Influence (SOI). The proposed Project would result in the annexation of APN 191-250-14 and 191-250-06 (which includes the Project site) into the City of Lathrop. The Project site APNs and surrounding APNs are shown on Figure 2.0-3.

GENERAL PLAN AMENDMENT

The proposed Project would require a General Plan Amendment to the City's Land Use Map to change land uses on the Project site. Changes to the Land Use Map would include changing the designation for APN 191-250-06 from A/G (County) to FC (City).

The proposed General Plan Land Use Map designation for the Project site is shown on Figure 2.0-9.

PRE-ZONING

The Project site is currently in jurisdiction of San Joaquin County and zoned for Freeway Service Commercial (C-FS) and Agricultural (AG-40) uses by the County. The San Joaquin County Local Agency Formation Commission (LAFCO) will require the Project site to be pre-zoned by the City of Lathrop in conjunction with the proposed annexation. The City's pre-zoning will follow the land use designation intent of General Plan Land Use Map (Freeway Commercial), as such the site will be zoned Highway Commercial (CH). The pre-zoning would go into effect upon annexation into the City of Lathrop. As discussed in Section 17.44.050(A) of the City's Municipal Code, the CH district is intended primarily for application to areas along major highway entrances to the city in accord with policies of the general plan, where controlled access to the highway is afforded for the convenience of patrons traveling the highway by the provision of frontage roads, interchanges, channelized intersections and control over driveway spacing.

The proposed pre-zoning for the Project site is shown on Figure 2.0-10.

CONDITIONAL USE PERMIT

Travel Plaza or Truck Stop is listed as a Conditional Use Permit in the Highway Commercial (HC) Zoning District (Section 17.44.050). As such, the Project would require the approval of a Conditional Use Permit (CUP) prior to Project approval.

SITE PLAN REVIEW

Pursuant to Chapter 17.100 of the City's Zoning Code, the Project would require a site review prior to Project approval.

2.5 USES OF THE EIR AND REQUIRED AGENCY APPROVALS

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

CITY OF LATHROP

The City of Lathrop will be the Lead Agency for the proposed Project, pursuant to the State Guidelines for Implementation of CEQA, Section 15050. Actions that would be required from the City include, but are not limited to, the following:

- Certification of the EIR;
- Adoption of the Mitigation Monitoring and Reporting Program;
- General Plan Amendment from A/G (County) to FC for APN 191-250-06;
- Annexation approval and the annexation of the subject parcels by the City of Lathrop and San Joaquin Local Agency Formation Commission;
- Pre-zoning for annexation of the Project site;
- Approval of Conditional Use Permit;
- Approval of Site Plan Review;
- Approval of Sign Design Application;

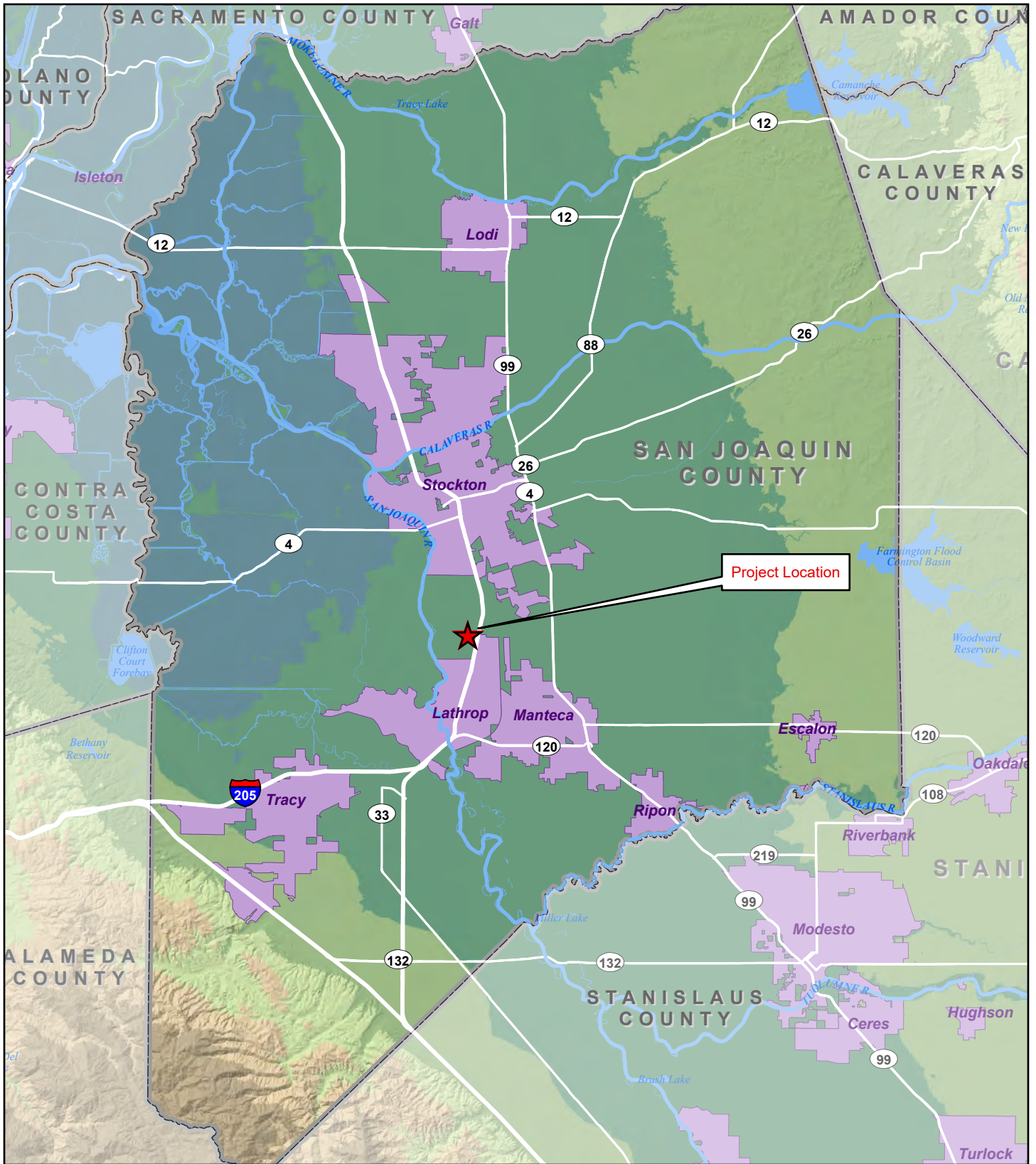
2.0 PROJECT DESCRIPTION

- Approval of Improvement Plans;
- Approval of Grading Plans;
- Approval of Building Permits;
- Approval of Project Utility Plans.

OTHER GOVERNMENTAL AGENCY APPROVALS




The following agencies may be required to issue permits or approve certain aspects of the proposed Project. Other governmental agencies that may require approval include, but are not limited to, the following:

- San Joaquin LAFCO - Annexation;
- San Joaquin Council of Governments (SJCOG) - Compliance with Airport Land Use Compatibility Plan (ALUCP) and San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) Compliance;
- San Joaquin Valley Air Pollution Control District (SJVAPCD) - Approval of construction-related air quality permits. Additionally, as an industrial development, the Project may be subject to Indirect Source Review (ISR) by the SJVAPCD;
- Central Valley Regional Water Quality Control Board (CVRWQCB) - Storm Water Pollution Prevention Plan (SWPPP) approval prior to construction activities pursuant to the Clean Water Act and water quality certification pursuant to Section 401 of the Clean Water Act;
- Lathrop Manteca Fire District - Plan check of the site plan and roadway improvements for adequate emergency vehicle access and fire flow capabilities.



Project Location

Legend

-  Project Location
-  Incorporated Area
-  County Boundary

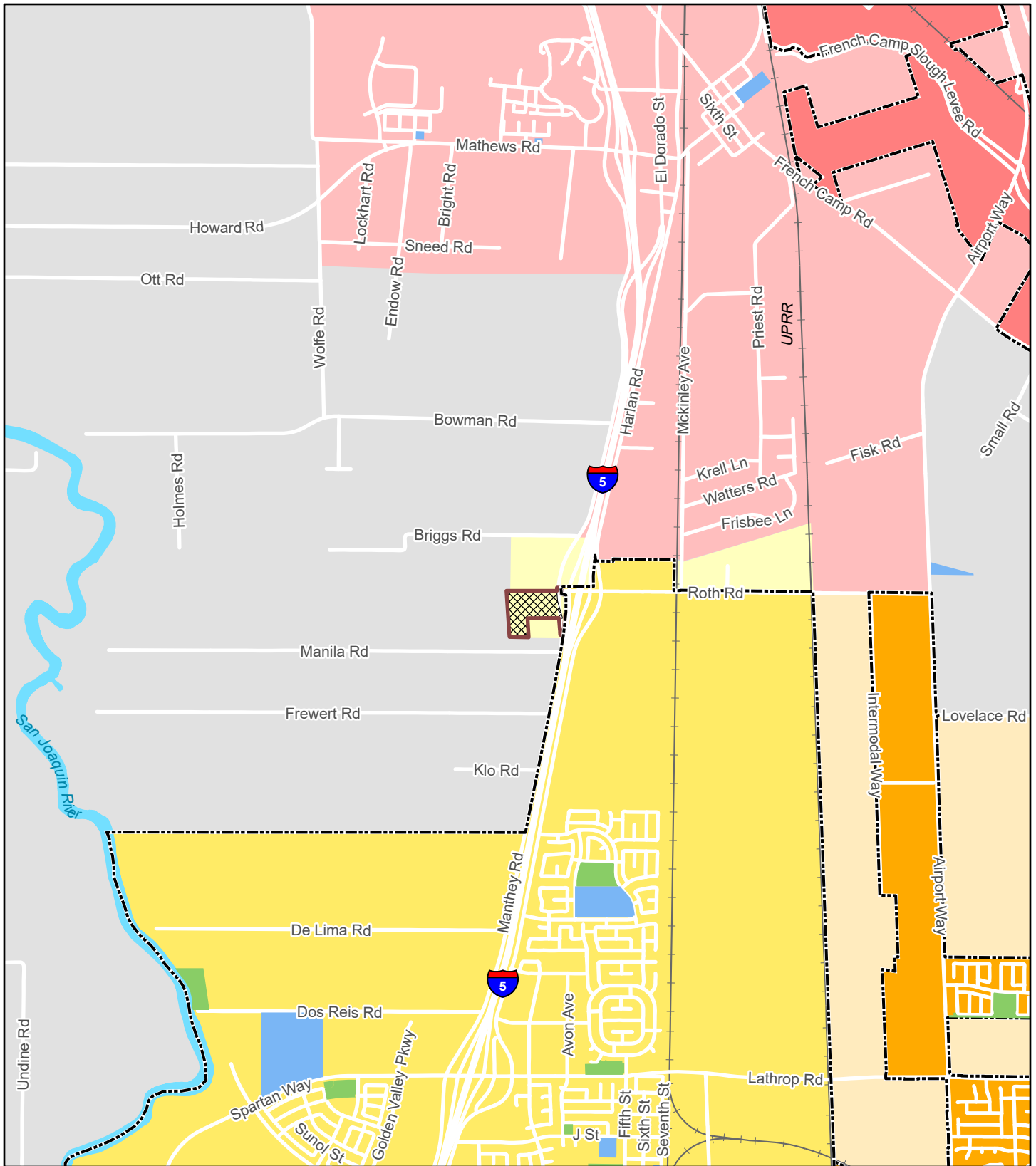
SINGH PETROLEUM INVESTMENT PROJECT

Figure 2.0-1. Regional Map



Sources: California State Geoportal. Map date: December 13, 2022.










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SINGH PETROLEUM INVESTMENT PROJECT

Figure 2.0-2. Vicinity Map

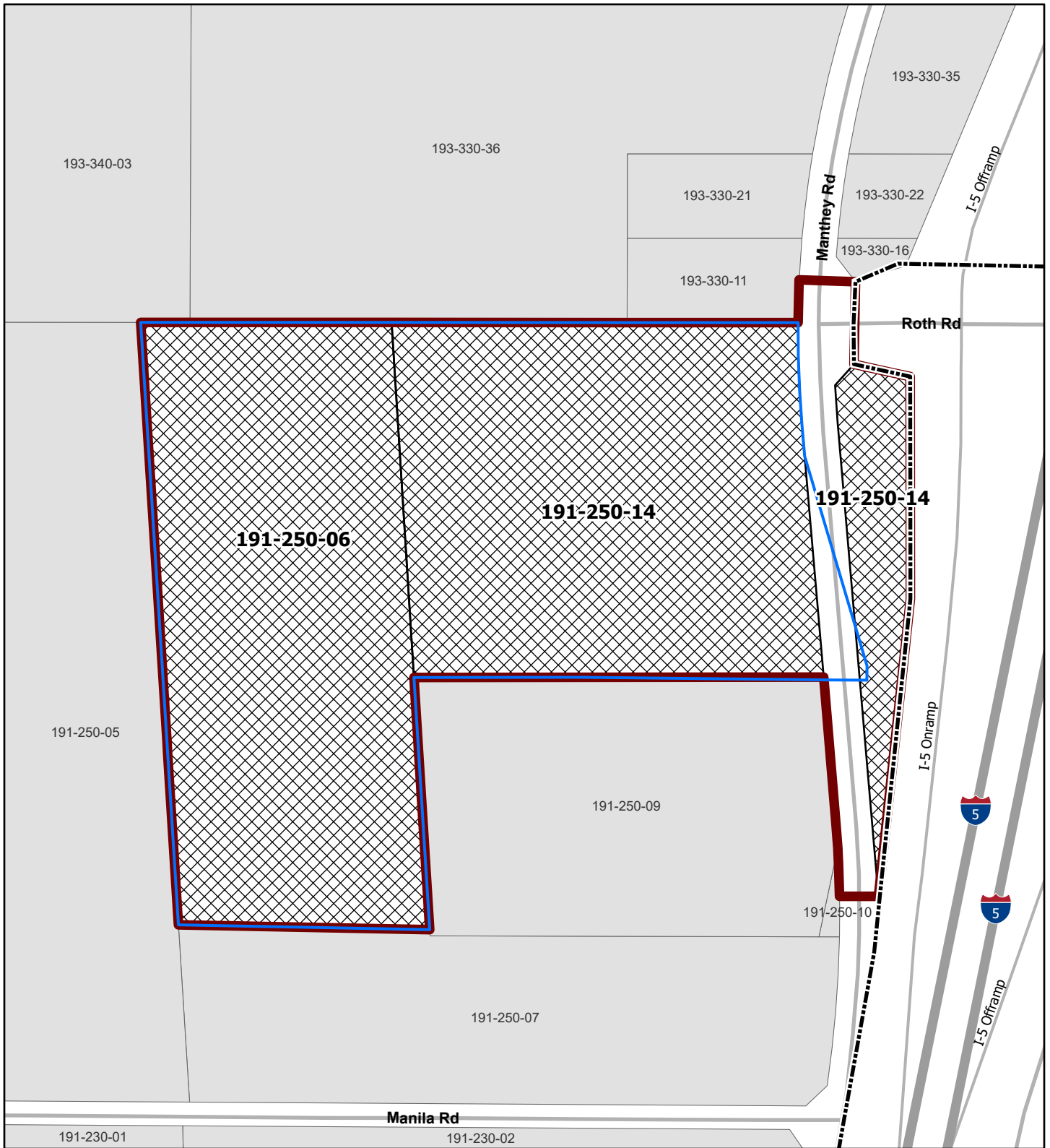
Legend

-  Project Site / Annexation Area
-  City of Lathrop
-  Lathrop SOI
-  School
-  City of Manteca
-  Manteca SOI
-  Park
-  City of Stockton
-  Stockton SOI








Sources: San Joaquin County Assessor parcels, July 2022; San Joaquin County GIS. Map date: December 13, 2022.

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Legend

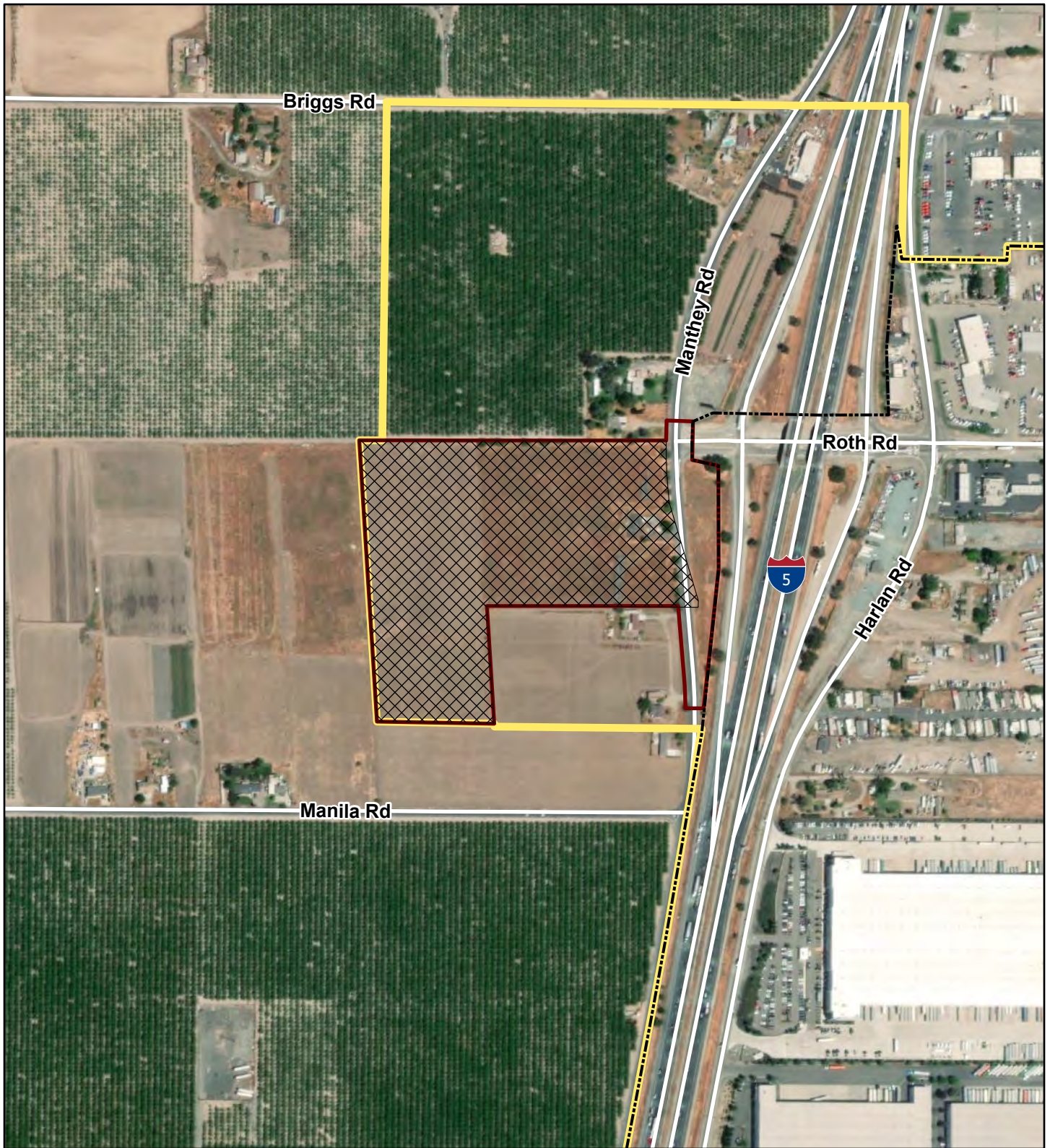
-  Project Site / Annexation Area
-  Development Area
-  Lathrop City Limits
-  Parcels to be Annexed
-  Other Assessor Parcels

SINGH PETROLEUM INVESTMENTS PROJECT

Figure 2.0-3. Assessor Parcel Map



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SINGH PETROLEUM INVESTMENTS PROJECT

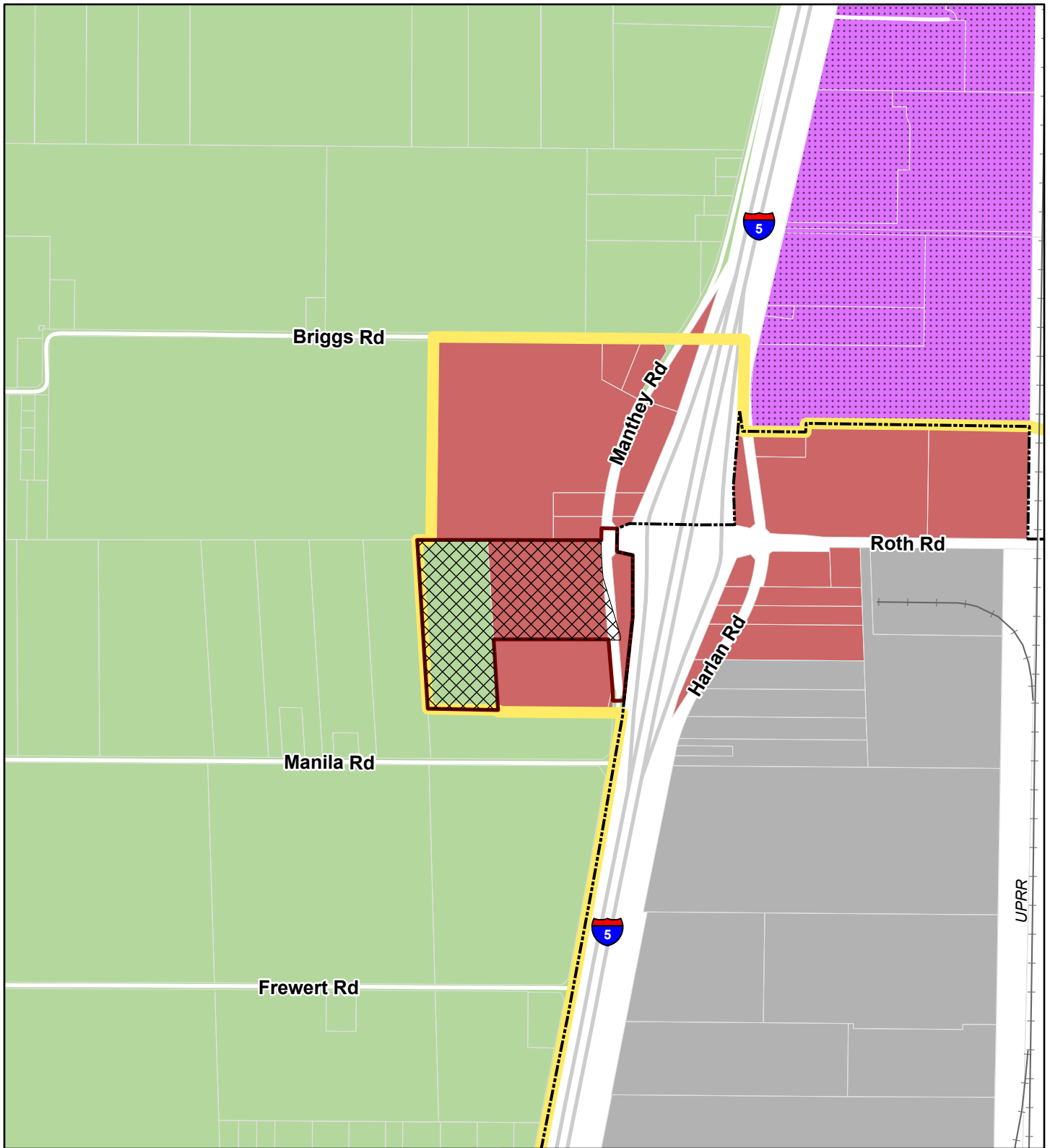
Figure 2.0-4. Aerial View of Project

Legend

- Project Site / Annexation Area
- Development Area
- Lathrop City Limits
- Lathrop Sphere of Influence



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Legend

- Project Site / Annexation Area
- Development Area
- Lathrop City Limits
- Lathrop Sphere of Influence
- Parcel Boundary

City of Lathrop General Plan Designation

- FC: Freeway Commercial
- LI: Limited Industrial

San Joaquin County General Plan Designation

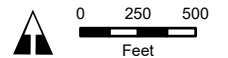
- Agriculture/General

City of Stockton General Plan Designation

- Industrial

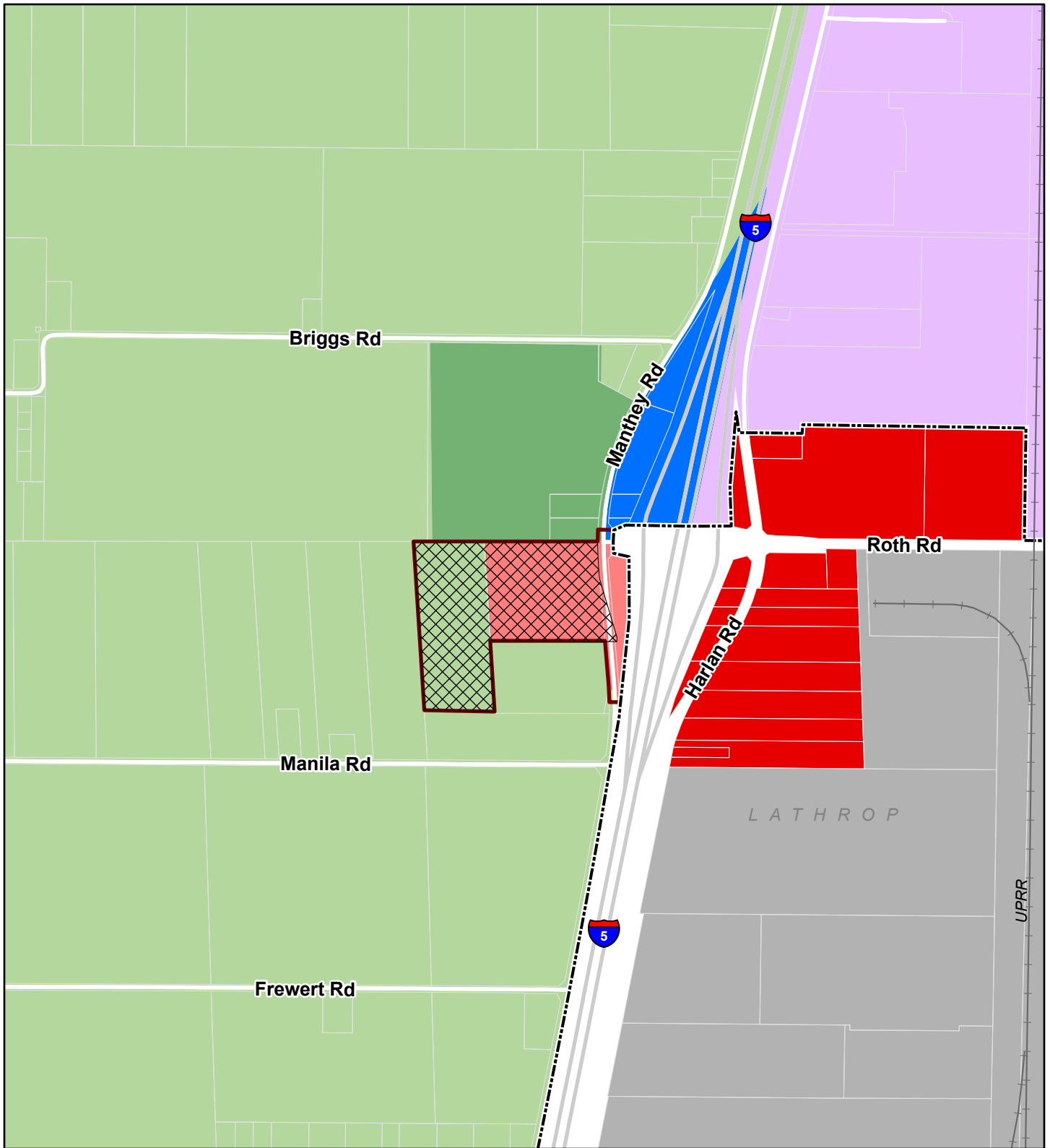
SINGH PETROLEUM INVESTMENTS PROJECT

Figure 2.0-5. Existing General Plan Land Use Designations



Sources: San Joaquin County GIS; City of Stockton General Plan 2040; City of Lathrop General Plan 2022. Map date: December 13, 2022.

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Legend

Project Site/Annexation Area

Development Area

Lathrop City Limits

City of Lathrop Zoning Designation

CH: Highway Commercial

IL: Industrial Limited

San Joaquin County Zoning Designation

AG-40: General Agriculture

AU-20: Agriculture Urban Reserve

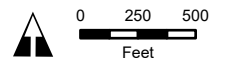
C-FS: Freeway Service Commercial

I-G: General Industrial

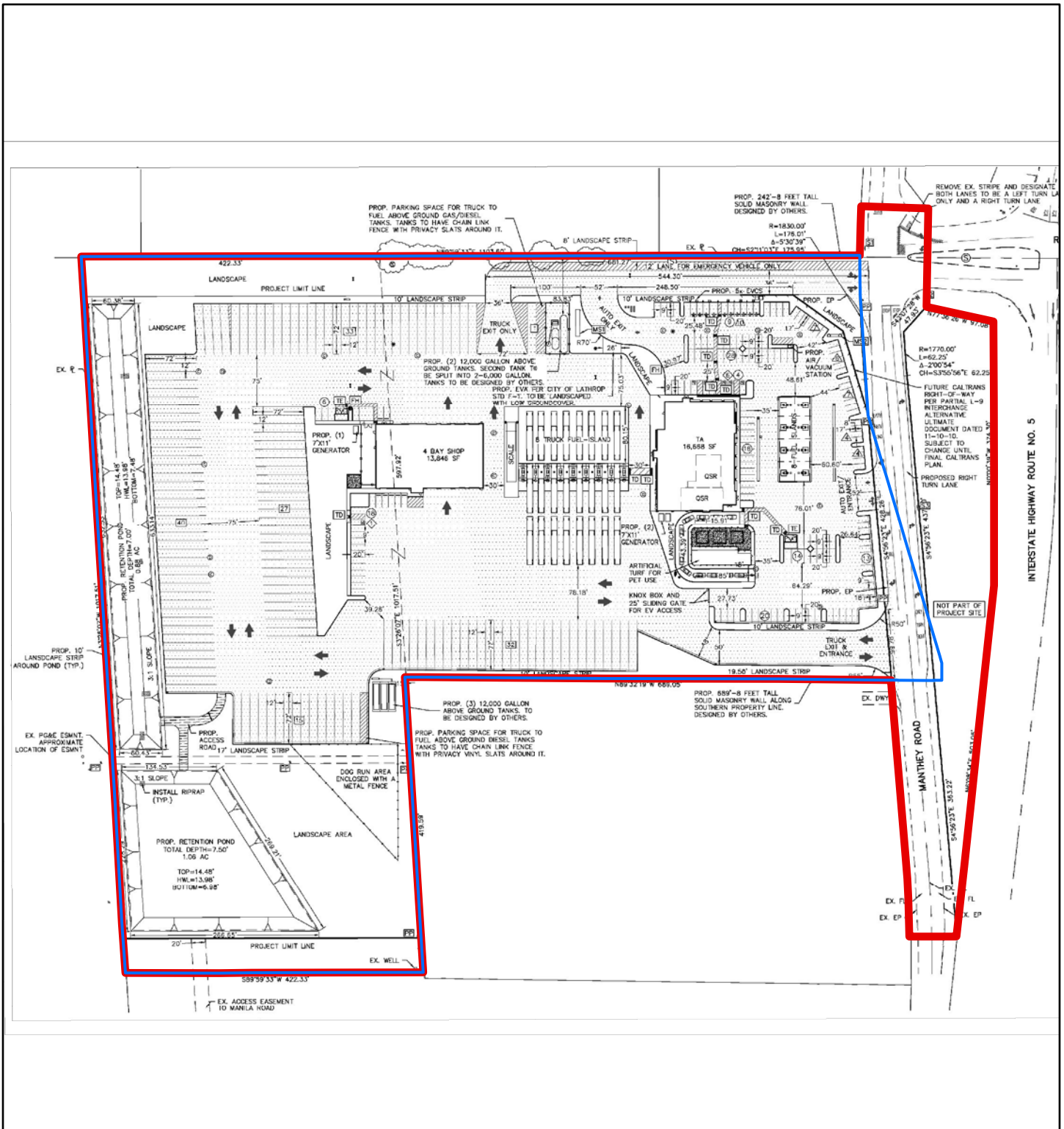
I-W: Warehouse Industrial

SINGH PETROLEUM INVESTMENTS PROJECT

Figure 2.0-6. Existing Zoning Designations



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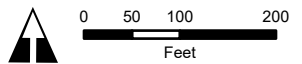


SINGH PETROLEUM INVESTMENT PROJECT

Figure 2.0-7. Site Plan Phase I - Interim

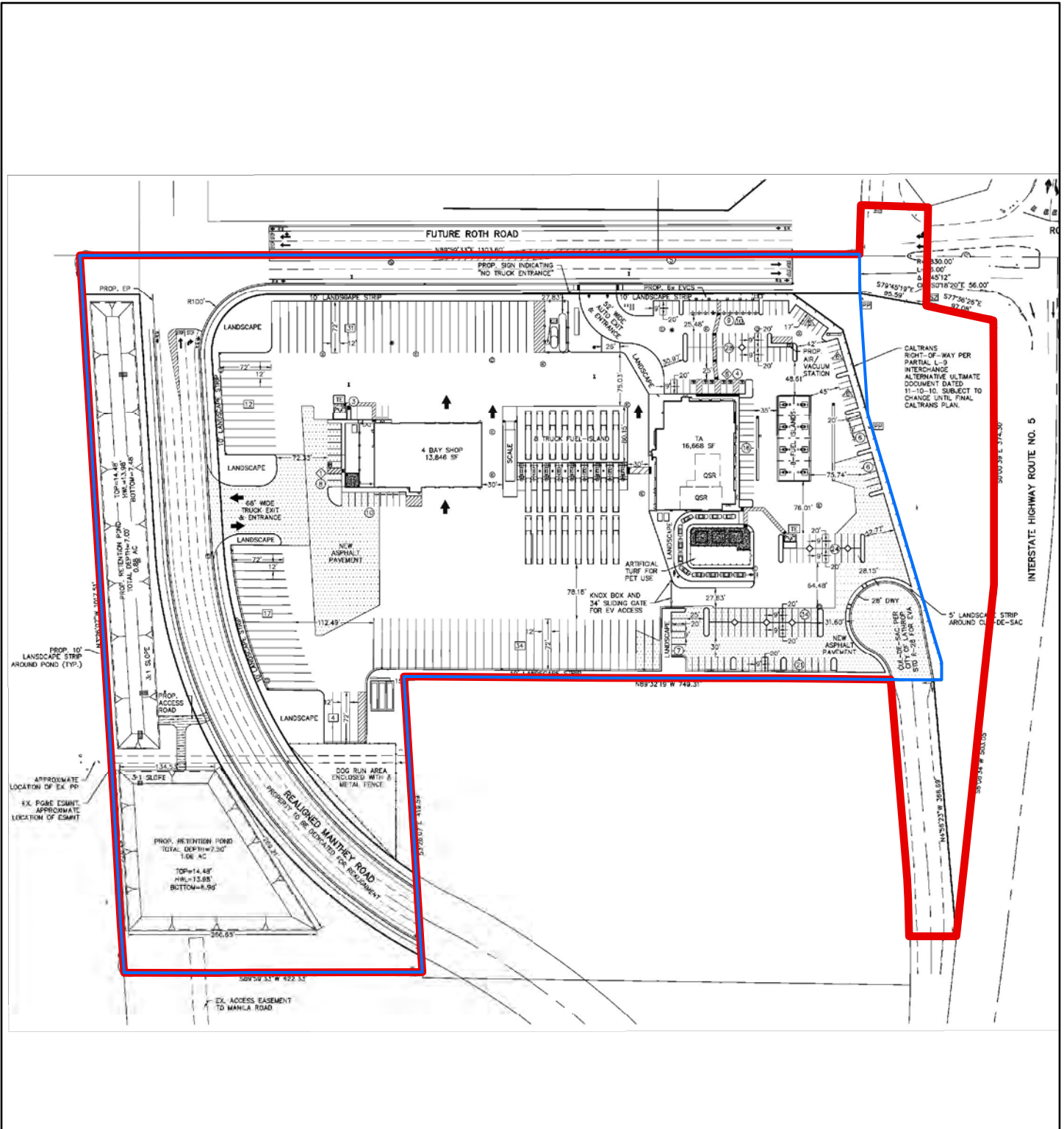
Legend

- Project Site/Annexation Area
- Development Area



Sources: WONG ENGINEERS, April 14, 2023. Map date: May 4, 2023.

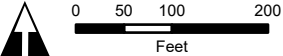
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SINGH PETROLEUM INVESTMENT PROJECT

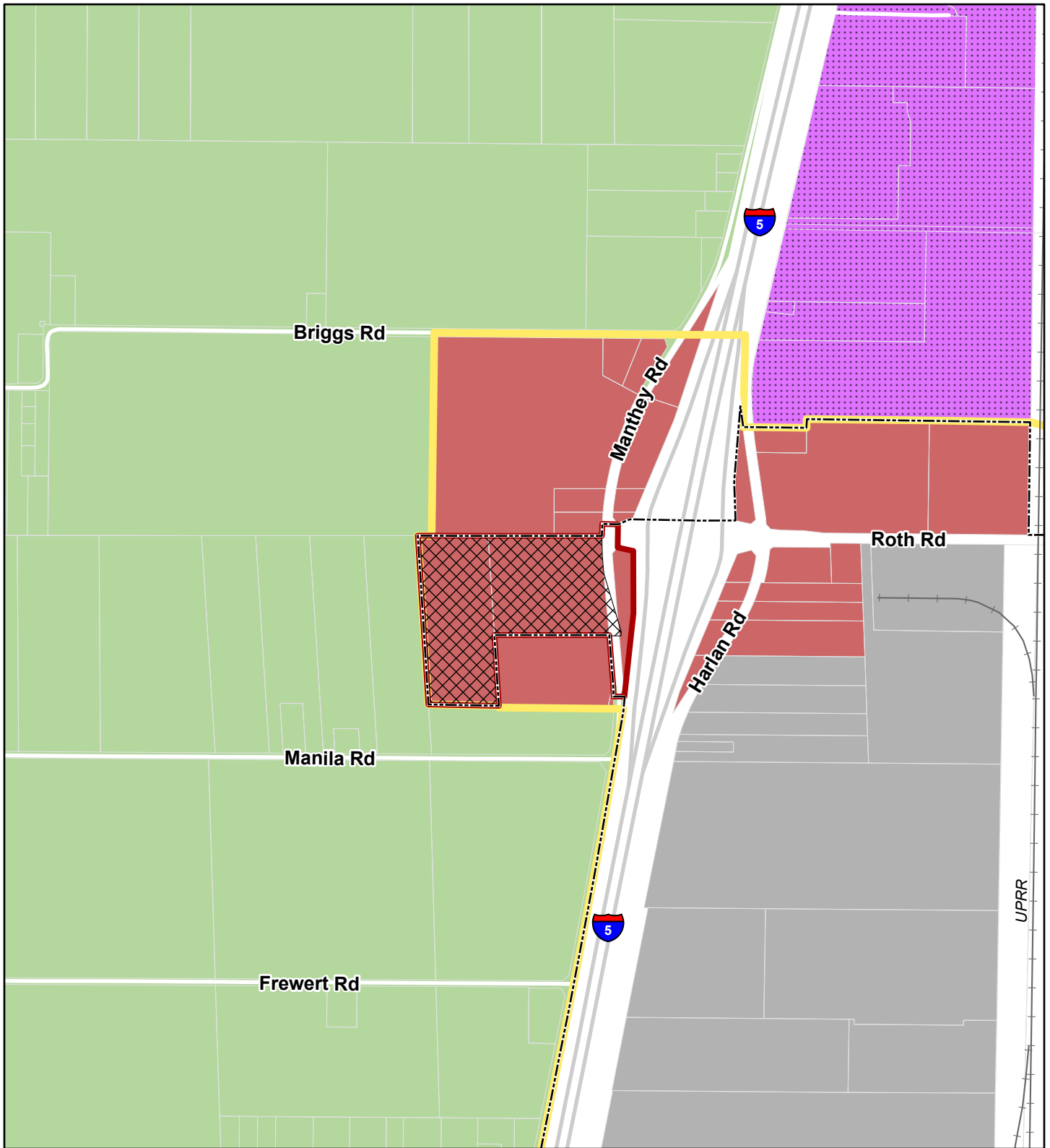
Figure 2.0-8. Site Plan Phase II - Buildout

- Legend**
- Development Area
 - Project Area/Annexation Area



Sources: WONG ENGINEERS, April 14, 2023. Map date: May 4, 2023.

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Legend

- Project Site / Annexation Area
- Development Area
- Lathrop City Limits (Proposed)
- Lathrop Sphere of Influence
- Parcel Boundary

City of Lathrop General Plan Designation

- FC: Freeway Commercial
- LI: Limited Industrial

San Joaquin County General Plan Designation

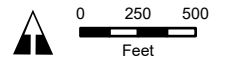
- Agriculture/General

City of Stockton General Plan Designation

- Industrial

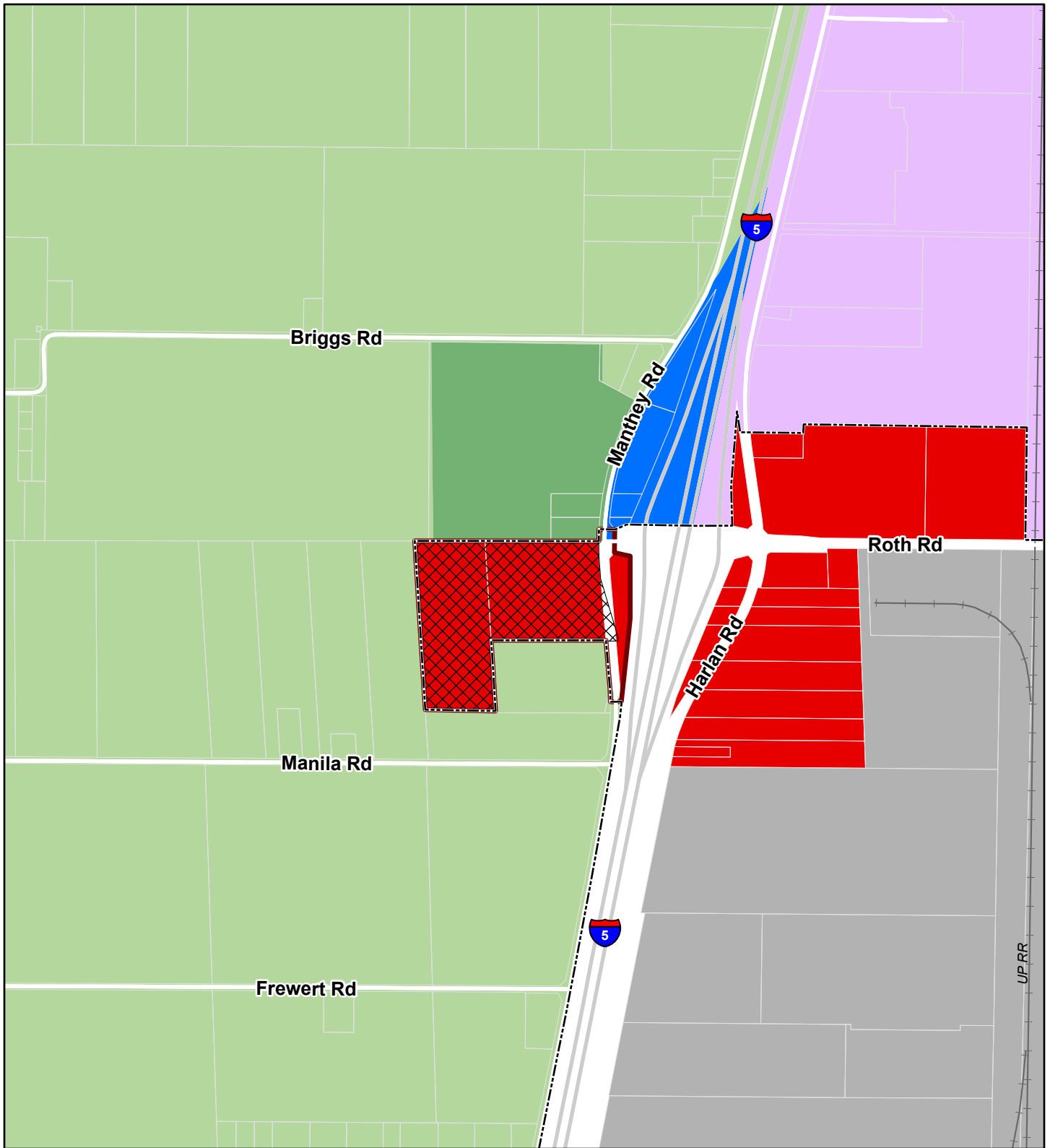
SINGH PETROLEUM INVESTMENTS PROJECT

Figure 2.0-9. Proposed General Plan Land Use Designations



Sources: San Joaquin County GIS; City of Stockton General Plan 2040; City of Lathrop General Plan 2022. Map date: December 14, 2022.

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Legend

- Project Site/Annexation Area
- Development Area
- Lathrop City Limits (Proposed)

City of Lathrop Zoning Designation

- CH: Highway Commercial
- IL: Industrial Limited

San Joaquin County Zoning Designation

- AG-40: General Agriculture
- AU-20: Agriculture Urban Reserve
- I-G: General Industrial
- I-W: Warehouse Industrial

SINGH PETROLEUM INVESTMENTS PROJECT

Figure 2.0-10. Proposed Zoning Designations



Sources: San Joaquin County GIS. Map date: December 14, 2022.

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This section provides an overview of the visual character, scenic resources, views, scenic highways, and sources of light and glare that are encountered in the Project site and the vicinity. This section concludes with an evaluation of the impacts and recommendations for mitigating impacts.

There were no comments received during the Notice of Preparation (NOP) comment period that specifically address aesthetics or visual resources. Full comments received are included in Appendix A.

3.1.1 ENVIRONMENTAL SETTING

REGIONAL SCENIC RESOURCES

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

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

SCENIC HIGHWAYS AND CORRIDORS

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

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

Scenic Highways

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

3.1 AESTHETICS AND VISUAL RESOURCES

The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to Caltrans for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the Caltrans Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 (I-5) to State Route 205 (SR 205). This route traverses the edge of the Coast Range to the west and Central Valley to the east. The City of Lathrop is not visible from this roadway segment.

Scenic Corridors

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

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

The City of Lathrop General Plan does not designate any scenic corridors or viewsheds. As identified in the Open Space Element of the San Joaquin County General Plan, designated scenic routes in the county include I-5 from the Sacramento County line south to Stockton. The City of Lathrop is located south of Stockton, and Lathrop is not visible from this segment of I-5.

Visual Character and Other Scenic Resources Areas

The City of Lathrop's visual character is defined by its agricultural heritage and suburban development pattern. The City is a mixture of urbanized areas with commercial, residential, and industrial uses concentrated along the I-5 corridor and other major roadway corridors, including S. Harlan Road, Golden Valley Parkway, Lathrop Road, Roth Road and Louise Avenue. Residential neighborhoods, including parks and schools, occupy the remainder of the City's urbanized area east of I-5 with more recent residential patterns emerging west of I-5. Much of the undeveloped land within the Planning Area surrounding the developed portion of Lathrop is predominantly farmland, including alfalfa, orchards, row crops, and pasture, and rural residential uses.

Farmland and open space, interspersed with rural residential, agricultural, and industrial uses, generally border the City to the north, south, and west. To the west, the City is bordered by agricultural land and the San Joaquin River. Unincorporated San Joaquin County and the City of Stockton lie to the north, and the City of Manteca to the east.

Much of the undeveloped land within the City Limits, Sphere of Influence (SOI), Planning Area, and areas surrounding the urbanized portion of Lathrop is predominantly farmland, including alfalfa,

orchards, row crops, and pasture. Agricultural lands have become important visual resources that contribute to the community identity of Lathrop, and the Central Valley region. Agricultural lands provide for visual relief from urbanized areas and act as green space to nearby urban areas. While this land is disturbed from its natural condition, developed agricultural land can provide visual relief to a passerby/viewer from common manmade structures and visual obstructions found in a developed environment. Agricultural lands provide a sense of openness that is common in natural environments. While the project site is not identified as a scenic resource by the City of Lathrop General Plan, the Project site is located within the undeveloped open space of the City of Lathrop and is surrounded by agricultural land that is identified to be of significant scenic value by the City of Lathrop General Plan. Specifically, the City of Lathrop General Plan includes policy RR-2.3 which aims to protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features.

Water resources are important visual resources that draw tourists to the area for recreational opportunities, provide critical habitat, and provide for scenic areas within and surrounding urban areas. The most visually significant water body in the region is the San Joaquin River and the Old River located along the western and southern borders of the City and the Planning Area.

PROJECT AREA CONTEXT

The Project site is comprised of flat land with ruderal grasses, a few trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf. Fencing surrounds the Project site.

The Project site is located within the northern boundary of the City of Lathrop SOI, within the unincorporated area of Jan Joaquin County. The proposed Project is located west of I-5 and is bordered by Manthey Road and the future extension of Roth Road. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east.

Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

Light and Glare

There are minimal existing light sources in the Project site. There are some existing light sources in the vicinity of the proposed Project site. There is existing nighttime lighting associated with the nearby agricultural and residential land uses, and streetlights and vehicle lights from nearby roadways including I-5.

3.1.2 REGULATORY SETTING

FEDERAL

There are no Federal regulations that apply to the proposed Project related to visual resources in the study area.

STATE

Caltrans California Scenic Highway Program

California's Scenic Highway Program was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change, which would diminish the aesthetic value of lands adjacent to highways. The State laws governing the Scenic Highway Program are found in the Streets and Highways Code, Section 260 et seq. As previously described, there are no scenic highways in the City of Lathrop or with views of the Project site.

LOCAL

City of Lathrop Municipal Code

CHAPTER 17.92, LANDSCAPING AND SCREENING STANDARDS

Chapter 17.92, Landscaping and Screening Standards, of the City Zoning Ordinance contains several sections that regulate aesthetic or visual standards for development in the City. These include standards for landscaping of commercial and industrial developments; requirements for the contents of landscape plans; street, road, and parkway landscaping standards; requirements for a tree and shrub schedule; and planting and maintenance standards. Some of these standards would be applicable to the proposed Project, including the following:

- A landscape plan is required for all new residential, commercial, and industrial developments. These plans would include landscape materials, trees, shrubs, groundcover, turf, etc.
- Parking lots located on the proposed Project site shall include a landscape strip buffer installed continuously along the property line.
- All outside storage areas shall be screened so as not to be visible from adjacent properties and public rights-of-way. Screening shall be a minimum of six feet in height, and consist of a solid material. Outside storage is not permitted in front or street side yards, or in front of structures.
- Roof mounted mechanical equipment, tanks, ventilating fans and similar equipment shall be screened from the view of adjacent properties and public rights-of-way at grade. The required screens shall be architecturally compatible with the building or structure on which they are used. All streets, roads, and parkways within the City shall meet the following standards:
- In residential, commercial and industrial zones, trees shall be planted in accordance with the landscape and screening standards. In addition, the following requirements shall apply:

- Trees shall be planted between four feet and ten feet from a public right-of-way. Trees should also be a minimum of ten feet from any driveway.
- Trees planted on street frontages where noise attenuation is required shall be planted in a minimum five-foot landscape strip or in tree wells. Each tree shall be spaced no farther than 20 feet apart.

SECTION 17.100, SITE PLAN REVIEW

Section 17.100, Site Plan Review, of the City Zoning Ordinance contains sections that requires, during site plan review, proposed developed are reviewed in order to ensure building height; landscaping, setbacks, and lighting to be proposed to limit impact to adjoining properties.

SECTION 17.84.100, MASTER SIGNAGE PLANS

Section 17.84.100, Master Signage Plans, implements the City's Sign Design Program or master signage plans. The section provides a process for community development director review and decision related to requests for signs for multi-tenant projects. The intent is to allow the integration of a project's signs with the design of the structures to achieve a unified architectural design and to approve common sign regulations for multi-tenant projects.

City of Lathrop General Plan

POLICIES: RECREATION AND RESOURCES ELEMENT

- RR-2.1: Open Space Boundaries. Maintain existing open space lands within the city by carefully considering the impact of new development in established open space areas.
- RR-2.2: Regional Partners. Coordinate with regional partners to maintain and preserve open space areas under overlapping jurisdiction or within nearby communities to protect all local and regional opportunities for recreation available to Lathrop residents.
- RR-2.3 Scenic Resources. Protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features, to the extent practical.

POLICIES: LAND USE ELEMENT

- LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.3 Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high- volume roadways.
- LU-5.6 In considering land use change requests, consider factors such as compatibility with surrounding uses in terms of privacy, noise, and changes in traffic levels.
- LU-7.1 Encourage San Joaquin County to retain existing agricultural land use designations in areas outside of the Lathrop SOI.

3.1 AESTHETICS AND VISUAL RESOURCES

- LU-7.2 Support the continuation of agricultural operations and activities on lands adjacent to the SOI and within the City's Area of Influence.
- LU-7.3 Allow and support the continuation of agricultural operations on lands within the City limits which are designed for urban uses until such time as urban development is proposed for the land.
- LU-7.4 Ensure that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors

ACTIONS: LAND USE ELEMENT

- LU-5.a Through the development review process, screen development proposals for land use and transportation network compatibility with existing surrounding or abutting development or neighborhoods.
- LU-5.b Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-7.a Continue to implement the City's Agricultural Land Preservation Ordinance in order to protect existing agricultural operations from nuisance complaints, and to reduce impacts to future sensitive receptors proposed in close proximity to agricultural operations.
- LU-7.b Consider requiring buffering features between new urban uses and commercial agricultural uses, including but not limited to, landscaping, trails, gardens, solar arrays, and open spaces.

3.1.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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

- Have a substantial adverse effect on a scenic vista;
- Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with the applicable zoning and other regulations governing scenic quality; or
- Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Project implementation would not result in substantial adverse effects on scenic vistas. (Less than Significant)

As described in Chapter 2.0, Project Description, implementation of the Project would convert the site from its existing use as primarily vacant land to the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators.

Project components would include:

- Fueling facilities offering 8 truck fuel islands and 8 car fuel islands (12 dispensers);
 - Fuel tanks for both trucks and auto will be above ground with chain link fencing with privacy slats around the tanks.
- Various parking areas during Phases I and II, including:
 - 148 truck/trailer spaces, 163 passenger vehicle spaces (including 128 regular spaces, 28 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase I; and
 - 98 truck/trailer spaces, 203 passenger vehicle spaces (including 176 regular space, 20 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase II;
- A 13,846-sf full service 4-bay truck and automobile repair shop;
- A 16,668-sf building that will include the following:
 - Office space;
 - Restroom facilities, 8 showers;
 - Laundry facility with 12 sets of washer/dryer;
 - Retail convenience store that will offer everyday products from truck accessories, toiletry supplies and a number of products for quick shopping needs for traveling and commuter customer base;
 - Two quick service restaurants, one with a drive-thru option;
 - Seating area for patrons to dine;
- Two dog run areas enclosed with metal fences.

The Project site is not designated as a scenic vista by the City of Lathrop General Plan or the San Joaquin County General Plan. Nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista or scenic resource under an established program. However, not qualifying for designation under a scenic program does not take away from the fact that Project site contains aesthetically pleasing features such as agricultural land and other natural topography. While this land is disturbed from its natural condition, developed agricultural land can provide visual relief to a passerby/viewer from common manmade structures and visual obstructions found in a developed environment. Agricultural lands provide a sense of openness that is common in natural environments. Throughout the year agricultural operations would result in the land evolving from an environment that appears lush with vegetation (green crops) to an environment that appears barren (recently tilled). The City's General Plan EIR notes that views of

3.1 AESTHETICS AND VISUAL RESOURCES

the agricultural lands have become important visual resources that contribute to the community identity of Lathrop, and the Central Valley region and are considered to be very important by members of the Lathrop community. Furthermore, these features are desirable to residents throughout the region, as well as visitors passing through regardless of whether they meet the criteria for scenic programs.

The only scenic resource in the vicinity of the Project is the San Joaquin River and its associated environs, which runs approximately two miles west of the proposed Project and is considered the most significant visual resource in the vicinity. However, the San Joaquin River is not visible from anywhere within the Project Site.

Furthermore, implementation of the proposed Project will include a high-rise pylon sign for quick site identification for patrons ranging from travelers to locals. The sign will be placed at the northeast corner of the site. The sign will house the TA logo, unleaded and diesel prices, and spaces to advertise the two quick service restaurants. There will also be an additional monument sign placed just north of the truck fuel islands for facility identification from the roadway.

All signage on the Project site will require a Sign Design Program review process, in accordance with Section 17.84.100, Master Signage Plans, that is separate from the rest of the proposed development. The master sign plan provides a process for community development director review and decision related to requests for signs for multi-tenant projects. The intent is to allow the integration of a project's signs with the design of the structures to develop a unified architectural statement and to approve common sign regulations for multi-tenant projects.

The proposed Project would include visual components that would assist in enhancing the appearance of the Specific Plan Area following site development. These improvements would include landscaping improvements along the eastern boundary line of the Project site and along Manthey and Roth Roads, as well as in internal parking areas. The southwestern corner and western boundary line of the Project site also includes bioretention areas and leaves a portion of the Project site as an undeveloped area with the landscaping of trees in order to provide visual relief from the development of the Project site. Furthermore, northern and eastern boundary lines are proposed to be screened from the respective roadways through the planting of medium shrubberies and proposed masonry walls. Internal vehicle access roads, including the proposed Manthey Road Re-Alignment access easement, would be bordered on either side by native and street trees. Internal utilities are also proposed to be shielded by 4 foot and 10 foot high chain link fences with coated black vinyl slats. Fuel storage tanks to the southwest are proposed to be screened by landscaping.

Further, the travel center is proposed to be articulated to provide visual relief from massing of solid walls and are proposed to be vary in heights. The proposed truck service center, with minimal building articulation, is proposed to be set back from either frontage road and rear of the travel center which is in prominent view of either adjoining road.

Impacts related to a change in visual character are largely subjective and very difficult to quantify. People have different reactions to the visual quality of a project or a project feature, and what is considered "attractive" to one viewer may be considered "unattractive" to other viewers. The

Project site currently consists primarily of agricultural lands, which are generally considered to provide visual relief from urban and suburban developments, and help to define the character of a region. The loss of agricultural lands can have an adverse cumulative impact on the overall visual character and quality of a region.

The proposed Project would result in the conversion of land in the Project site from a natural setting to a developed use. Nevertheless, the “attractive” aesthetics of the agricultural areas in the Project site would be visually changed in perpetuity. There are a variety of design elements, such as park areas and landscaping, in the Project site that will provide “attractive” elements to the human environment. However, as mentioned previously, there are no designated scenic vistas or resources that would be impacted. The Project site is not designated as a scenic vista by the City of Lathrop General Plan or the San Joaquin County General Plan, nor does it contain any unique or distinguishing features that would qualify the site for designation as a scenic vista or scenic resource under an established program. Therefore, while the proposed Project would permanently convert the agricultural and undeveloped uses to a developed use and would create a change in the visual characteristics of the site that is generally considered less “attractive” than the existing condition, the proposed Project site is not within or near a designated scenic vista. Implementation of the proposed Project would have a *less than significant* impact on a scenic vista, and no mitigation is required.

Impact 3.1-2: Project implementation would not substantially damage scenic resources within a State Scenic Highway. (Less than Significant)

As previously discussed, there are no designated State Scenic Highways in the vicinity of the Project site. The only Officially Designated Scenic Highway in San Joaquin County is I-580 from I-5 to SR 205 located approximately 16 miles southwest of the Project site. Views from this route are primarily agricultural with distant views of the Coast Range. The City of Lathrop and the Project site are not visible from this roadway segment.

There are no County designated scenic corridors, trails, or rivers located in the Project site. Additionally, there are no “eligible” highway segments in the Project vicinity that may be included in the State Scenic Highway system. While the Project would permanently convert the agricultural land to urbanized use, potential views of the Project site are limited due to the topography to potential views from the State Scenic Highway. Thus, implementation of the Project would not substantially damage scenic resources within a State Scenic Highway, as public views of the agricultural land from I-580 are limited; therefore, this is a *less than significant* impact.

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

The CEQA definition for an “Urbanized area” means a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile. In addition, to be considered an Urbanized area according to CEQA, projects must also be within the boundary of a map prepared by

3.1 AESTHETICS AND VISUAL RESOURCES

the U.S. Bureau of the Census which designates the area as urbanized area. According to the U.S. Bureau of the Census, the Project site is mapped and designated as urbanized area. In addition, the Project site is located within the City of Lathrop, which has an estimated population of approximately 35,080 people; meaning the Project site is within an urbanized area and subjected to applicable zoning or other regulation governing scenic quality. Future development of the Project site would convert the Project site from its existing vacant state to a developed urban use.

The proposed Project would result in a land use consistent with the land use designation of the Project site. More specifically, the Project proposes the construction of freeway commercial services, consisting of a new travel center with multiple facilities, gasoline and diesel refueling stations, service station, and parking lots. These improvements would be aesthetically similar to service uses currently developed or anticipated within the immediate area and along I-5, such as the trucking sales and travel service centers across I-5 from the Project site. The proposed buildings and new impervious surface, in and of itself, would not substantially degrade the existing visual character or quality of the area and its surroundings, since uses would be similar to the urbanized uses near the proposed Project site. Therefore, while the Project would result in a loss of rural agricultural land, it would result in the development of commercial uses in an area of Lathrop currently planned for and developed with similarly scaled travel center amenities.

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

Impact 3.1-4: Project implementation would not create new source of substantial in light or glare. (Less than Significant)

Currently, there are no existing lighting sources within the Project site. Implementation of the proposed Project would introduce new sources of light and glare into the Project site. New sources of glare would occur primarily from the windshields of vehicles travelling to and from the Project site and from vehicles parked at the site. There is also the potential for reflective building materials and windows to result in increases in daytime glare. A detailed lighting plan has been prepared for the proposed Project.

LIGHTING

Development of the parking areas will include lighting systems to provide safety and security, which could result in an increase in lighting adjacent to the Project site. The proposed lighting primarily consists of 70 watt pole lights throughout the parking areas; and 131.3 watt LED canopy light and 37.05 watt wall sconce lights within the refueling area and buildings, respectively.

According to the lighting plan prepared for the proposed Project, street lighting, parking lighting, exterior lighting, and safety lighting will be installed in accordance with the City's standards. According to the photometric plan prepared for the Project, development of the parking areas will include lighting systems onsite to provide safety and security and could result in an increase in lighting adjacent to the Project site. This primarily consists of 70 watt pole lights throughout the

parking areas; and 131.3 watt LED canopy light and 37.05 watt wall sconce lights within the refueling area and buildings, respectively. As noted on the photometric plan, the eastern boundary lines of the Project site include 0.0 and 0.1 photometric values indicating that light produced on the Project site will not trespass or spill on to adjacent sites. Furthermore, the lighting plan prepared for the proposed Project indicates that all pole lighting will be directed downward to avoid trespass or spill onto adjacent sites. The southern and northern boundary lines, however, range from 0.2 to 1.5 photometric values indicating that the proposed Project could cause nominal or minimal light spillage onto adjacent properties.

Existing lighting near the proposed Project includes roadway lighting from I-5 and adjacent streetlight and facility lighting. Under current conditions, the proposed Project has nighttime lighting associated with the existing urbanized uses to the east, roadway lighting from I-5 (including from motorist vehicles), and miscellaneous lighting associated with various nearby streets. The proposed project would be subject to lighting and design guidelines that would reduce potential adverse impacts associated with light and glare to the extent feasible. The lighting guidelines require the use of cut-off type fixtures for on-site lighting to minimize visibility from adjacent areas and specifies that light fixtures will be the appropriate size and height given the activities for which they are designed, and proposed lighting would be arranged as to deflect light away from adjoining properties.

GLARE

Development in accordance with the proposed Project will disperse the amount of vehicles in multiple areas that could create new sources of glare within the Project site and directly adjacent to the Project site. These new sources of glare could be from materials used throughout the proposed parking areas, roadway surfaces, motor vehicles, and vehicle structures such as poles and signs. Outside the City limits, there are currently minimal sources of glare, and future development will introduce new lighting in an area with relatively low existing lighting. Due to the substantial of new parking lot square footage planned for the Project site, the Project could significantly result in a substantial increase in glare vehicles on nearby streets (i.e. Roth Road and Manthey Road). However, excessive reflective building materials would not be used on any buildings/structures/facilities associated with the proposed project. Furthermore, the landscaping on-site would include a variety of shade trees throughout the Project site and the perimeter of the site would be landscaped with a variety of grasses and trees per the preliminary landscape plan. The proposed landscaping would assist in shielding glare resulting from the proposed building materials and glass windows. Therefore, the proposed project is not expected to introduce significant glare that would negatively affect nearby pedestrians or motorists.

CONCLUSION

The Lathrop General Plan EIR determined the impact of new sources of light and glare can be minimized by incorporating design features and operating requirements into new developments that limit light and glare. Additionally, improvements such as landscape and street lighting, are subject to Site Plan and Architectural Design Review. Design Review procedures in compliance with 17.100 and 17.104 of the Lathrop Municipal Code.

3.1 AESTHETICS AND VISUAL RESOURCES

Light sources from the proposed parking lot may have a significant adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, on-site light sources may create light spillover impacts on surrounding land uses in the absence of mitigation. However, the proposed Project will be required to comply with the all City of Lathrop Municipal Code Title 17.84, Signs, and would be required to incorporate design features to minimize the effects of light and glare which would ensure impacts associated with nighttime lighting and light spillage onto adjacent properties are ***less than significant***.

This section provides an overview of the agricultural crops in San Joaquin County and the City of Lathrop, agricultural capability of the soils in the Project site and existing site conditions. This section concludes with an evaluation of the impacts related to agricultural resources and recommendations for mitigating impacts as needed. Information in this section is derived primarily from the San Joaquin County Agricultural Report (San Joaquin County Agricultural Commissioner, 2022), the California Department of Conservation’s “FMMP – Rural Land Mapping Project” (California Department of Conservation, 2022), and the Natural Resources Conservation Service (NRCS) Web Soil Survey (NRCS, 2023).

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

As discussed in the Initial Study for the proposed Project (see Appendix A), the Project site is not under a Williamson Act contract. There are no forest resources or zoning for forest lands located on the Project site, or within the City of Lathrop. This CEQA topic is not relevant to the proposed project. Therefore, this CEQA topic is not relevant to the proposed Project and will not be addressed further in this EIR.

3.2.1 ENVIRONMENTAL SETTING

SAN JOAQUIN COUNTY AGRICULTURE

San Joaquin County occupies a central location in California’s vast agricultural heartland, the San Joaquin Valley. The County’s Agricultural Commissioner’s most recent published Agricultural Report (published in 2021) contains the following information relating to agriculture in the County.

Agricultural Value

San Joaquin County has a total land area of 1,391 square miles. The total acreage of crop land in the county is approximately 772,762 acres. The gross value of agricultural production in San Joaquin County for 2021 was \$3,193,234,000 which represents a 5.0 percent increase (\$162,605,000) in value from 2020. Table 3.2-1 lists the nine primary commodities in San Joaquin County in 2020 and 2021.

TABLE 3.2-1: SUMMARY COMPARISON OF CROP VALUES

<i>PRODUCT TYPE</i>	<i>2020 VALUE IN DOLLARS</i>	<i>2021 VALUE IN DOLLARS</i>
Field Crops	\$235,304,000	\$236,790,000
Vegetable Crops	\$260,363,000	\$250,386,000
Fruit and Nut Crops	\$1,603,784,000	\$1,726,962,000
Nursery Products	\$132,255,000	\$138,155,000
Livestock and Poultry	\$124,305,000	\$128,628,000
Livestock and Poultry Products	\$622,507,000	\$654,239,000
Seed Crops	\$4,090,000	\$4,029,000
Apiary Products	\$48,461,000	\$54,045,000
Other Products (Biomass/Firewood)	\$15,285,000	\$15,725,000

SOURCE: SAN JOAQUIN COUNTY 2021 AGRICULTURAL REPORT (2021).

AGRICULTURAL CAPABILITY

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

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

Soil Capability Classification System

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

TABLE 3.2-2: SOIL CAPABILITY CLASSIFICATION

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

SOURCE: USDA SOIL CONSERVATION SERVICE.

Storie Index Rating System

The Storie Index Rating system ranks soil characteristics according to their suitability for agriculture from Grade 1 soils (80 to 100 rating) which have few or no limitations for agricultural production, to

Grade 6 soils (less than 10) which are not suitable for agriculture. Under this system, soils deemed less than prime can function as prime soils when limitations such as poor drainage, slopes, or soil nutrient deficiencies are partially or entirely removed. The six grades, ranges in index rating, and definition of the grades, as defined by the NRCS, are provided below in Table 3.2-3.

TABLE 3.2-3: STORIE INDEX RATING SYSTEM

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

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

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

Important Farmlands

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

IMPORTANT FARMLANDS IN SAN JOAQUIN COUNTY

Data from the Department of Conservation indicates that approximately 1,858 acres of Prime Farmland in the County was developed for other uses between 2016 and 2018, resulting in an existing total of 381,934 acres of Prime Farmland (42 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (9 percent), Unique Farmland (9 percent), Farmland of Local Importance (7 percent), and Grazing Land (14 percent). The types and acreages of farmland in 2016 and 2018 are shown in Table 3.2-4.

3.2 AGRICULTURAL RESOURCES

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

LAND USE CATEGORY	2016-2018 ACREAGE CHANGES							
	TOTAL ACREAGE INVENTORIED				ACRES LOST	ACRES GAINED	TOTAL	NET
	2016		2018		(-)	(+)	ACREAGE CHANGED	ACREAGE CHANGED
	Acres	Percent	Acres	Percent				
Prime Farmland	381,634	42%	381,984	42%	1,858	2,210	4,068	352
Farmland of Statewide Importance	82,618	9%	82,163	9%	921	466	1,387	-455
Unique Farmland	81,920	9%	85,694	9%	402	4,174	4,576	3,772
Farmland of Local Importance	68,903	8%	65,944	7%	5,507	2,547	8,054	-2,960
IMPORTANT FARMLAND SUBTOTAL	615,075	67%	615,785	67%	8,688	9,397	18,085	709
Grazing Land	129,760	14%	126,902	14%	2,893	37	2,930	-2,856
AGRICULTURAL LAND SUBTOTAL	744,835	82%	742,687	81%	11,581	9,434	21,015	-2,147
Urban and Built-up Land	95,329	10%	97,541	11%	121	2,332	2,453	2,211
Other Land	60,602	7%	60,987	7%	922	1,312	2,234	390
Water Area	11,836	1%	11,382	1%	680	226	906	-454
TOTAL AREA INVENTORIED	912,602	100%	912,597	100%	13,304	13,304	26,608	0

NOTE: THE 2016 AND 2018 DATA IS THE LATEST AVAILABLE DATA FROM THE STATE AT THE TIME THIS DOCUMENT WAS WRITTEN.

SOURCE: CA DEPARTMENT OF CONSERVATION, DIVISION OF LAND RESOURCE PROTECTION TABLE A-30, 2018.

EXISTING SITE CONDITIONS

The Project site is comprised of approximately 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road. The Project site is comprised of flat land with ruderal grasses, a few trees (located primarily along the northern and eastern boundary of the Project site), a foundation of a previously demolished abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet and the impervious area is approximately 2,500 square feet. Fencing surrounds the Project site.

The Project Site is located within the northern boundary of the City of Lathrop Sphere of Influence (SOI), within the unincorporated area of San Joaquin County. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and rural residential properties to the north. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, illustrate the regional location and Project vicinity.

Important Farmland Designations

The State of California Department of Conservation FMMP and San Joaquin County GIS data were used to illustrate the farmland characteristics for the Project site. Farmland classifications within and in the vicinity of the Project Site are identified in Figure 3.2-1 and are shown in table 3.2-5 below.

TABLE 3.2-5: FARMLAND CLASSIFICATION

<i>LAND CLASSIFICATION</i>	<i>DEVELOPMENT AREA</i>	<i>ANNEXATION AREA</i>	<i>TOTAL</i>	<i>% OF TOTAL</i>
D - Urban/Built Up Land	0.26	2.63	2.89	13%
L - Farmland of Local Importance	19.31	0.14	19.45	87%
Grand Total	19.57	2.77	22.34	100%

SOURCE: CALIFORNIA DEPARTMENT OF CONSERVATION; NRCS CUSTOM WEB SOIL SURVEY, 2022.

PRIME FARMLAND

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

The Project site does not contain Prime Farmland. The area adjacent to the northern boundary of the Project site is designated Prime Farmland, as shown on Figure 3.2-1. Prime Farmlands are also located west, southwest, and south of the Project site.

FARMLAND OF STATEWIDE IMPORTANCE

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

The Project site does not contain Farmland of Statewide Importance. Farmland of Statewide Importance is located within the vicinity of the Project site to the west, northwest, southwest, and south, as shown on Figure 3.2-1.

FARMLAND OF LOCAL IMPORTANCE

Farmland of Local Importance is land of importance to the local agricultural economy, as determined by the County Board of Supervisors and a local advisory committee. The Project site consists of approximately 19.45 acres of Farmland of Local Importance, including 19.31 acres within the Development Area and 0.14 acres within the Project site but outside the Development Area. As shown on Figure 3.2-1, Farmland of Local Importance is located to the north, west, and south of the Project site.

3.2 AGRICULTURAL RESOURCES

URBAN AND BUILT-UP LAND

Urban and Built-Up Land includes lands occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes. As shown on Figure 3.2-1, Urban and Built-up Land is adjacent to the Project site, to the east. The Project site consists of approximately 2.89 acres of Urban and Built-Up land which includes approximately 0.26 acres within the Development Area.

RURAL RESIDENTIAL

Rural Residential includes rural development which has a building density of one to five structures per ten acres. Rural Residential land are located north of the Project site.

Soils Characteristics

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.2-6 identifies the soils found in the Project Site.

TABLE 3.2-6: PROJECT SITE SOILS

<i>UNIT SYMBOL</i>	<i>NAME</i>	<i>ACRES IN PROJECT SITE</i>	<i>PERCENT OF PROJECT SITE</i>	<i>CAPABILITY CLASSIFICATION</i>
196	Manteca fine sandy loam, 0 to 2 percent slopes	6.8	32.7%	III-IV
266	Veritas fine sandy loam, 0 to 2 percent slopes	14.9	67.3%	II-IV

** DEPICTS IRRIGATED VS NON IRRIGATED CAPABILITY RATING*

SOURCE: SAN JOAQUIN COUNTY GIS, NRCS SOILS DATABASE, 2022.

Manteca fine sandy loam. This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. Soils are used for irrigated crops such as alfalfa, almonds, barley, corn, grapes, melons, pasture and tomatoes. Vegetation is soft chess, wild oats, ripgut brome, turkey mullein and other annual grasses, forbs and scattered valley oaks.

Veritas fine sandy loam. This series consists of deep to duripan, moderately well drained soils. They formed in alluvium derived from mixed rock sources. Veritas soils are on low fan terraces. They have slow runoff and moderately rapid permeability. Common uses for this series include irrigated cropland. Alfalfa, barley and corn are the principal crops. Vegetation is annual grasses, forbs and scattered valley oaks.

3.2.2 REGULATORY SETTING

FEDERAL

Farmland Protection Policy Act

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

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

The proposed Project is not anticipated to be federally funded; therefore, the Project will not be subject to the FPPA.

Farm and Ranch Lands Protection Program

The NRCS administers the Farm and Ranch Lands Protection Program (FRPP), a voluntary program aimed at keeping productive farmland in agricultural uses. Under the FRPP, the NRCS provides matching funds to state, local, or tribal government entities and nonprofit organizations with existing farmland protection programs to purchase conservation easements. According to the 1996 Farm Bill, the goal of the program is to protect between 170,000 and 340,000 acres of farmland per year. Participating landowners agree not to convert the land to non-agricultural use and retain all rights to use the property for agriculture. A conservation plan must be developed for all lands enrolled based upon the standards contained in the NRCS Field Office Technical Guide. A minimum of 30 years is required for conservation easements and priority is given to applications with perpetual easements. The NRCS provides up to 50 percent of the fair market value of the easement being conserved (NRCS, 2004). To qualify for a conservation easement, farm or ranch land must meet several criteria. The land must be:

3.2 AGRICULTURAL RESOURCES

- Prime, Unique, or other productive soil, as defined by NRCS based on factors such as water moisture regimes, available water capacity, developed irrigation water supply, soil temperature range, acid-alkali balance, water table, soil sodium content, potential for flooding, erodibility, permeability rate, rock fragment content, and soil rooting depth;
- Included in a pending offer to be managed by a nonprofit organization, state, tribal, or local farmland protection program;
- Privately owned;
- Placed under a conservation plan;
- Large enough to sustain agricultural production;
- Accessible to markets for the crop that the land produces; and
- Surrounded by parcels of land that can support long-term agricultural production

STATE

California Department of Conservation

The DOC administers and supports a number of programs, including the Williamson Act, the California Farmland Conservancy Program (CFCP), the Williamson Act Easement Exchange Program (WAEPP), and the FMMP. These programs are designed to preserve agricultural land and provide data on conversion of agricultural land to urban use. The DOC has authority for the approval of agreements entered into under the WAEPP. Key DOC tools available for land conservation planning are conservation grants, tax incentives to keep land in agriculture or open space, and farmland mapping and monitoring.

Farmland Security Zones

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

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

Delta Reform Act

The California Legislature passed the Johnston-Baker-Andal-Boatwright Delta Protection Act of 1992 (Delta Protection Act) on September 23, 1992 and it was updated in 2009 and renamed the Delta Reform Act. The Act provided the means to prepare the Land Use and Resource Management Plan (2010) for the Primary Zone of the Delta. The Management Plan includes policies and recommendations with the overall goal to “protect, maintain, and where possible, enhance and restore the overall quality of the Delta environment, including but not limited to agriculture, wildlife

habitat, and recreational activities.” The following are the applicable policies with relation to agriculture:

Policy P-3. New non-agriculturally oriented residential, recreational, commercial, habitat, restoration or industrial development shall ensure that appropriate buffer areas are provided by those proposing new development to prevent conflicts between any proposed use and existing adjacent agricultural parcels. Buffers shall adequately protect the integrity of land for existing and future agricultural uses and shall not include uses that conflict with agricultural operations on adjacent agricultural lands. Appropriate buffer setbacks shall be determined in consultation with local Agricultural Commissioners, and shall be based on applicable general plan policies and criteria included in Right-to-Farm Ordinances adopted by local jurisdictions.

California Government Code Section 560643

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

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

LOCAL

City of Lathrop General Plan

POLICIES: LAND USE ELEMENT

- LU-7.1: Encourage San Joaquin County to retain existing agricultural land use designations in areas outside of the Lathrop SOI.
- LU-7.2: Support the continuation of agricultural operations and activities on lands adjacent to the SOI and within the City’s Area of Influence.

3.2 AGRICULTURAL RESOURCES

- LU-7.3: Allow and support the continuation of agricultural operations on lands within the City limits which are designed for urban uses until such time as urban development is proposed for the land.
- LU-7.4: Ensure that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors.

City of Lathrop Municipal Code - Agricultural Land Preservation (Title 15.48.040)

The City of Lathrop Right-to-Farm Ordinance (15.48.030) of the City's Agricultural Land Disclosure Statement (15.48.040) was adopted in 1991 to conserve and protect agricultural land in the City and protect agricultural landowners from nuisance complaints related to cultivation, irrigation, spraying, fertilizing, and other activities related to normal agricultural operations. Per Section 15.48.040, a disclosure statement is required whenever adjacent property is sold or building permit application is submitted, notifying the prospective buyer/applicant of adjacent agricultural land and possible discomforts and nuisance factors related to agricultural operations. The focus of the ordinance is to reduce the loss of agricultural resources in the City by clarifying the circumstances under which agricultural operations may be considered a nuisance.

Central Valley Farmland Trust

The Central Valley Farmland Trust is a private, non-profit, regional land trust working in Sacramento, San Joaquin, Stanislaus and Merced Counties of California. The organization works to preserve farmland through the purchase of agricultural conservation easements from willing landowners.

City of Lathrop Agricultural Mitigation

The City of Lathrop adopted an agricultural mitigation program in 2005, as a result of the settlement of a water transfer lawsuit against the cities of Lathrop, Manteca, and Tracy by the Sierra Club. The mitigation program adopted by the City of Lathrop required that future development pay \$2,000/acre for agricultural mitigation. Half of the mitigation (\$1,000/acre) will be paid to the Central Valley Farmland Trust (CVFT). The other \$1,000/acre will be collected by the City of Lathrop and may be passed to the CVFT or other trust, or may be retained by the City of Lathrop to be applied to local easements or other agricultural mitigation. This fee structure included an automatic escalator, so the fee as of 2023 is currently \$3,352 per acre.

Chapter 3.40 of the City's Municipal Code implements the agricultural mitigation program. This includes mitigating the loss of productive agricultural lands converted for urban uses within the city by permanently protecting agricultural lands planned for agricultural use and by working with farmers who voluntarily wish to place conservation easements on their land with fair compensation for such easements.

These Agricultural Mitigation amounts discussed above are in addition to fees imposed as part of the San Joaquin Multi-Species Conservation Plan (SJMSCP). The adopted SJMSCP includes a commitment to spend 75% of the dollars collected on lands which would benefit agricultural

resources. The SJMSCP fees are considered a separate Mitigation Fee obligation from the Agricultural Mitigation fees, but in many cases serve the same purpose. The SJMSCP is a voluntary program in lieu of conducting independent biological assessments. Most development proponents chose to comply with the SJMSCP.

Local Agency Formation Commission Boundary Controls

The San Joaquin Local Agency Formation Commission (LAFCO) is responsible for coordinating orderly amendments to local jurisdictional boundaries, including annexations. Annexation to the City of Lathrop would be subject to LAFCO approval, and LAFCO's decision is governed by state law (Gov't Code § 56001 et seq.) and the local LAFCO Policies and Procedures. State law requires LAFCOs to consider agricultural land and open space preservation in all decisions related to expansion of urban development. LAFCO's definition of Prime agricultural land refers to California Government Code Section 56064.3, which is described above under the State Regulatory Setting.

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

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

3.2.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: The proposed Project would not 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 uses. (Less than Significant)

Development of the proposed Project would result in the permanent conversion of approximately 19.45 of Farmland of Local Importance to nonagricultural use. However, Prime Farmland, Unique Farmland, and Farmland of Statewide Importance would not be converted as none is found on-site.

As previously discussed, Chapter 3.40 of the Municipal Code establishes the City's Agricultural Mitigation Fee Program, which authorizes the collection of development impact fees to offset costs associated with the loss of productive agricultural lands converted for urban uses within the City. The City's agricultural mitigation fee program requires that future development pay the agricultural mitigation fee, currently \$3,352 per acre¹, to mitigate the conversion of agricultural land to urban use. The City will use these funds to purchase conservation easements or deed restrictions on agricultural land to ensure that the land remains in agricultural use in perpetuity.

In addition to the City's agricultural mitigation fee program, the SJMSCP requires development to pay fees on a per-acre basis for impacts to agricultural lands that function as habitat for biological resources. As discussed in Section 3.4, Biological Resources, the Project site functions as biological habitat because it has been previously and actively used for agricultural use. Agricultural fields commonly have irrigation canals, ditches, and stock ponds that serve as a water source or drainage for the fields and habitat for a limited variety of plants and animals. SJCOG will then use these funds to purchase the conservation easements on agricultural and habitat lands in the Project vicinity. The compensation results in the purchase of conservation easements that are placed over agricultural land. As such, the Project fees paid to SJCOG as administrator of the SJMSCP will result in the preservation of agricultural lands in perpetuity.

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

As defined in Section 3.40.050 of the Agricultural Mitigation Fee section of the City of Lathrop Municipal Code, "Agricultural land or farmland" is defined as those land areas upon which agricultural activities, uses, operations or facilities exist that contain Capability Class I, II, III or IV soils as defined by the United States Department of Agriculture Natural Resource Conservation Service. As noted in Table 3.2-5, the Project site includes Class II-IV and III-IV soils. The site contains fallow agricultural land, is surrounded by agricultural uses to the north, west, and south, and is designated by the County for agricultural land uses. Therefore, the site is considered agricultural land or farmland according to the Agricultural Mitigation Fee section of the City of Lathrop Municipal Code.

The Project site is currently designated Freeway Commercial (FC) by the City of Lathrop General Plan Land Use Map. The City of Lathrop General Plan EIR identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified

¹ City of Lathrop. *Municipal Service Review and Sphere of Influence Amendment*. Pg 2-13. July 2022.

General Plan policies to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. The EIR concluded that implementation of the General Plan would result in a less than significant impact as the General Plan includes policies which would reduce the impact of development resulting in the conversion of Prime Farmland, Unique Farmland, and Farmland of Statewide Importance. This includes policies which encourage agricultural land uses in areas outside of Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Interest, and within the city. The EIR noted that adherence to the policies would ensure that projects include adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the city.

The City of Lathrop General Plan EIR identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan policies to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. However, the EIR concluded that implementation of the General Plan would result in a less than significant impact as the General Plan includes policies which would reduce the impact of development resulting in the conversion of existing farmland. This includes policies which encourage agricultural land uses in areas outside of Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Influence, and within the city.

While the proposed Project will result in the loss of Farmland of Local Importance, implementation of the proposed Project will not result in the conversion of convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Furthermore, the proposed Project would contribute fees toward the purchase of conservation easements on agricultural lands through the City's agricultural mitigation fee program and the SJMSCP which would result in the conservation of farmland. As such, impacts resulting from the Project would be *less than significant* relative to this topic.

Impact 3.2-2: The proposed Project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural. (Less than Significant)

Neighboring agricultural land, including Prime Farmland and Farmland of Local Importance, are located to the north, south, and west of the Project site, as shown on Figure 3.2-1. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. Existing agricultural operations, including orchard land and irrigated row crops across Roth Road to the northwest, that are located adjacent to the Project site may be adversely impacted by the increased human and vehicular presence in the Project site.

Commercial uses would be developed in the Project site with implementation of the proposed Project. Commercial uses would involve regional travel serving uses that include fueling facilities,

3.2 AGRICULTURAL RESOURCES

traveler amenities, vehicle servicing, and parking facilities for passing motorists and commercial truck operators. The commercial uses proposed by the project would significantly increase vehicular traffic and service operations next to adjacent agricultural uses. However, the development of commercial uses within the Project site, such as the development of buildings and signage, would not would interfere with existing agricultural operations, such that would prevent aerial spraying, as the structures proposed onsite would not be developed at heights that would interfere with such operations.

The City of Lathrop Right-to-Farm Ordinance (15.48.030) of the City's Agricultural Land Disclosure Statement (15.48.040) reduces the potential for conflict between existing agricultural lands and adjacent uses. The notification procedures in the ordinance serves to inform landowners and developers of non-agricultural uses of what the expectations are in the area with regard to continued agricultural activities. This notification process is designed to reduce complaints and legal conflicts between existing agricultural operations and future development. The proposed Project would be subject to the City of Lathrop Right-to-Farm Ordinance (15.48.030) of the City's Agricultural Land Disclosure Statement (15.48.040).

The City of Lathrop General Plan EIR (2022) identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan policies to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. However, the EIR concluded that implementation of the General Plan would result in a less than significant impact as the General Plan includes policies which would reduce the impact of development resulting in the conversion of existing farmland. This includes policies which encourage agricultural land uses in areas outside of Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Influence, and within the city. The EIR noted that adherence to the policies would ensure that projects include adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the city.

General Plan Policy LU-7.4 requires that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors. These buffer zones are required to be of sufficient size to protect the agriculture operations from the impacts of incompatible development and be established based on the proposed land use, site conditions and anticipated agricultural practices.

As shown in Figure 2.0-5 in Chapter 2.0, the land adjacent to the west and south is designated Agriculture/General by the County General Plan Land Use Map. Pursuant to General Plan Policy LU-7.4, buffers between the Project site and the agriculturally designated lands to the west of the western boundary and the south of the southwestern portion of the site should be provided to reduce potential land use conflicts and nuisance impacts to sensitive receptors.

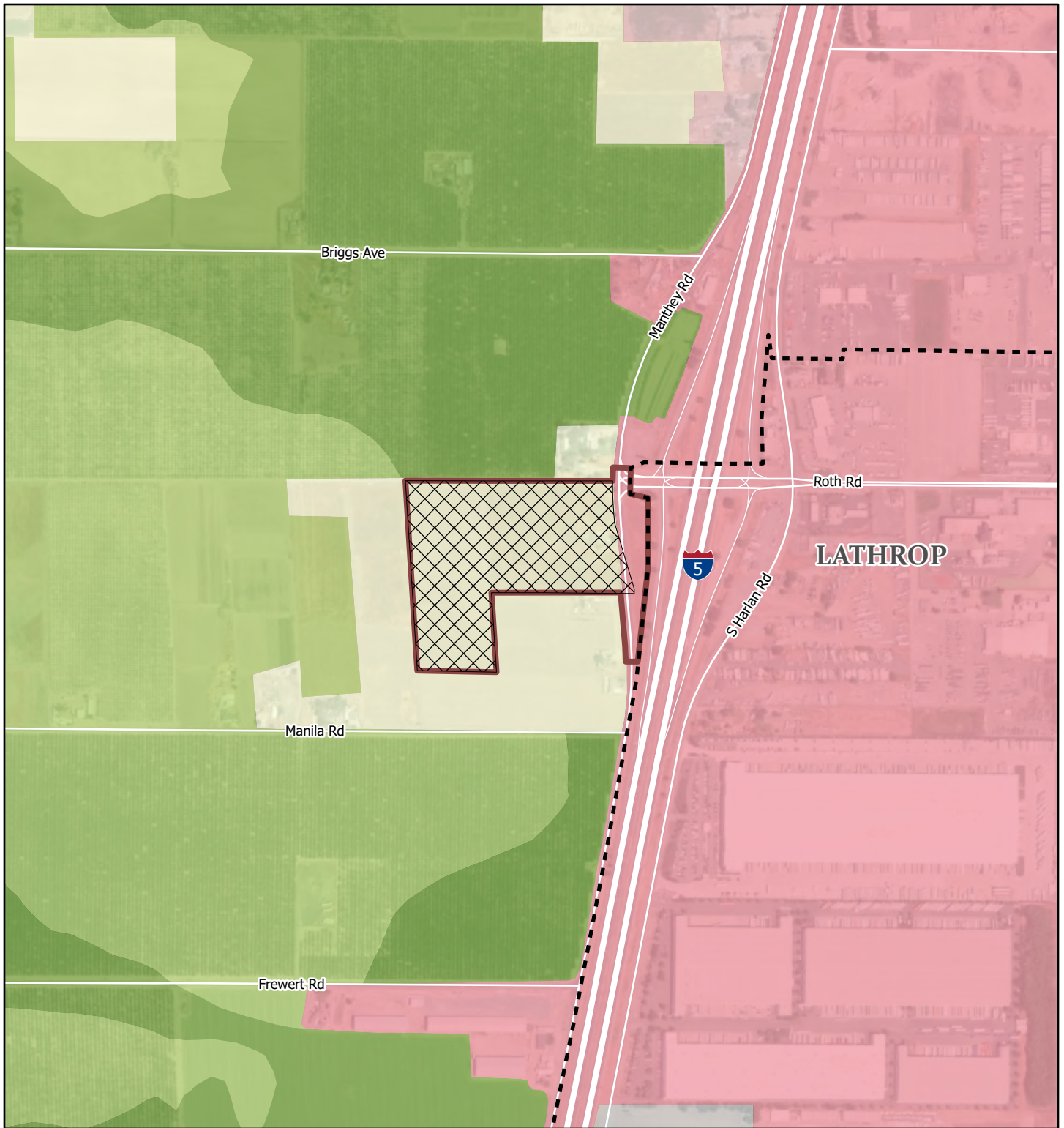
Phase I of the Project will develop 18.61 acres out of the 19.63-acre Development Area. The Phase I area is designed as an interim basis until the future realignment of Manthey Road, future Roth Road, and interchange improvements for I-5 will be constructed. Phase I will account for the future right-

of-way (ROW) dedication for these improvements. For the proposed Project in Phase I, landscaping provides a buffer between the southern and western portions of the Project site and existing agricultural operations located to the south and west. The retention pond along the western boundary measures approximately 60 ft. from the western boundary line and the retention pond to the southwestern corner measures approximately 266 ft. from the western boundary line and approximately 228 ft. from the southern boundary line. Together, the retention ponds provide sufficient buffer to protect the agriculture operations from the impacts of the development of the Project site, as buffers typically consistent of a minimum of 5 to 10 ft., according to Chapter 17.92 Landscaping and Screening requirements of the City of Lathrop Municipal Code.

Phase II of the Project provides additional landscaping buffers to the north from the Project site, along the northern project boundary. This includes a 10 ft. width landscaping strip along the northern Project boundary in order to provide sufficient buffering from agricultural operations. Phase II of the Project also includes the realignment of Manthey Road from the existing configuration to run along the western boundary of the Project site with a new connection to Roth Road; improvement of Roth Road to the north of the Project site; and improvements of the interchange for I-5. No new buildings are proposed as part of the Phase II development. Portions of Phase I site and circulation-related improvements will be removed which will allow the future improvements to be constructed. Additional parking will also be added for the auto portion of the development to incorporate the abandonment of the old Manthey Road. As Phase II of the proposed Project would be focused primarily to the east of the Project Site where there are no agricultural uses, agricultural operations would not be adversely impacted by Phase II of the proposed Project.

Adherence to the policies of the General Plan, stated above, would ensure that the proposed project include adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the proposed Project. Therefore, the proposed Project would not result in conflicts with adjacent agricultural lands would result in a *less than significant* impact regarding this topic.

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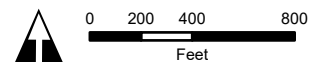


Legend

- | | |
|--------------------------------|----------------------------------|
| Project Site / Annexation Area | Farmland of Statewide Importance |
| Development Area | Farmland of Local Importance |
| Lathrop City Limits | Vacant or Disturbed Land |
| Farmland Classification | Rural Residential Land |
| Prime Farmland | Urban and Built-Up Land |

SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.2-1. Important Farmlands



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This section describes the regional air quality, current attainment status of the air basin, local sensitive receptors, emission sources, and impacts that are likely to result from Project implementation. The analysis contained in this section is intended to be at a project-level, and covers impacts associated with the conversion of the entire site to urban uses. Following this discussion is an assessment of consistency of the proposed Project with applicable policies and local plans. The Greenhouse Gases, Climate Change, and Energy analysis is located in a separate section of this document (see Chapter 3.7 – Greenhouse Gases, Climate Change and Energy). This air quality section is based in part on the following technical studies: *Air Quality and Land Use Handbook: A Community Health Perspective* (California Air Resources Board [CARB], 2007), *Guide for Assessing and Mitigation Air Quality Impacts* (San Joaquin Valley Air Pollution Control District [SJAVPCD], 2002), *Guidance for Assessing and Mitigating Air Quality Impacts - 2015* (SJAVPCD, 2015), and CalEEMod (v.2022.1).

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

3.3.1 ENVIRONMENTAL SETTING

SAN JOAQUIN VALLEY AIR BASIN

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

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

Climate

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

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

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

Wind Patterns

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

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

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

¹ SJVAPCD. Frequently Asked Questions, http://www.valleyair.org/general_info/frequently_asked_questions.htm#What%20is%20being%20done%20to%20improve%20air%20quality%20in%20the%20San%20Joaquin%20Valley, accessed September 11, 2023.

Temperature

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

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

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

Precipitation, Humidity, and Fog

Precipitation and fog may reduce or limit some pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog can block the required solar radiation. Wet fogs can cleanse the air during winter as moisture collects on particles and deposits them on the ground. Atmospheric moisture can also increase pollution levels. In fogs with less water content, the moisture acts to form secondary ammonium nitrate particulate matter. The winds and unstable air conditions experienced during the passage of winter storms result in periods of low pollutant concentrations and excellent visibility. Between winter storms, high pressure and light winds allow cold moist air to pool on the SJVAB floor. This creates strong low-level temperature inversions and very stable air conditions, which can lead to tule fog. Wintertime conditions favorable to fog formation are also conditions favorable to high concentrations of particulate matter (PM), including PM that have a diameter of less than 2.5 micrometers (PM_{2.5}) and 10 micrometers PM₁₀ (SJVAPCD, 2015).

Inversions

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

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

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

CRITERIA POLLUTANTS

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

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

Ozone (O₃) is a photochemical oxidant and the major component of smog. While O₃ in the upper atmosphere is beneficial to life by shielding the earth from harmful ultraviolet radiation from the sun, high concentrations of O₃ at ground level are a major health and environmental concern. O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. These reactions are stimulated by sunlight and temperature so that peak O₃ levels occur typically during the warmer times of the year. Both ROGs and NO_x are emitted by transportation and industrial sources. ROGs are emitted from sources as diverse as autos, chemical manufacturing, dry cleaners, paint shops and other sources using solvents. Relatedly, reactive organic compounds (ROG) are defined as the subset of ROGs that are reactive enough to contribute substantially to atmospheric photochemistry.

The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

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

In addition to human health effect, ozone has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O₃ can also act as a corrosive and oxidant, resulting in property damage such as the degradation of rubber products and other materials.

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

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

Nitrogen oxides (NO_x) is a brownish, highly reactive gas that is present in all urban atmospheres. The main effect of increased NO₂ is the increased likelihood of respiratory problems. Under ambient conditions, NO₂ can irritate the lungs, cause bronchitis and pneumonia, and lower resistance to respiratory infections. Nitrogen oxides are an important precursor both to ozone (O₃) and acid rain and may affect both terrestrial and aquatic ecosystems. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase

susceptibility to respiratory infections. People with asthma, as well as children and the elderly are generally at greater risk for the health effects of NO₂.

The major mechanism for the formation of NO₂ in the atmosphere is the oxidation of the primary air pollutant nitric oxide (NO_x). NO_x plays a major role, together with ROG_s, in the atmospheric reactions that produce O₃. NO_x forms when fuel is burned at high temperatures. The two major emission sources are transportation and stationary fuel combustion sources such as electric utility and industrial boilers.

Sulfur dioxide (SO₂) is one of the multiple gaseous oxidized sulfur species and is formed during the combustion of fuels containing sulfur, primarily coal and oil. The largest anthropogenic source of SO₂ emissions in the U.S. is fossil fuel combustion at electric utilities and other industrial facilities. SO₂ is also emitted from certain manufacturing processes and mobile sources, including locomotives, large ships, and construction equipment.

SO₂ affects breathing and may aggravate existing respiratory and cardiovascular disease in high doses. Sensitive populations include asthmatics, individuals with bronchitis or emphysema, children and the elderly. SO₂ is also a primary contributor to acid deposition, or acid rain, which causes acidification of lakes and streams and can damage trees, crops, historic buildings and statues. In addition, sulfur compounds in the air contribute to visibility impairment in large parts of the country. This is especially noticeable in national parks. Ambient SO₂ results largely from stationary sources such as coal and oil combustion, steel mills, refineries, pulp and paper mills and from nonferrous smelters.

Short-term exposure to ambient SO₂ has been associated with various adverse health effects. Multiple human clinical studies, epidemiological studies, and toxicological studies support a causal relationship between short-term exposure to ambient SO₂ and respiratory morbidity. The observed health effects include decreased lung function, respiratory symptoms, and increased emergency department visits and hospitalizations for all respiratory causes. These studies further suggest that people with asthma are potentially susceptible or vulnerable to these health effects. In addition, SO₂ reacts with other air pollutants to form sulfate particles, which are constituents of fine particulate matter (PM_{2.5}). Inhalation exposure to PM_{2.5} has been associated with various cardiovascular and respiratory health effects (U.S. EPA, 2017). Increased ambient SO₂ levels would lead to increased risk of such effects.

SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other sulfur oxides (SO_x). SO_x can react with other compounds in the atmosphere to form small particles. These particles contribute to particulate matter (PM) pollution. Small particles may penetrate deeply into the lungs and in sufficient quantity can contribute to health problems.

Particulate matter (PM) includes dust, dirt, soot, smoke and liquid droplets directly emitted into the air by sources such as factories, power plants, cars, construction activity, fires and natural windblown dust. Particles formed in the atmosphere by condensation or the transformation of emitted gases such as SO₂ and ROG_s are also considered particulate matter. PM is generally categorized based on the diameter of the particulate matter: PM₁₀ is particulate matter 10

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

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, there are major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis and premature death. Small particulate pollution causes health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed.

Particulate matter (PM₁₀) consists of small particles, less than 10 microns in diameter, of dust, smoke, or droplets of liquid which penetrate the human respiratory system and cause irritation by themselves, or in combination with other gases. Particulate matter is caused primarily by dust from grading and excavation activities, from agricultural activities (as created by soil preparation activities, fertilizer and pesticide spraying, weed burning and animal husbandry), and from motor vehicles, particularly diesel-powered vehicles. PM₁₀ causes a greater health risk than larger particles, since these fine particles can more easily penetrate the defenses of the human respiratory system.

PM_{2.5} consists of fine particles that are less than 2.5 microns in size. Similar to PM₁₀, these particles are primarily the result of combustion in motor vehicles, particularly diesel engines, as well as from industrial sources and residential/agricultural activities such as burning. It is also formed through the reaction of other pollutants. As with PM₁₀, these particulates can increase the chance of respiratory disease, and cause lung damage and cancer. In 1997, the U.S. EPA created new Federal air quality standards for PM_{2.5}.

Although neither the U.S. EPA nor the California air districts have provided any thresholds for ultrafine particles (UFPs) (defined as fine particles of less than 0.1 microns in size, or PM_{0.1}), it should be noted that such particles may have the potential for even greater health effects than PM₁₀ or PM_{2.5}, due to their even smaller sizes. UFPs are primarily generated by motor vehicle emissions (especially from diesel engines), braking, and tire wear. Specifically, UFPs are comprised mostly of metals that are known constituents of brake pads and drums, as well as additives in motor oil. Generally, all engines can create UFPs, but especially diesel engines, and any vehicle's braking system; traffic, particularly start-and-stop, generates UFPs.² Recent research suggests that UFPs pose considerable health risks, similar to but tending to be more severe than PM₁₀ and PM_{2.5}, such as increased risk of cardiovascular disease and ischemic heart disease death rates, and loss of lung

² Aerosol Science and Technology. 2011. Thomas A. Cahill, David E. Barnes, Nicholas J. Spada, Jonathan A. Lawton, and Thomas M. Cahill. Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 2003-2007. July 13, 2011.

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function.³ Furthermore, unlike diesel exhaust or other larger TAC emissions, UFPs are more persistent and do not dissipate easily over distances.⁴

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

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high PM levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. EPA, 2022c).

Lead (Pb) exposure can occur through multiple pathways, including inhalation of air and ingestion of Pb in food, water, soil or dust. Once taken into the body, lead distributes throughout the body in the blood and is accumulated in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. Excessive Pb exposure can cause seizures, mental retardation and/or behavioral disorders. Low doses of Pb can lead to central nervous system damage. Recent studies have also shown that Pb may be a factor in high blood pressure and subsequent heart disease.

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

Lead exposure is typically associated with industrial sources. Major sources of lead in the air are ore and metals processing and piston-engine aircraft operating on leaded aviation fuel. Other sources are waste incinerators, utilities, and lead-acid battery manufacturers. The highest air concentrations

³ Atmospheric Environment. 2016. Thomas A. Cahill, David E. Barnes, Leann Wuest, David Gribble, David Buscho, Roger S. Miller, Camille De la Croix. Artificial Ultra-fine Aerosol Tracers for Highway Transect Studies. April 7, 2016;

Aerosol Science and Technology. 2011. Thomas A. Cahil, David E. Barnes, Earl Withycombe, & Mitchell Watnik, and DELTA Group. Very Fine and Ultrafine Metals and Ischemic Heart Disease in the California Central Valley 1: 1974-1991. July 13, 2011.

⁴ Atmospheric Environment. 2016. Transition Metals in Coarse, Fine, Very Fine and Ultra-fine Particles from an Interstate Highway Transect Near Detroit. September 12, 2016.

of lead are usually found near lead smelters. As a result of the U.S. EPA's regulatory efforts, including the removal of lead from motor vehicle gasoline, levels of lead in the air decreased by 98 percent between 1980 and 2014 (U.S. EPA, 2022d). Based on this reduction of lead in the air over this period, and since most new developments do not generate an increase in lead exposure, the health impacts of ambient lead levels are not typically monitored by the California Air Resources Board (CARB).

AMBIENT AIR QUALITY STANDARDS

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

The federal and State ambient air quality standards are summarized in Table 3.3-1 for important pollutants. The federal and State ambient standards were developed independently, although both processes were aimed at avoiding health-related effects. As a result, the federal and State standards differ in some cases. In general, the California standards are more stringent. This is particularly true for ozone, PM_{2.5}, and PM₁₀. The U.S. EPA signed a final rule for the federal ozone eight-hour standard of 0.070 ppm on October 1, 2015, which was effective as of December 28, 2015 (equivalent to the California state ambient air quality eight-hour standard for ozone).

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

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

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

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2019A.

In 1997, new national standards for fine particulate matter diameter 2.5 microns or less (PM_{2.5}) were adopted for 24-hour and annual averaging periods. The existing PM₁₀ standards were retained, but the method and form for determining compliance with the standards were revised.

In addition to the criteria pollutants discussed above, Toxic Air Contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria

pollutants. Unlike criteria pollutants, TACs are regulated on the basis of risk rather than specification of safe levels of contamination.

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

Attainment Status

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

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

The U.S. EPA designates areas for ozone, carbon monoxide, and nitrogen dioxide as “does not meet the primary standards,” “cannot be classified,” or “better than national standards.” For sulfur dioxide, areas are designated as “does not meet the primary standards,” “does not meet the secondary standards,” “cannot be classified,” or “better than national standards.” However, the CARB terminology of attainment, nonattainment, and unclassified is more frequently used.

San Joaquin County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, PM₁₀ and PM_{2.5}. San Joaquin County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and PM_{2.5}. Table 3.3-2 presents the state and nation attainment status for San Joaquin County.

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

CRITERIA POLLUTANTS	STATE DESIGNATIONS	NATIONAL DESIGNATIONS
Ozone (O ₃)	Nonattainment	Nonattainment
PM ₁₀	Nonattainment	Attainment
PM _{2.5}	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (NO ₂)	Attainment	Unclassified/Attainment
Sulfur Dioxide (SO ₂)	Attainment	Unclassified/Attainment
Sulfates	Attainment	
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Unclassified	
Visibility Reducing Particles	Unclassified	

SOURCE: CALIFORNIA AIR RESOURCES BOARD, 2023.

San Joaquin County Air Quality Monitoring

The San Joaquin Valley Air Pollution District (SJVAPCD) and the CARB maintain air quality monitoring sites throughout San Joaquin County that collect data for ozone and PM_{2.5}. In addition, air quality monitoring sites for PM₁₀ are located throughout the San Joaquin Valley (though not in San Joaquin County). The closest air quality monitoring station to the Project site is the Stockton-Hazelton Street location. It is important to note that while the State retains the one-hour ozone standard, the federal ozone 1-hour standard was revoked by the U.S. EPA and is no longer applicable for federal standards. Best available data obtained from the monitoring sites between 2017 and 2021 (latest year of data available) is shown in Table 3.3-3, Table 3.3-4, and Table 3.3-5.

TABLE 3.3-3 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (STOCKTON-HAZELTON STREET)* - OZONE

YEAR	DAYS > STANDARD				1-HOUR OBSERVATIONS			8-HOUR AVERAGES				YEAR COVERAGE	
	STATE		NATIONAL		MAX.	STATE	NAT'L	STATE		NATIONAL			
	1-HR	8-HR	1-HR	8-HR		D.V. ¹	D.V. ²	MAX.	D.V. ¹	MAX.	D.V. ²	MIN	MAX
2021	0	1	0	1	0.085	0.10	0.093	0.073	No data	0.073	No data	73	74
2020	1	2	0	2	0.100	0.09	0.088	0.074	0.066	0.074	0.066	99	99
2019	1	2	0	2	0.098	0.08	0.087	0.077	0.066	0.077	0.066	90	91
2018	1	2	0	1	0.088	0.18	0.087	0.077	0.066	0.077	0.066	94	96
2017	0	2	0	2	0.085	0.09	0.090	0.079	0.066	0.079	0.066	80	84

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

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

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TABLE 3.3-4: AMBIENT AIR QUALITY MONITORING DATA SUMMARY (STOCKTON-HAZELTON STREET)* – PM₁₀

YEAR	EST. DAYS > STD.		ANNUAL AVERAGE		HIGH 24-HR AVERAGE		YEAR COVERAGE
	NAT'L	STATE	NAT'L	STATE	NAT'L	STATE	
2021	No data	No data	36.8	No data	199.1	160.3	0
2020	No data	No data	33.5	No data	147.0	148.5	84
2019	0	45.4	24.4	25.2	85.9	89.1	96
2018	13.1	31.7	28.7	29.5	187.0	198.6	97
2017	0	42.9	28.2	28.8	89.9	92.6	97

NOTES: THE NATIONAL ANNUAL AVERAGE PM₁₀ STANDARD WAS REVOKED IN DECEMBER 2006 AND IS NO LONGER IN EFFECT. AN EXCEEDANCE IS NOT NECESSARILY A VIOLATION. STATISTICS MAY INCLUDE DATA THAT ARE RELATED TO AN EXCEPTIONAL EVENT. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. NATIONAL STATISTICS ARE BASED ON STANDARD CONDITIONS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA.

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

TABLE 3.3-5 AMBIENT AIR QUALITY MONITORING DATA SUMMARY (STOCKTON-HAZELTON STREET)* - PM_{2.5}

YEAR	EST. DAYS > NAT'L '06 STD.	ANNUAL AVERAGE		NAT'L ANN. STD. D.V. ¹	STATE ANNUAL D.V. ²	NAT'L '06 STD. 98TH PERCENTILE	NAT'L '06 24-HR STD. D.V. ¹	HIGH 24-HOUR AVERAGE		YEAR COVERAGE	
		NAT'L	STATE					NAT'L	STATE	MIN	MAX
2021	No data	No data	No data	No data	14	39.9	51	582	58.2	64	64
2020	21.2	14.0	14.0	13.7	17	80.6	69	130.7	130.7	98	99
2019	6.4	9.3	No data	13.0	17	32.9	56	50.1	50.1	77	95
2018	25.0	17.6	17.4	13.8	17	92.3	56	188.0	257.5	96	100
2017	16.9	12.1	No data	12.2	12	44.2	39	53.7	53.7	94	99

NOTES: ALL CONCENTRATIONS EXPRESSED IN PARTS PER MILLION. STATE AND NATIONAL STATISTICS MAY DIFFER FOR THE FOLLOWING REASONS: STATE STATISTICS ARE BASED ON CALIFORNIA APPROVED SAMPLERS, WHEREAS NATIONAL STATISTICS ARE BASED ON SAMPLERS USING FEDERAL REFERENCE OR EQUIVALENT METHODS. STATE AND NATIONAL STATISTICS MAY THEREFORE BE BASED ON DIFFERENT SAMPLERS. STATE CRITERIA FOR ENSURING THAT DATA ARE SUFFICIENTLY COMPLETE FOR CALCULATING VALID ANNUAL AVERAGES ARE MORE STRINGENT THAN THE NATIONAL CRITERIA. D.V. ¹ = STATE DESIGNATION VALUE. D.V. ² = NATIONAL DESIGN VALUE.

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

ODORS

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

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

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

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

3.3.2 REGULATORY SETTING

FEDERAL

Clean Air Act

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

The U.S. EPA is responsible for administering the CAA. The CAA requires the U.S. EPA to set NAAQS for several air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health (with an adequate margin of safety, including for sensitive populations such as children, the elderly, and individuals suffering from respiratory diseases), and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

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

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

Federal Hazardous Air Pollutants Program

The 1977 CAA Amendments required the USEPA to identify National Emissions Standards for Hazardous Air Pollutants (NESHAPs) to protect the public health and welfare. Hazardous air

pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA Amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

Federal Heavy-duty Engines and Vehicles Fuel Efficiency Standards

In 2010, President Obama issued a memorandum directing federal agencies to establish additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and National Highway Traffic Safety Administration (NHTSA) proposed stringent, coordinated federal GHG and fuel economy standards for model year 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO₂ in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if this level were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021, and NHTSA intends to set standards for model years 2022–2025 in a future rulemaking.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011, the USEPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles.

In August 2016, the USEPA and NHTSA announced the adoption of the phase two program related to the fuel economy and GHG standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi-trucks, large pickup trucks, vans and all types of sizes of buses and work trucks. The final standards are expected to lower carbon dioxide emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.⁵

In August 2017, the USEPA asked for additional information and data relevant to assessing whether the GHG emissions standards for model years 2022-2025 remain appropriate. In early 2018, the USEPA Administrator announced that the midterm evaluation for the GHG emissions standards for cars and light-duty trucks for model years 2022-2025 was completed and stated his determination that the current standards should be revised in light of recent data. Subsequently, in April 2018, the USEPA and NHTSA proposed to amend certain existing Corporate Average Fuel Economy (CAFE) standards for passenger cars and light trucks and establish new standards, covering model years 2022-2025. Compared to maintaining the post-2020 standards now in place, the pending proposal

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

would increase U.S. fuel consumption.⁶ California and other states have announced their intent to challenge federal actions that would delay or eliminate GHG reductions. In April 2020, NHTSA and EPA amended the CAFE and GHG emissions standards for passenger cars and light trucks and established new less stringent standards, covering model years 2021 through 2026.

On September 27, 2019, the USEPA and NHTSA published the SAFE Rule (Part One).⁷ The SAFE Rule (Part One) went into effect in November 2019, and revoked California's authority to set its own GHGs standards and set zero emission vehicle mandates in California. The SAFE Rule (Part One) freezes new zero emission vehicles (ZEV) sales at model year 2020 levels for year 2021 and beyond, and will likely result in a lower number of future ZEVs and a corresponding greater number of future gasoline internal combustion engine vehicles. In response to the USEPA's adoption of the SAFE Rule (Part One), CARB has issued guidance regarding the adjustment of vehicle emissions factors to account for the rule's implications on criteria air pollutant and greenhouse gas emissions.^{8,9} The SAFE Rule is subject to ongoing litigation and on February 8, 2021 the D.C. Circuit Court of Appeals granted the Biden Administration's motion to stay litigation over Part 1 of the SAFE Rule. On April 22 and April 28, 2021, respectively, NHTSA and USEPA formally announced their intent to reconsider the Safe Rule (Part One).¹⁰ In August 2021, USEPA proposed to revise existing national greenhouse gas (GHG) emissions standards for passenger cars and light trucks for Model Years 2023- 2026 to make the standards more stringent. On August 5, 2021, USEPA announced plans to reduce greenhouse gas (GHG) emissions and other harmful air pollutants from heavy-duty trucks through a series of rulemakings over the next three years. The first rulemaking, to be finalized in 2022, will apply to heavy-duty vehicles starting in model year 2027, and will set new standards for criteria

⁶ NHTSA. 2018. Federal Register, Vol. 83, No. 72, Rules & Regulations, Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022-2025 Light Duty Vehicles. April 13. Available at: <https://www.federalregister.gov/documents/2018/04/13/2018-07364/mid-term-evaluation-of-greenhouse-gas-emissions-standards-for-model-year-2022-2025-light-duty>. Accessed: February 2022.

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

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

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

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

pollutants for the entire sector as well as targeted updates to the current GHG emissions standards.¹¹

STATE

California Clean Air Act

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

CARB Mobile-Source Regulation

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

California Air Quality Standards

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

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

Tanner Air Toxics Act (TACs)

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

Toxic Air Contaminants Health Effects

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The 10 TACs are acetaldehyde, benzene, 1,3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

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

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The CARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the CARB emissions inventory's PM₁₀ database, ambient PM₁₀ monitoring data, and the results from several studies to estimate concentrations of DPM.

Transportation Control Measures

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

Omnibus Low-NOx Rule

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

Low Emission Vehicle Program

The CARB first adopted Low Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan (SIP). In 2012, the CARB adopted the LEV III amendments to California's LEV regulations. These amendments, also known as the Advanced Clean Car Program, include more stringent emission standards for model years 2017 through 2025 for both criteria pollutants and greenhouse gas (GHG) emissions for new passenger vehicles.

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

On-Road Heavy-Duty Vehicle Program

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

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

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

The latest amendments became effective on December 31, 2014. The amended regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet particulate matter (PM) filter requirements beginning January 1, 2012. Lighter and older heavier trucks were required to be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent.

The regulation applies to nearly all privately and federally owned diesel-fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. The regulation provides a variety of flexibility options tailored to fleets operating low use vehicles, fleets operating in selected vocations like agricultural and construction, and small fleets of three or fewer trucks.¹²

Diesel Risk Reduction Plan

The CARB's Diesel Risk Reduction Plan has led to the adoption of new State regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels. The projected emission benefits

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

associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010, and 85 percent by 2020.¹³

LOCAL

City of Lathrop General Plan

The City of Lathrop General Plan includes several goals, policies, and implementation actions that are relevant to air quality. General Plan goals, policies, and implementation actions applicable to the Project are identified below:

GOALS – LAND USE ELEMENT

- LU-1: Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.
- LU-2: Promote objectives and development in special planning areas consistent with adopted specific plans, overlay districts, Master Plans and density bonus provisions.
- LU-3: Participate in coordinated local and regional land use planning activities.
- LU-4: Coordinate and integrate land use planning and transportation objectives.
- LU-5: Ensure that new development is compatible with existing development.

GOALS – CIRCULATION ELEMENT

- CIR-1: Develop and maintain a roadway system that accommodates all users.
- CIR-2: Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4: Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.

GOAL – RECREATION AND RESOURCES ELEMENT

- RR-6: Provide the community with optimal air quality.

POLICIES – LAND USE ELEMENT

- LU-1.1: Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3: Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4: Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age

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

groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)

- LU-1.8: Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.
- LU-3.1: Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.
- LU-3.2: Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.
- LU-3.3: Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4: Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2: Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3: Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-4.4: As the city grows, encourage and support the development of a transit system with regular service connecting destinations within the city, to ACE and Valley Link stations, and to adjacent jurisdictions.
- LU-5.1: Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2: Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.
- LU-5.3: Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4: In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5: Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and

nuisances) to nearby residential land uses and other existing and planned sensitive receptors.

POLICIES – CIRCULATION ELEMENT

- CIR-1.2: Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-2.1: Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3: Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.
- CIR-2.4: Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5: Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.
- CIR-4.1: Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2: Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3: New Technologies. Monitor deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.
- CIR-4.4: Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.

POLICIES – RECREATION AND RESOURCES ELEMENT

- RR-6.1: Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- RR-6.2: Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3: Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.

- RR-6.4: Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5: Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6: Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7: Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.
- RR-6.8: Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
 - 3.99 MT CO₂e per capita by 2030
 - 2.66 MT CO₂e per capita by 2040; and
 - 1.33 MT CO₂e per capita by 2050.
- RR-6.9: GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.
- RR-6.10: Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS – LAND USE ELEMENT

- LU-3.b: Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.
- LU-3.c: Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.
- LU-5b: Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-5c: When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.

- LU-5d: When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:
 - Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.
 - Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
 - Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
 - Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
 - Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
 - Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
 - Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.
- LU-5e: Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:
 - A. A definition of the type and size of facility that is subject to the Guidelines;
 - B. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
 - C. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
 - D. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
 - E. Strategies to reduce and/or eliminate diesel idling within the facility's site;

IMPLEMENTATION ACTIONS – CIRCULATION ELEMENT

- CIR-1a: Review and revise roadway standards to establish complete streets standards addressing the following factors as applicable: number of travel lanes, lane width, medians,

drainage control, shoulder width, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strips, and sidewalk width.

- CIR-1b: Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.
- CIR-1c: Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.
- CIR-1d: Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-2a: Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c: Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d: Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- CIR-2e: Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- CIR-2f: Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g: Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h: Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i: Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j: Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.
- CIR-2k: Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l: Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.

3.3 AIR QUALITY

- CIR-2m: Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.
- CIR-2n: Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o: Coordinate with transit providers and encourage them to enhance transit amenities for safe and comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.
- CIR-4a: Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.
- CIR-4b: Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.
- CIR-4c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.
- CIR-4d: Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e: Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f: As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.
- CIR-4g: Encourage open data sharing. Anonymized data can improve the City's decision-making and help to develop more informed policies and plans while preserving people's privacy.
- CIR-4i: As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.

- CIR-4j: As need for transit grows, review and consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.
- CIR-4k: Require new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code. Encourage installation of electric vehicle charging stations at existing development.

IMPLEMENTATION ACTIONS – RECREATION AND RESOURCES ELEMENT

- RR-6a: Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
 - A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b: Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c: Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e: Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6f: Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.
- RR-6g: Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.

- RR-6h: Encourage community car-sharing and carpooling.
- RR-6i: Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.
- RR-6j: Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.
- RR-6k: Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.
- RR-6l: Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

San Joaquin Valley Air Pollution Control District

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

AIR QUALITY PLANNING

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

In addition, the CARB requires regions that do not meet California AAQS for ozone to submit clean air plans (CAPs) that describe measures to attain the standard or show progress toward attainment. To ensure federal CAA compliance, SJVAPCD is currently developing plans for meeting new National AAQS for ozone and PM_{2.5} and the California AAQS for PM₁₀ in the SJVAB (for California CAA compliance). The following describes the air plans prepared by the SJVAPCD.

8-HOUR OZONE PLAN

The SJVAPCD's Governing Board adopted the 2007 Ozone Plan on April 30, 2007. This far-reaching plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard as set by U.S. EPA in 1997. The CARB approved the plan on June 14, 2007. The U.S. EPA approved the 2007 Ozone Plan effective April 30, 2012. SJVAPCD adopted the 2016 Ozone Plan to address the federal 2008 8-hour ozone standard, which must be attained by end

of 2031.^{14,15} More recently, a new ozone attainment plan is under development. Specifically, the 2022 Ozone Plan for the Attainment of the 2015 Federal 8-hour Ozone Standard is anticipated to be submitted in August 2022 to the U.S. EPA.

PM₁₀ PLAN

Based on PM₁₀ measurements from 2003 to 2006, the U.S. EPA found that the SJVAB has reached federal PM₁₀ standards. On September 21, 2007, the SJVAPCD's Governing Board adopted the 2007 PM₁₀ Maintenance Plan and Request for Redesignation. This plan demonstrated that the valley would continue to meet the PM₁₀ standard. U.S. EPA approved the document and on September 25, 2008, the SJVAB was redesignated to attainment/maintenance (SJVAPCD, 2015).

PM_{2.5} PLAN

The SJVAPCD adopted the 2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards on November 15, 2018.¹⁶ This plan addresses the U.S. EPA federal 1997 annual PM_{2.5} standard of 15 µg/m³ and 24-hour PM_{2.5} standard of 65 µg/m³; the 2006 24-hour PM_{2.5} standard of 35 µg/m³; and the 2012 annual PM_{2.5} standard of 12 µg/m³. This plan demonstrates attainment of the federal PM_{2.5} standards as expeditiously as practicable (SJVAPCD, 2020).

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

SJVAPCD RULES AND REGULATIONS

SJVAPCD Indirect Source Review

On December 15, 2005, SJVAPCD adopted the Indirect Source Review Rule (ISR or Rule 9510) to reduce ozone precursors (i.e., ROG and NO_x) and PM₁₀ emissions from new land use development projects. Specifically, Rule 9510 targets the indirect emissions from vehicles and construction equipment associated with these projects and applies to both construction and operational-related impacts. The rule applies to the proposed Project since it proposes more than 25,000 square feet of light industrial uses.

This rule requires the applicants of certain development projects which equal or exceed established applicability thresholds to apply to the SJVAPCD when applying for the development's last discretionary approval. Projects subject to the rule are required to quantify indirect emissions (mobile source emissions), area source emissions and construction exhaust emissions and to mitigate a portion of these emissions. The Indirect Source Rule was adopted December 2005 and

¹⁴ SJVAPCD. Ozone Plans <https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ozone-plans/>, accessed January 15, 2024.

¹⁵ SJVAPCD. 2016 Plan for the 2008 8-Hour Ozone Standard, http://www.valleyair.org/Air_Quality_Plans/Ozone-Plan-2016.htm, accessed January 15, 2024.

¹⁶ SJVAPCD. Particulate Matter Plans. http://valleyair.org/Air_Quality_Plans/PM_Plans.htm, accessed January 15, 2024.

last amended December 2017. Rule 9510 was adopted to reduce the impacts of growth in emissions from all new development in the San Joaquin Valley. Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site measures or pay off-site mitigation fees. One hundred percent of all off-site mitigation fees are used by the SJVAPCD to fund emission reduction projects through its Incentive Programs, achieving emission reductions on behalf of the project. The emission reduction expected from the rule allow the SJVAPCD to achieve attainment of the federal air quality standards for ozone by 2037.

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

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

Construction Equipment Emissions

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

- 20 percent of the total NO_x emissions
- 45 percent of the total PM₁₀ exhaust emissions

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

Operational Emissions

- NO_x Emissions. Applicants shall reduce 33.3 percent of the project's operational baseline NO_x emissions over a period of 10 years as quantified in the approved AIA.
- PM₁₀ Emissions. Applicants shall reduce 50 percent of the project's operational baseline PM₁₀ emissions over a period of 10 years as quantified in the approved AIA.

These requirements listed above can be met through any combination of on-site emissions reduction measures. In the event that a project cannot achieve the above standards through imposition of mitigation measures, then the project would be required to pay the applicable off-site

fees. These fees are used to fund various incentive programs that cover the purchase of new equipment, engine retrofit, and education and outreach.

Fugitive PM₁₀ Prohibitions

SJVAPCD controls fugitive PM₁₀ through Regulation VIII, Fugitive PM₁₀ Prohibitions. The purpose of this regulation is to reduce ambient concentrations of PM₁₀ and PM_{2.5} by requiring actions to prevent, reduce, or mitigate anthropogenic (human caused) fugitive dust emissions.

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

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

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

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

Nuisance Odors

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

Employer Based Trip Reduction Program

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce vehicle miles traveled (VMT) from private vehicles used by employees to commute to and from their worksites to reduce emissions of NO_x, ROG, and particulate matter (PM₁₀ and PM_{2.5}). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to their employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

Visible Emissions

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

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

Architectural Coatings

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

3.3.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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

- Conflict with or obstruct implementation of the applicable air quality plan;

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

APPROACH TO ANALYSIS

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

This analysis was performed consistent with the guidance and methodologies provided by the SJVAPCD’s GAMAQI.¹⁷ Based on the SJVAPCD New Source Review (NSR) offset requirements for stationary sources, the SJVAPCD has established thresholds of significance for criteria pollutant emissions, shown in Table 3.3-6. These thresholds apply to the project because these air pollutants would be generated during project construction and operation and constitute criteria pollutants or precursor emissions for criteria pollutants, which are regulated by the federal and State Clean Air Acts.

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

<i>POLLUTANT</i>	<i>CONSTRUCTION THRESHOLDS (TPY)</i>	<i>OPERATIONAL THRESHOLDS (TPY)</i>
ROG	10	10
NOx	10	10
CO	100	100
SOx	27	27
PM ₁₀	15	15
PM _{2.5}	15	15

SOURCES: SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD). 2015. GUIDANCE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACT. WEBSITE:

[HTTPS://WWW.VALLEYAIR.ORG/TRANSPORTATION/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF](https://www.valleyair.org/transportation/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF) ACCESSED JUNE 8, 2022.

¹⁷ San Joaquin Valley Air Pollution Control District (SJVAPCD). 2015. Guidance for Assessing and Mitigating Air Quality Impact. Website: <https://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf> Accessed June 8, 2022.

3.3 AIR QUALITY

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

TABLE 3.3-7: SJVAPCD DAILY MASS EMISSIONS SCREENING CRITERIA

<i>POLLUTANT</i>	<i>CONSTRUCTION THRESHOLDS (POUNDS PER DAY)</i>	<i>OPERATIONAL THRESHOLDS (POUNDS PER DAY)</i>
ROG	100	100
NOX	100	100
CO	100	100
SOX	100	100
PM ₁₀	100	100
PM _{2.5}	100	100

SOURCES: SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT (SJVAPCD), 2015. GUIDANCE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACT. WEBSITE: [HTTPS://WWW.VALLEYAIR.ORG/TRANSPORTATION/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF](https://www.valleyair.org/transportation/CEQA%20RULES/GAMAQI%20JAN%202002%20REV.PDF) ACCESSED DECEMBER 20, 2023.

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

CRITERIA POLLUTANT EMISSIONS MODELING

California Emission Estimator Model (CalEEMod)TM (v.2022.1), developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with California air districts, was used to estimate emissions for the proposed Project. Project construction was assumed to commence in late 2024 and be completed in early 2026. However, the exact timing of Project construction would depend on Project needs, availability of materials and more.

The land use assumptions for the modeling are: Gasoline/Service Station – 16 pumps; Gasoline Service Station – 8 pumps; Strip Mall – 16,688 square feet; Automobile Care Center – 13,846 square feet; and Other Asphalt Surfaces - 18.85125353 acres. Land uses were selected on a best-fit basis, and are consistent with the land use assumptions made by Fehr & Peers in their Transportation Analysis Report (2023) for the proposed Project. Total development acres were assumed to be 19.63 acres, consistent with the Development Area for the proposed Project. Vehicle trips, vehicle miles traveled (VMT), and fleet mix estimates in the modeling are consistent with those provided by Fehr & Peers in its traffic analysis (see Appendix F of the Draft EIR for further detail).

The construction phase details are provided in Table 3.3-8, below, which is based on CalEEMod default phases based on the Project's land uses. See Appendix A.1 of this Draft EIR for further detail.

TABLE 3.3-8: ANTICIPATED CONSTRUCTION SCHEDULE

<i>CALEEMOD PHASE</i>	<i>CALEEMOD PHASE START DATE</i>	<i>CALEEMOD PHASE END DATE</i>
Site Preparation	9/30/2024	10/14/2024
Grading	10/15/2024	11/26/2024
Building Construction	11/27/2024	1/21/2026
Paving	1/22/2026	2/19/2026
Architectural Coating	2/20/2026	3/20/2026

SOURCE: CALEEMOD, 2023.

Separately, it was assumed that there would be no soil import or export, based on the Project applicant's stated intent to balance soil on-site.

IMPACTS AND MITIGATION MEASURES

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

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

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

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

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

The SJVAPCD has implemented the current, modified 2016 8-hour AQAP as approved by CARB and approved by USEPA for the 2008 8-hour O₃ standard.

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

The San Joaquin Council of Governments (SJCOG) Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) growth projections provide for future employment/population factors. The development of the SJVAPCD AQAP is based in part on the land use general plan projections of

the various cities and counties that constitute the Air Basin. The proposed Project would require a General Plan Amendment to the City's Land Use Map to change land uses on the Project site. Changes to the Land Use Map would include changing the General land use designation for APN 191-250-06 from A/G (County) to FC (City). However, most of the Project site is already designated as FC, which the Project would be consistent with. Therefore, the proposed Project, which involves the development of regional travel serving uses, is consistent with the majority of the Project site's existing General Plan land use designation and therefore most of its traffic would be included in volumes projected for analysis of the General Plan. Moreover, as described in further detail under Impact 3.3-2, below, the proposed Project would not exceed any of the SJVAPCD's thresholds for criteria pollutants.

The SJVAPCD AQAP is based on the growth assumptions of the City of Tracy General Plan and SJCOG RTP/SCS. Since the Project would be consistent with the SJCOG RTP/SCS, and SJCOG RTP/SCS projections are incorporated into the SIP, the Project is also considered consistent with the SIP.

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

The Project incorporates various policy and rule-required implementation measures that would reduce related emissions, including all of the current Air District rules and regulations.¹⁸ For example, the proposed Project would be required to implement Air District Rule 9510, which ensures that the Project would fulfill the Air District's emissions reduction commitments in the relevant PM₁₀ and Ozone Attainment plans.¹⁹ In addition, the Project would comply with all applicable stationary source permitting rules implemented by SJVAPCD, which further confirms the Project would not cause or contribute to any ambient air quality standard exceedances.

Overall, the proposed Project is not anticipated to conflict with or obstruct implementation of the AQAP. However, since a portion of the Project would require a General Plan land use amendment for a portion of the Project site, out of an abundance of caution, this impact is considered to be ***significant and unavoidable***.

Impact 3.3-2: The proposed Project would not result in a cumulatively considerable net increase of a criteria pollutant for which the region is in nonattainment under an applicable federal or State ambient air quality standard. (Less than Significant)

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

¹⁸ See here for further detail: <https://www.valleyair.org/rules/1ruleslist.htm>

¹⁹ Compliance with Air District Rule 9510 is assumed under CEQA.

The Air Basin is in nonattainment for PM₁₀, PM_{2.5}, and ozone. Therefore, if the proposed Project exceeds the regional thresholds for PM₁₀, or PM_{2.5}, then it would contribute to a cumulatively considerable impact for those pollutants. If the proposed Project exceeds the regional threshold for NO_x or VOC (which are precursors to ozone), then it follows that the proposed Project would result in a cumulatively considerable contribution and thus result in a significant cumulative impact for ozone.

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

CONSTRUCTION EMISSIONS

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Construction-related activities would result in Project-generated emissions from site preparation, grading, paving, building construction, and architectural coatings. CalEEMod™ (v.2022.1) was used to estimate construction emissions for the proposed Project. Table 3.3-9, below, provides the construction criteria pollutant emissions and thresholds associated with implementation of the proposed Project. It should be noted that the SJVAPCD recommends the same criteria pollutant thresholds for both construction and operational emissions, as provided within the *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts* (2015).

TABLE 3.3-9: CONSTRUCTION PROJECT GENERATED EMISSIONS (TONS PER YEAR)

POLLUTANT	CO	NOX	ROG	SOX	PM ₁₀	PM _{2.5}
THRESHOLD	100	10	10	27	15	15
YEAR 2024	0.81	0.84	0.09	<0.005	0.28	0.14
YEAR 2025	1.77	1.39	0.15	<0.005	0.07	0.06
YEAR 2026	0.22	0.16	0.24	<0.005	0.01	0.01
MAXIMUM EMISSIONS	1.77	1.39	0.24	<0.005	0.28	0.14
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CAL EEMOD (v.2022.1)

Additionally, the SJVAPCD has developed daily mass emissions screening criteria for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} to determine whether project emissions would result in a violation of an AAQS. Because the NAAQS and CAAQS are concentration-based standards, Project emissions were evaluated using the SJVAPCD mass emissions screening approach, which provides a preliminary assessment to determine whether a project would contribute to a violation of an AAQS. The screening is conducted by evaluating daily Project emissions against a 100 pound per day threshold for each criteria air pollutant. The following table (Table 3.3-10) provides the proposed Project’s construction emissions in pounds per day in comparison to these screening thresholds.

3.3 AIR QUALITY

TABLE 3.3-10: CONSTRUCTION PROJECT GENERATED EMISSIONS (POUNDS PER DAY)

POLLUTANT	CO	NO _x	ROG	SO _x	PM ₁₀	PM _{2.5}
THRESHOLD (POUNDS/DAY)	100	100	100	100	100	100
YEAR 2024	32.9	36	3.65	0.06	1.6	1.47
YEAR 2025	13	10.4	1.13	0.02	0.43	0.4
YEAR 2026	13	9.85	1.07	0.02	0.38	0.35
MAXIMUM EMISSIONS	32.9	36	3.65	0.06	1.6	1.47
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CALHEMOD (v.2022.1)

NOTE: EMISSIONS ONLY INCLUDE THOSE EMISSIONS THAT ARE CONSIDERED "ON-SITE", PER SJVAPCD GUIDANCE.

If the proposed Project's emissions exceed the SJVAPCD's threshold of significance for construction-generated emissions, the proposed Project would have a significant impact on air quality. As shown in Table 3.3-9, the proposed Project would not exceed the SJVAPCD thresholds of significance for construction criteria pollutants. As shown in Table 3.3-10, the proposed Project would also not exceed the daily mass screening criteria thresholds during Project construction. Therefore, the Project's construction-related criteria pollutant emissions would be considered to have a **less than significant** impact.

OPERATIONAL EMISSIONS

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 its *Guidance for Assessing and Mitigating Air Quality Impacts* (2015). Projects with emissions below the thresholds of significance for criteria pollutants would be determined to "Not conflict or obstruct implementation of the District's air quality plan," and also to not have a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment. If the proposed Project's emissions exceed the SJVAPCD's threshold of significance for operational-generated emissions, the proposed Project will have a significant impact on air quality and all feasible mitigation measures must be implemented to reduce emissions.

Mobile source emissions will be generated by the Project due to the vehicle travel expected to occur to and from the Project site. According to the Traffic Analysis (Fehr & Peers) (as provided in Appendix F of the Draft EIR), the proposed Project is anticipated to generate approximately 2,790 passenger vehicle trips and 700 heavy-duty truck trips per day. Additionally, Fehr & Peers identified that the proposed Project would generate approximately 10,700 and 8,890 daily VMT for passenger vehicles and heavy-duty trucks, respectively.

CalEEMod™ (v.2022.1) was used to model operational emissions of the proposed Project. Table 3.3-11 and Table 3.3-12 show proposed Project emissions as provided by CalEEMod in tons per year and pounds per day, respectively. As shown in Table 3.3-11 below, total Project operational emissions would not exceed any of the SJVAPCD thresholds of significance, in terms of tons per day.

TABLE 3.3-11: OPERATIONAL PROJECT GENERATED EMISSIONS (TONS PER YEAR)

<i>POLLUTANT</i>	<i>CO</i>	<i>NO_x</i>	<i>ROG</i>	<i>SO_x</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
THRESHOLD	100	10	10	27	15	15
EMISSIONS – TOTAL PROJECT	13.2	5.83	2.15	0.05	2.69	0.74
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CALFEEMOD (v.2022.1)

The SJVAPCD has developed daily mass emissions screening criteria for ROG, NO_x, CO, SO_x, PM₁₀, and PM_{2.5} to determine whether project emissions would result in a violation of an AAQS. Because the NAAQS and CAAQS are concentration-based standards, Project emissions were evaluated using the SJVAPCD mass emissions screening approach, which provides a preliminary assessment to determine whether a project would contribute to a violation of an AAQS. The screening is conducted by evaluating daily Project emissions against a 100 pound per day threshold for each criteria air pollutant. The following table (Table 3.3-12) provides the proposed Project's operational emissions in pounds per day in comparison to these screening thresholds. As shown in Table 3.3-12, the proposed Project's operational emissions would not exceed any of the daily mass screening criteria thresholds.

TABLE 3.3-12: OPERATIONAL PROJECT GENERATED EMISSIONS (POUNDS PER DAY)

<i>POLLUTANT</i>	<i>CO</i>	<i>NO_x</i>	<i>ROG</i>	<i>SO_x</i>	<i>PM₁₀</i>	<i>PM_{2.5}</i>
THRESHOLD (POUNDS/DAY)	100	100	100	100	100	100
EMISSIONS – TOTAL PROJECT	6.3	2.0	1.9	0.0	0.9	0.3
EXCEEDS THRESHOLD?	N	N	N	N	N	N

SOURCES: CALFEEMOD (v.2022.1)

NOTE: EMISSIONS ONLY INCLUDE THOSE EMISSIONS THAT ARE CONSIDERED "ON-SITE", PER SJVAPCD GUIDANCE. THIS EXCLUDES "MOBILE" EMISSIONS, EXCEPT FOR APPROXIMATELY 5.9% OF MOBILE EMISSIONS THAT ARE ESTIMATED TO BE ON-SITE, USING A CONSERVATIVE ESTIMATE OF THE ON-SITE MOBILE TRAVEL (0.33 MILES) DIVIDED BY THE AVERAGE VEHICLE TRIP LENGTH MODELED FOR THE PROJECT OF 5.61 MILES.

The emission estimates provided in Table 3.3-13 and Table 3.3-14 demonstrate a reasonable worst-case scenario for Project operation. Because the operational emissions shown therein would be below the SJVAPCD's significance threshold, this impact would be **less than significant**.

REGULATORY COMPLIANCE

Prior to the issuance of a Grading Permit for each phase of the Project, the Project Proponent would be required to prepare and submit a Dust Control Plan that meets all of the applicable requirements of APCD Rule 8021, Section 6.3. Additionally, the Project would be required to implement dust control measures that include application of water or chemical dust suppressants to unpaved roads and graded areas, covering or stabilization of transported bulk materials, prevention of carryout or trackout of soil materials to public roads, limiting the area subject to soil disturbance, construction of wind barriers, access restrictions to inactive sites, as required by the applicable rules. The Project

would also be required to, during all construction activities, implement the dust control practices identified in Tables 6-2 and 6-3 of the GAMAQI (2002).

PROJECT EFFECTS ON PUBLIC HEALTH

San Joaquin County has a state designation of Nonattainment for ozone, PM₁₀ and PM_{2.5}. The SJVAPCD developed these Project-level thresholds based on the emissions that would exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. Ambient levels of these criteria pollutants are likely to decrease in the future, based on current and future implementation of federal and/or state regulatory requirements, such as improvements to the statewide vehicle fleet over time (including the long-term replacement of internal combustion engine vehicles with electric vehicles in coming decades).

It should be noted that the emissions of ozone precursors such as ROG and NO_x attributable to the proposed Project would not be substantial enough on a regional basis for the City to be able, with currently available technical tools, to predict how the emissions of such pollutants would translate into either physical environmental changes, such as measurable effects on ambient ozone concentrations within the air basin, or health effects, such as increased respiratory problems, within any discrete population within the City or the region. Such an analysis is not reasonably feasible within the meaning of CEQA because it would require a level of speculation.

Ozone

O₃ is not emitted directly into the air but is formed through complex chemical reactions between precursor emissions of volatile organic compounds (VOC) (also known as ROG) and oxides of nitrogen (NO_x) in the presence of sunlight. The reactivity of O₃ causes health problems because it damages lung tissue, reduces lung function, and sensitizes the lungs to other irritants. Scientific evidence indicates that ambient levels of O₃ not only affect people with impaired respiratory systems, such as asthmatics, but healthy adults and children as well. Exposure to O₃ for several hours at relatively low concentrations has been found to significantly reduce lung function and induce respiratory inflammation in normal, healthy people during exercise. This decrease in lung function generally is accompanied by symptoms including chest pain, coughing, sneezing and pulmonary congestion.

Studies show associations between short-term ozone exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to ozone may increase the risk of respiratory-related deaths (U.S. Environmental Protection Agency 2022a). The concentration of ozone at which health effects are observed depends on an individual's sensitivity, level of exertion (i.e., breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding no symptoms to the least responsive individual after a 2-hour exposure to 400 parts per billion of ozone and a 50 percent decrement in forced airway volume in the most responsive individual. Although the results vary, evidence suggest that sensitive populations (e.g., asthmatics) may be affected on days when the 8-hour maximum ozone concentration reaches 80 parts per billion (U.S. Environmental Protection Agency 2022b).

The Project would generate emissions of ROG and NO_x during Project operational activities, as shown in Table 3.3-9 through Table 3.3-12. Increases in ROG and NO_x could affect people with impaired respiratory systems, but also healthy adults and children. Neither ROG nor NO_x would exceed the applicable air district criteria pollutant thresholds. ROG and NO_x during Project operation would be primarily due to the operational mobile vehicles generated by the Project, but also substantially due to the use of consumer products (such as cleaning supplies, kitchen aerosols, cosmetics, and toiletries) by residents of the Project site. Consumer products are known to generate ROG through off-gassing. Such increases in ROG could fuel potential increases in health effects due to exposure to ozone.

Particulate Matter

Based on studies of human populations exposed to high concentrations of particles (sometimes in the presence of SO₂) and laboratory studies of animals and humans, PM can cause major effects of concern for human health. These include effects on breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular disease, alterations in the body's defense systems against foreign materials, damage to lung tissue, carcinogenesis, and premature death. Small particulate pollution has health impacts even at very low concentrations – indeed no threshold has been identified below which no damage to health is observed. The major subgroups of the population that appear to be most sensitive to the effects of particulate matter include individuals with chronic obstructive pulmonary or cardiovascular disease or influenza, asthmatics, the elderly, and children.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms. Studies show that every 1 microgram per cubic meter reduction in PM_{2.5} results in a one percent reduction in mortality rate for individuals over 30 years old (Bay Area Air Quality Management District, 2017). Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis – and even premature death. Additionally, depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (U.S. Environmental Protection Agency 2022c).

The Project would generate emissions of PM during Project operational activities. Although the exact effects of such emissions on local health are not known, it is likely that the increases in PM generated by the proposed Project would be minimal, even for people with impaired respiratory systems, located in the immediate vicinity of the Project site. The increases of these pollutants generated by the proposed Project would not on their own generate an increase in the number of days exceeding the NAAQS or CAAQS standards. In addition, because PM generated by the proposed Project is less than the air district's threshold, and based on the nature of the Project and its size, such emissions when combined with the existing PM emitted regionally would have minimal health effect on people located in the immediate vicinity of the Project site.

UFPs are a subset of PM and represent a health concern. Such particles have been shown to have the potential for even greater health effects than PM₁₀ or PM_{2.5}, due to their even smaller particle

sizes. However, there are no adopted rules or regulations by the U.S. EPA or California air districts regarding UFPs. Moreover, attainment status related to UFPs is not monitored by the U.S. EPA or California air districts, and the SJVAPCD does not provide any guidance for assessment, thresholds, or mitigation associated with UFPs. Additionally, air districts are not required to be monitor UFPs. Nevertheless, funding for harm reduction and monitoring of UFPs is occurring throughout California. For example, the Bay Area Air Quality Management District (BAAQMD), a neighboring air district, established in 2011 a comprehensive program to study UFPs. As part of this program, the BAAQMD began making measurements at four air monitoring stations, with additional monitoring stations expected to be online soon. At each station, the number of particles in a specified volume of air is counted every second. In addition to the number counts, sampling began in 2015 at two stations to gather data on UFP composition. Collected samples are analyzed for nineteen metals. Data obtained from these measurements is used to identify major UFP sources in the San Francisco Bay Area, and to evaluate models and refine estimates of UFP's public health impact.²⁰ Separately, the SJVAPCD provides grant funding for off-road engine projects through their grants and incentives programs, which reduce UFPs²¹; the U.S. EPA Pacific Southwest region has provided funding for both the South Coast Air Quality Management District and the San Joaquin Valley Air Pollution Control District to help spur early-stage, innovative technologies that need further testing and demonstration prior to massive deployment and commercialization of California Clean Air Initiative (CATI) projects.²² Examples of such projects include Hybrid Natural Gas-Electric and Fully Electric Class 8 Trucks, Zero Emission Heavy-Duty Electric Trucks, Zero- and Near-Zero Emission School Buses, Electric Delivery Trucks, and School Bus Air Filtration. Other, numerous efforts are underway throughout the state to reduce PM emissions, which also tend to reduce emissions of UFPs (since UFPs are a subset of PM).

Different sources of PM generate differing levels of UFPs. For example, almost all the PM emitted by natural gas combustion is in the PM_{0.1} size fraction, whereas this is only true for less than half of the PM emitted by gasoline and diesel fuel combustion.²³ Therefore, estimating PM_{0.1} can be difficult, given that it is not incorporated into the modeling software recommended by the CARB and the California air districts (i.e. CalEEMod). Nevertheless, a quantitative estimate of the Project's PM_{0.1} is provided under Impact 3.3-3, based on assumptions provided in available literature.

Discussion

SJVAPCD has not established any methodology or thresholds (quantitative or qualitative) for assessing the health effects from criteria pollutants. Given the nature and size of the Project, a qualitative approach to correlating the expected air quality emissions of Projects to the likely health consequences of the increased emissions is appropriate. From a qualitative perspective, it is well documented from scientific studies that criteria pollutants can have adverse health effects. The federal and state governments have established the NAAQS or CAAQS as an attempt to regionally,

²⁰See: https://www.baaqmd.gov/about-air-quality/air-quality-measurement/special-air-monitoring-projects/special-reports/ultrafine-particulate-matter?sc_lang=en&switch_lang=true

²¹ See: <https://ww2.valleyair.org/grants/>

²² See: <https://www.epa.gov/cati/california-clean-air-technology-initiative-cati-projects>

²³ Venecek, M. A., Yu, X., and Kleeman, M. J.: Predicted ultrafine particulate matter source contribution across the continental United States during summertime air pollution events, *Atmos. Chem. Phys.*, 19, 9399–9412, <https://doi.org/10.5194/acp-19-9399-2019>, 2019.

and cumulatively, assess and control the health effects that criteria pollutants have within Air Basins. It is anticipated that public health will continue to be affected by the emission of criteria pollutants, especially by those with impaired respiratory systems in the City of Lathrop and the surrounding region so long as the region does not attain the CAAQS or NAAQS. The Project's emissions would make a cumulatively considerable contribution to the region's exceedances of the CAAQS or NAAQS for ozone, and therefore would be expected to significant and unavoidable health effect on people located in the immediate vicinity of the Project site.

CONCLUSION

Criteria pollutant emissions generated by the proposed Project during construction and operation would not exceed applicable thresholds after compliance with all rules and regulations. Therefore, this impact would be *less than significant*.

Impact 3.3-3: The proposed Project could expose sensitive receptors to substantial pollutant concentrations. (Significant and Unavoidable)

TOXIC AIR CONTAMINANTS

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. Those who are sensitive to air pollution include children, the elderly, and persons with preexisting respiratory or cardiovascular illness. The SJVAPCD considers a sensitive receptor to be a location that houses or attracts children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Examples of sensitive receptors include hospitals, residences, convalescent facilities, and schools. There are no traditional sensitive receptors such as residences, convalescent facilities, or schools that are proposed as part of the proposed Project. The closest residential receptors to the Project are located as follows:

- The residence located directly south of the Project site, at 11401 Manthey Road;
- Additional residences located south of the Project site, approximately 350 feet south of the southeast boundary of the Project site, also located along Manthey Road;
- Several residences located to the southwest of the Project site, along Manila Road;
- Residences located adjacent to the northern boundary of the Project site, along Manthey Road;
- An additional residence located 1,000 feet to the north of the Project site, along Manthey Road;
- An additional residence located approximately 1,150 feet to the northwest of the northwest boundary of the Project site, along Briggs Avenue;
- Several residences located along Harlan Road, east of I-5, to the east of the Project site.

Additionally, workplace receptors are considered to be located throughout the entirety of the Project site, as required to be analyzed by the SJVAPCD.

3.3 AIR QUALITY

Heavy-duty trucks are a common source of Diesel Particulate Matter (DPM), in contrast to passenger vehicles (such as light-duty cars and trucks). The inhalation of DPM generates cancer and non-cancer health risks, especially where concentrations are elevated for long periods of time and for younger sensitive receptors. The SJVAPCD's GAMAQI (SJVAPCD, 2015) includes procedures for evaluating hazardous air pollutants. The Project would also generate truck trips that contain Truck Refrigeration Units (TRUs), which also generate DPM. Furthermore, gasoline refueling, storage, spillage and tank breathing would generate benzene emissions. Based on the guidance provided in the GAMAQI, an air toxics health impact analysis has been prepared for the proposed Project to analyze the Project's anticipated impacts from diesel exhaust emitted by heavy-duty trucks and truck TRUs, as well as benzene emissions from gasoline-related activities, during Project operation.

An air toxics health risk assessment was conducted utilizing Lakes Environmental Software AERMOD and the CARB's Hotspots Analysis Reporting Program Version 2 (HARP 2) Air Dispersion, Modelling, and Risk Tool (ADMRT) for the DPM associated with the heavy-duty trucks. Emissions associated with truck idling and truck on-site travel were calculated. The maximum residential (70-year exposure) cancer, workplace (40-year exposure) cancer, chronic (non-cancer), and acute (non-cancer) risks were assessed and compared to SJVAPCD thresholds. See Appendix A.3 of this Recirculated Draft EIR for full model inputs. Table 3.3-15 summarizes the results of the analysis.

Separately, Project construction would generate DPM emissions from the use of off-road diesel equipment required. The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards).

The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short and exhaust from construction equipment would dissipate rapidly. Current models and methodologies for conducting health risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities. Given that construction is anticipated to occur over the course of approximately two years, construction health risks associated with construction of this timeframe were evaluated. See Appendix A.3 for further detail.

The California Office of Environmental Health Hazard Assessment has not identified short-term health effects from DPM. Construction activities would be subject to and would comply with California regulations limiting the idling of heavy-duty construction equipment to no more than five minutes to further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions.

The maximum residential cancer risk would occur at a residence located at 11401 Manthey Road, located directly adjacent to the Project site to the south, would have a residential cancer risk of approximately 28.6 per million. The maximum workplace cancer risk would occur within the central portion of the Project site, located around the gasoline pumps. The maximum workplace cancer risk would occur at the central portion of the Project site, around the gasoline fueling station, with a maximum risk of up approximately 5.9 per million (at the location of maximum workplace cancer risk). Although the workplace cancer risk would be below the applicable SJVAPCD threshold, the

residential cancer risk would be above this threshold. As shown in Table 3.3-15, the proposed Project, in and of itself, could not result in a significant increased exposure of receptors to localized concentrations of TACs for the residential located at 11401 Manthey Road. Further detail is provided in the Health Risk Assessment provided in Appendix A.3. Therefore, implementation of the proposed Project is considered to have the potential to cause a **significant and unavoidable** impact relative to this topic.

TABLE 3.3-13: SUMMARY OF MAXIMUM HEALTH RISKS

RISK METRIC	MAXIMUM RISK	SIGNIFICANCE THRESHOLD	IS THRESHOLD EXCEEDED?
<i>OPERATIONAL</i>			
Residential Cancer Risk (70-year exposure)	28.6 per million	20 per million	No
Workplace Cancer Risk (40-year exposure)	5.9 per million	20 per million	No
Chronic (non-cancer)	0.12	Hazard Index ≥ 1	No
Acute (non-cancer) ¹	0.24	Hazard Index ≥ 1	No

SOURCES: AERMOD 12.0.0 (LAKES ENVIRONMENTAL SOFTWARE, 2023); AND HARP-2 AIR DISPERSION AND RISK TOOL (VERSION 22118).

It should be noted that the mobile vehicles generated by the Project during operation would also generate UFPs through vehicle emissions, braking, and tire wear. Similar to PM in general (though generating even higher risk per unit than larger particle sizes) UFPs are notable for their potential to generate chronic risks associated with cardiovascular disease, potential long-term loss of lung function, and cancer. According to a recent study prepared for the European Geosciences Union, UFPs vary widely as a proportion of PM overall, depending on location; specifically, the PM_{0.1} to PM_{2.5} ratio analyzed in approximately 39 cities in the United States varied from approximately 1% to 16%.²⁴ These factors vary so widely because the sources of PM_{0.1} vary substantially from city to city. For example, cities that are located close to substantial sources of natural gas combustion have higher PM_{0.1} to PM_{2.5} ratios, since almost all the PM emitted by natural gas combustion is in the PM_{0.1} size fraction, whereas this is only true for less than half of the PM emitted by gasoline and diesel fuel combustion. Taken together, these facts support the potential importance of natural gas combustion for ambient PM_{0.1} concentrations. The city analyzed in the study with the greatest similarity to the City of Lathrop (i.e. where the Project is located) was the City of Bakersfield, given its similarity in location within the Central Valley region. The ratio of PM_{0.1} to PM_{2.5} for Bakersfield was found to be approximately 11%. Absent data specific to the City of Lathrop, this data is presumed to be the best available data and reasonable for use in estimating PM_{0.1} levels in this case.

²⁴ Venecek, M. A., Yu, X., and Kleeman, M. J.: Predicted ultrafine particulate matter source contribution across the continental United States during summertime air pollution events, Atmos. Chem. Phys., 19, 9399–9412, <https://doi.org/10.5194/acp-19-9399-2019>, 2019.

3.3 AIR QUALITY

Therefore, given the Project's estimated 0.74 tons per year of PM_{2.5} (see Table 3.3-11), the total PM_{0.1} generated by the Project is estimated to be approximately 0.08 tons per year (163 lbs/year). This is equivalent to 0.45 lbs/day of PM_{0.1}. While there is not specifically a quantitative threshold of significance established by the SJVAPCD for PM_{0.1}, the quantity estimated is considered small relative to thresholds established for other particulate matter. From an incremental health perspective, this level of UFPs generated by the Project would not be substantial. As such, the Project would not result in substantial UFP emissions that may affect nearby receptors.

VALLEY FEVER

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

The San Joaquin Valley is considered an endemic area for Valley Fever. By geographic region, hospitalizations for Valley Fever in the San Joaquin Valley increased from 230 (6.9 per 100,000 population) in 2000 to 701 (17.7 per 100,000 population) in 2007. Within the region, Kern County reported the highest hospitalization rates, increasing from 121 (18.2 per 100,000 population) in 2000 to 285 (34.9 per 100,000 population) in 2007, and peaking in 2005 at 353 hospitalizations (45.8 per 100,000 population). The Centers for Disease Control and Prevention indicates that 752 of the 8,657 persons (8.7 percent) hospitalized in California between 2000 and 2007 for Valley Fever died.²⁵

The distribution of *C. immitis* within endemic areas is not uniform and *C. immitis* growth sites are commonly small (a few tens of meters) and widely scattered. Known sites appear to have some ecological factors in common suggesting that certain physical, chemical, and biological conditions are more favorable for *C. immitis* growth. Avoidance, when feasible, of sites favorable for the occurrence of *C. immitis* is a prudent risk management strategy. Listed below are ecologic factors and sites favorable for the occurrence of *C. immitis*:²⁶

1. Rodent burrows (often a favorable site for *C. immitis*, perhaps because temperatures are more moderate and humidity higher than on the ground surface).
2. Prehistoric Indian campsites near fire pits.
3. Areas with sparse vegetation and alkaline soils.
4. Areas with high salinity soils.

²⁵ The Centers for Disease Control and Prevent (CDC). 2009. Increase in Coccidioidomycosis – California, 2000-2007. February 13. Website: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm5805a1.htm>. Accessed June 8, 2022.

²⁶ United States Geological Survey (USGS). 2000. Operational Guidelines (Version 1.0) for Geological Fieldwork in Areas Endemic for Coccidioidomycosis (Valley Fever). Website: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.486.1526&rep=rep1&type=pdf>. Accessed June 8, 2022.

5. Areas adjacent to arroyos (where residual moisture may be available).
6. Packrat middens.
7. Upper 30 centimeters of the soil horizon, especially in virgin undisturbed soils.
8. Sandy well aerated soil with relatively high-water holding capacities.

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

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

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

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

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

ASBESTOS AND LEAD-BASED PAINT EXPOSURE

According to a map of areas where naturally occurring asbestos in California is likely to occur, there are no such areas in the vicinity of the Project site.²⁷ Therefore, development of the proposed Project is not anticipated to expose receptors to naturally occurring asbestos. This impact would be *less than significant*.

CONCLUSION

TACs generated by the proposed Project would exceed the applicable residential cancer risk threshold, as shown in Table 3.3-13. Therefore, this impact would be *significant and unavoidable*.

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

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

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

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

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

²⁷ United States Geological Survey (USGS). 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Website: <https://pubs.usgs.gov/of/2011/1188/>. Accessed June 8, 2022.

Compliance with these rules would preclude land uses proposed under the proposed Project from emitting objectionable odors.

CONCLUSION

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

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This section describes the geomorphic provinces/bioregions, vegetation, wildlife, soils, hydrogeomorphic features, wetlands, special status species, regulatory setting, and impacts that are expected on biological resources. This section is based in part on the following: *Draft Environmental Impact Report for the Lathrop General Plan Update* (City of Lathrop, 2022), the *City of Lathrop General Plan* (City of Lathrop, 2022), as well as site specific surveys and analysis for the Project site.

Comments were received from the following during the Notice of Preparation (NOP) scoping process related to this environmental topic: Central Valley Regional Water Quality Control Board (RWQCB) (January 20, 2023), and San Joaquin Council of Governments (SJCOG) (December 27, 2022). Full comments received are included in Appendix A.

Methods

PRE-FIELD INVESTIGATION

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

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

FIELD SURVEY

The Project site was subject to a field survey by Principal Biologist Steve McMurtry on April 21, and May 12, 2021. The parcels surveyed include Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06. The parcels are shown on Figure 2.0-3 in Chapter 2.0, Projection Description. The surveys served several purposes. First, they served as reconnaissance of the site to establish the existing conditions of the site and to verify information gathered in the pre-field investigation. This included identification of the habitat types, hydrologic features, topography, soil characteristics, vegetation. The field investigations followed the *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (CDFW 2009). Field investigations were performed during the floristic period for species in the region. Field investigations were performed on foot using transects. Habitat was recorded, and the Project site was inspected for the presence, or potential for presence of wildlife. The area was inspected for its upland and aquatic habitat functions. The field investigations coincided with the optimal period for observing nesting birds, breeding amphibians, and active reptiles. The Project site was also examined for evidence of scat and tracks of mammals. The surveys spanned multiple growing seasons, so condition of the fields ranged from recently tilled agricultural fields, to early growth of crop. Orchards ranged from dormant to early growth. Visibility during each survey was excellent.

3.4 BIOLOGICAL RESOURCES

FIELD TOOLS/EQUIPMENT

Tools used during the field investigations included a Trimble GeoExplorer XH Handheld (sub-foot unit), 30-meter tape measure, diameter tape, spade, Munsell color chart, Vortex 20-60x80 spotting scope, and Swarovski 10x42 binoculars.

3.4.1 ENVIRONMENTAL SETTING

GEOMORPHIC PROVINCES/BIOREGION

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

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

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

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

LOCAL SETTING

Location

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

- **Project Site (or Annexation Area)** – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.

- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. Figures 2.0-1 and 2.0-2 in Chapter 2.0 show the Project's regional location and vicinity. Figure 2.0-3 provides the APN map.

Topography

The Project Area topography ranges greatly in elevation from approximately 8 to 21 feet above sea level. The high area is located in the eastern portion of the site while the low area is located in the western portion of the site. The majority of the Project Area is generally characterized as flat.

Climate

The summer climate is hot and sub-humid with warm, dry summers, and cool, moist winters. In the entire San Joaquin Valley Air Basin (SJVAB), daily summer high temperatures average 95 degrees. Over the last 30 years, temperatures in the SJVAB averaged 90 degrees or higher for 106 days a year, and 100 degrees or higher for 40 days a year.

The daily summer temperature variation can be as high as 30 degrees. In winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms. Average high temperatures in the winter are in the 50s, but lows in the 30s and 40s can occur on days with persistent fog and low cloudiness. The average daily low winter temperature is 45 degrees. The average rainfall is approximately 12.1 inches and occurs during winter storms.

Existing Uses

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), a foundation from a previously demolished abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf..

Surrounding Uses

The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. An aerial view of the Project site and its surrounding uses is provided in Figure 2.0-4.

Vegetation

The Project Area vegetation consists of highly disturbed areas (agricultural area), flat land with ruderal grasses, fallow ground, and several trees (located primarily along the northern and eastern boundary of the Project site). The majority of the Project Area is under active agricultural use, and overall, there is very limited natural vegetation in the Project Area. Trees are located along the perimeter of the agricultural fields (mainly along the northern and eastern Development Area boundaries).

Wildlife

Vegetation found in the Project site provides habitat for both common and a few special-status wildlife populations. For example, some commonly observed wildlife species in the region include: California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), red-tailed hawk (*Buteo jamaicensis*), northern harrier (*Circus cyaneus*), American kestrel (*Falco sparverius*), white-tailed kite (*Elanus leucurus*), American killdeer (*Charadrius vociferus*), gopher snake (*Pituophis melanoleucus*), garter snake (*Thamnophis species*), and western fence lizard (*Sceloporus occidentalis*), as well as many native insect species. There are also several bat species in the region. Bats often feed on insects as they fly over agricultural and natural areas.

Locally common and abundant wildlife species are important components of the ecosystem. Due to habitat loss, many of these species must continually adapt to using agricultural, ruderal, and ornamental vegetation for cover, foraging, dispersal, and nesting.

Plant Communities

Agricultural and natural plant communities provide habitat for a variety of biological resources in the region. Sensitive habitats include those that are of special concern to resource agencies or those that are protected under a Habitat Conservation Plan, Natural Community Conservation Plan, the California Environmental Quality Act (CEQA), the Fish and Game Code, or the Clean Water Act (CWA). Additionally, sensitive habitats are sometimes protected under specific policies from local agencies. Figure 3.4-2 illustrates the plant communities (land cover types) in the vicinity of the Project Area¹. Table 3.4-1 summarizes the plant communities (land cover types) by acreage.

¹ It is noted that the land cover types map is created from large scale GIS surveys put together by the State of California and does not represent a precise vegetative cover.

TABLE 3.4-1: LAND COVER TYPES

LAND COVER TYPE	ACREAGE		
	DEVELOPMENT AREA	OTHER ANNEXATION AREA	GRAND TOTAL
Annual Grassland	14.73	1.87	16.60
Cropland	2.63	0.00	2.63
Deciduous Orchard	0.22	0.00	0.22
Dryland Grain Crops	0.21	0.00	0.21
Evergreen Orchard	0.89	0.00	0.89
Urban	0.52	0.90	1.42
Vineyard	0.38	0.00	0.38
Totals	19.57	2.77	22.34

SOURCE: CALFIRE FRAP DATA, SAN JOAQUIN COUNTY, 2023.

Soils

Soil materials encountered in our site explorations are consistent with the above referenced published geologic mapping. Soil materials encountered on site generally consisted of medium dense silty sand (SM) from the surface to approximately 7.5 feet BGS. The sands were underlain by interbedded layers of very stiff to hard low plastic silts (ML) and clays (CL) to the maximum explored depth of 30.5 ft BGS.

Aquatic Resources

Agricultural ditches, which are ditches that drain runoff from the agricultural fields, are located on-site. The agricultural ditches have been created along some of the agricultural fields to collect agricultural runoff.

SPECIAL-STATUS SPECIES

The following discussion is based on a background search of special-status species that are documented in the California Natural Diversity Database (CNDDDB), the California Native Plant Society’s (CNPS) Inventory of Rare and Endangered Plants, and the U.S. Fish and Wildlife Service’s (USFWS) records of listed endangered and threatened species from the IPAC database. The background search was regional in scope and focused on the documented occurrences within the Project site’s 9-quadrangle region (i.e., Lathrop, Holt, Stockton West, Stockton East, Union Island, Manteca, Tracy, Vernalis, and Ripon) U.S. Geological Survey quadrangles). Table 3.4-2 provides a list of special-status plants and Table 3.4-3 provides a list of special-status animals. Figure 3.4-4 presents the documented occurrences within the Project Area’s nine-quadrangle region.

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BIOLOGICAL RESOURCES

TABLE 3.4-2: SPECIAL-STATUS PLANT SPECIES WHICH MAY OCCUR IN PROJECT AREA

<i>SPECIES</i>	<i>STATUS (FED./CA/ CNPS/SJMSCP)</i>	<i>GEOGRAPHIC DISTRIBUTION</i>	<i>HABITAT AND BLOOMING PERIOD</i>	<i>PRESENCE DETERMINATION</i>
bristly sedge <i>Carex comosa</i>	--/--/2B.1/Yes	Occurrences exist in the following counties: Contra Costa, Modoc, San Joaquin, Yolo, Fresno, Sacramento, Santa Cruz, Lake, San Bernardino, Shasta, Mendocino, San Francisco, and Sonoma	Marshes and swamps, coastal prairie, valley and foothill grassland. Lake margins, wet places; site below sea level is on a Delta island. -5-1,010 m.	Not expected to occur; no suitable habitat.
Large-flowered fiddleneck <i>Amsinckia grandiflora</i>	E/E/1B.1/Yes	Native to California found in Contra Costa, Alameda, and San Joaquin Counties	Found in grasslands; it grows on sedimentary loam in mesic areas of its range. April - May	Not expected to occur; no CNDDDB records within 15 miles of the site.
alkali-sink goldfields <i>Lasthenia chrysantha</i>	--/--/1B.1/No	Sacramento Valley, San Joaquin Valley	Vernal pools. Alkaline. 0-200 m. Feb-April.	Not expected to occur; no suitable habitat.
Alkali milk-vetch <i>Astragalus tener</i> <i>var. tener</i>	--/--/1B.2/Yes	Eastern San Francisco Bay region, the Delta, and western San Joaquin Valley south to the lower Salinas and San Benito valleys	Grassy alkaline flats and vernal moist meadows at elevations below 500 ft. March-June	Not expected to occur; no suitable habitat.
Heartscale <i>Atriplex cordulata</i> <i>var. cordulata</i>	--/--/1B.2/Yes	Central Valley and interior valleys of the Coast Range from Butte to Kern counties.	Saline or alkaline sandy soils in grassland or saltbush scrub. March-October	Not expected to occur; no suitable habitat and no CNDDDB records within 6 miles of the site.
Lesser saltscale <i>Atriplex minuscula</i>	--/--/1B.1/No	Scattered locations in the Central Valley in Alameda, Butte, Fresno, Kings, Kern, Madera, Merced, Stanislaus, Tulare counties	Alkaline, sandy soils. Chenopod scrub, playas, valley and foothill grassland. May-October	Not expected to occur; no CNDDDB occurrences within 15 miles.
Big tarplant <i>Blepharizonia plumosa</i>	--/--/1B.1/No	San Francisco Bay area with occurrences in Alameda, Contra Costa, San Joaquin, Stanislaus, and Solano Counties	Valley and foothill grassland; 30-505 m. July-Oct.	Not expected to occur; no suitable habitat and no CNDDDB records within 6 miles of the site.
Palmate-bracted bird's-beak <i>Chloropyron palmatum</i>	E/E/1B.1/No	Scattered locations in Fresno and Madera counties in the San Joaquin Valley, San Joaquin, Yolo, and Colusa counties in the Sacramento Valley, and the Livermore Valley area of Alameda County	Saline-alkaline soils in seasonally-flooded lowland plains and basins at elevations of less than 500 feet. May-October	Not expected to occur; no CNDDDB occurrences within 6 miles.
Recurved larkspur <i>Delphinium recurvatum</i>	--/--/1B.2/Yes	Central Valley from Colusa to Kern Counties	Alkaline soils in saltbush scrub, cismontane woodland, valley and foothill grassland; 3-750 m. Blooming Period March – May	Not expected to occur; no suitable habitat and no CNDDDB records within 6 miles of the site.

SPECIES	STATUS (FED./CA/ CNPS/SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT AND BLOOMING PERIOD	PRESENCE DETERMINATION
diamond-petaled California poppy <i>Eschscholzia rhombipetala</i>	--/--/1B.1/Yes	Interior foothills of south Coast Ranges from Contra Costa to Stanislaus Counties, Carrizo Plain in San Luis Obispo County	Grassland, chenopod scrub, on clay soils where grass cover is sparse enough to allow growth of low annuals; below 975 m. March-April	Not expected to occur; no suitable habitat.
San Joaquin spearscale <i>Extriplex joaquinana</i>	--/--/1B.2/No	Delta region, central valley and central coast	Alkaline. Chenopod scrub, meadows and seeps, playas, valley and foothill grassland. April-October	Not expected to occur; CNDDDB records within 6 miles of the site.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--/--/1B.2/Yes	Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, and Yuba Counties	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-October (November).	Not expected to occur; no suitable habitat.
Woolly rose-mallow <i>Hibiscus lasiocarpus var. occidentalis</i>	--/--/1B.2/Yes	Central Valley of California, as well as populations in eastern North America	All along the waterways of the Delta. June-September	Not expected to occur; no suitable habitat.
Wright's trichocoronis <i>Trichocoronis wrightii var. wrightii</i>	--/--/2B.1/Yes	Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, and Yuba Counties	Marshes and swamps. In standing or slow-moving freshwater ponds, marshes, and ditches. 0-605 m. May-October (November).	Not expected to occur; no suitable habitat.
Mason's lilaeopsis <i>Lilaeopsis masonii</i>	--/R/1B.1/Yes	Sacramento-San Joaquin River Delta and nearby shores of San Francisco Bay.	Marshes and swamps, riparian scrub. Tidal zones, in muddy or silty soil formed through river deposition or river bank erosion. In brackish or freshwater. 0-10 m. Apr-Nov.	Not expected to occur; no suitable habitat.
Delta mudwort <i>Limosella australis</i>	--/--/2B.1/Yes	Found in Contra Costa County, Sacramento County, San Joaquin County, and Solano County.	Riparian scrub, marshes and swamps. Usually on mud banks of the Delta in marshy or scrubby riparian associations; often with <i>Lilaeopsis masonii</i> . 0-5 m. May-Aug.	Not expected to occur; no suitable habitat.
Delta button-celery <i>Eryngium racemosum</i>	--/E/1B.1/Yes	San Joaquin River delta floodplains and adjacent Sierra Nevada foothills: Calaveras, Merced, San Joaquin, and Stanislaus Counties	Riparian scrub, seasonally inundated depressions along floodplains on clay soils; below 75 m. June-August.	Not expected to occur; no suitable habitat.
Delta tule pea <i>Lathyrus jepsonii var. jepsonii</i>	--/--/1B.2/Yes	Sacramento Valley, the San Joaquin Valley and SF Bay regions	Marshes and swamps. In freshwater and brackish marshes. Often found with Typha, Aster lentus, Rosa californica, Juncus spp., Scirpus, etc. Usually on marsh and slough edges. 0-5 m. May-July.	Not expected to occur; no suitable habitat.
slough thistle <i>Cirsium crassicaule</i>	--/--/1B.1/Yes	San Joaquin Valley: Kings, Kern, and San Joaquin Counties	Freshwater sloughs and marshes; 3-100 m. May-August.	Not expected to occur; no suitable habitat.

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BIOLOGICAL RESOURCES

<i>SPECIES</i>	<i>STATUS (FED./CA/ CNPS/SJMSCP)</i>	<i>GEOGRAPHIC DISTRIBUTION</i>	<i>HABITAT AND BLOOMING PERIOD</i>	<i>PRESENCE DETERMINATION</i>
Suisun Marsh aster <i>Symphotrichum lentum</i>	--/--/1B.2/Yes	Contra Costa, Napa, Sacramento, San Joaquin, Solano, and Yolo Counties	Marshes and swamps (brackish and freshwater). Most often seen along sloughs with Phragmites, Scirpus, blackberry, Typha, etc. 0-15 m. (April) May-November.	Not expected to occur; no suitable habitat.
Showy golden madia <i>Madia radiata</i>	--/--/1B.1/Yes	It is endemic to California, where it is known mostly from the Central Coast Ranges and adjacent edges of the San Francisco Bay Area and Central Valley.	Valley and foothill grassland, cismontane woodland. Mostly on adobe clay in grassland or among shrubs. 75-1220 m. Mar-May.	Not expected to occur; outside elevation range.
California alkali grass <i>Puccinellia simplex</i>	--/--/1B.2/No	Located throughout California, Oregon, and Utah. Occurrences in Alameda, Butte, Contra Costa, Fresno, Glenn, Kings, Kern, Lake, Los Angeles, Madera, Merced, Napa, San Bernardino, Santa Clara, Santa Cruz, San Luis Obispo, Solano, Stanislaus, Tulare, and Yolo Counties.	Alkaline, vernal mesic; sinks, flats, and lake margins. Chenopod scrub, meadows and seeps, valley and foothill grassland, vernal pools. 2 – 930 m. March – May.	Not expected to occur; no suitable habitat and no CNDDDB records within 14 miles of the site.
Saline clover <i>Trifolium hydrophilum</i>	--/--/1B.2/No	Eastern and Northern San Francisco Bay region, the Delta, western San Joaquin Valley, southern San Jose	Marshes and swamps, valley and foothill grassland (mesic, alkaline), and vernal pools. April-June	Not expected to occur; no suitable habitat.
Caper-fruited tropidocarpum <i>Tropidocarpum capparideum</i>	--/--/1B.1/Yes	Historically known from the northwest San Joaquin Valley and adjacent Coast Range foothills; currently known from Fresno, Monterey, and San Luis Obispo Counties	Alkaline hills in valley and foothill grassland; below 455 m. March-April.	Not expected to occur; one CNDDDB record within 1.5 miles of the site.
watershield <i>Brasenia schreberi</i>	--/--/2B.3/No	Central Valley of California and western North America	Freshwater marshes and swamps. June-September.	Not expected to occur; no suitable habitat.

NOTES: THE PRESENCE DETERMINATIONS WERE MADE BY PRINCIPAL BIOLOGIST, STEVE McMURTRY (DE NOVO PLANNING GROUP, 2023) AND ARE BASED ON THE SITE SURVEY, REVIEW OF ON-SITE HABITAT CONDITIONS, AND THE CNDDDB RESULTS

CNPS = CALIFORNIA NATIVE PLANT SOCIETY

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

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

CALIFORNIA NATIVE PLANT SOCIETY

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

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

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

4 = PLANTS OF LIMITED DISTRIBUTION – A WATCH LIST

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

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

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

TABLE 3.4-3: SPECIAL-STATUS WILDLIFE AND FISH SPECIES WHICH MAY OCCUR IN PROJECT AREA

SPECIES	STATUS (FED/CA/ SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS	PRESENCE DETERMINATION
<i>INVERTEBRATES</i>				
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	T/--/Yes	Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. Isolated populations also in Riverside County	Common in vernal pools; they are also found in sandstone rock outcrop pools.	No potential to occur. Habitat not present.
vernal pool tadpole shrimp <i>Lepidurus packardi</i>	E/--/Yes	Shasta County south to Merced County.	Vernal pools and ephemeral stock ponds.	No potential to occur. Habitat not present.
western ridged mussel <i>Gonidea angulata</i>	--/--/No	Extirpated throughout their original range in California, particularly in southern California and the Central Valley. They have also been extirpated from many sites in the Snake and Columbia watersheds.	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.	No potential to occur. Habitat not present.
California linderiella <i>Linderiella occidentalis</i>	--/--/No	Ranges from near Redding in the north to as far south as Fresno County, mainly to the east of the Sacramento and San Joaquin Rivers	Natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities	No potential to occur. Habitat not present.
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	E/--/Yes	Sacramento Valley and the northern San Joaquin Valley, and the eastern flank of the central coastal range	Large to very large vernal pools and vernal lakes although they also have been found in alkaline pools	No potential to occur. Habitat not present.
Crotch bumble bee <i>Bombus crotchii</i>	--/--/No	Central California south to Baja California del Norte, Mexico, and includes coastal areas east to the edges of the deserts and the Central Valley	Open grassland and scrub	Low potential; No known CNDDB occurrences within 10 miles of Project site. Potential habitat limited, to non-existent within Project area.
Sacramento anthicid beetle <i>Anthicus sacramento</i>	--/--/No	Found in several locations along the Sacramento and San Joaquin rivers, from Shasta to San Joaquin counties, and at one site along the Feather River.	Sand dune area, sand slipfaces among bamboo and willow, but may not depend on these plants.	No potential to occur. Habitat not present.
San Joaquin Valley giant flower-loving fly <i>Rhaphiomidas</i>	--/--/ No	Historically known from, and endemic to, sandy soils of the San Joaquin Valley from Antioch Dunes in Contra Costa Co south to Sand Ridge in Kern Co.	Associated with sandy soils such as riverine deposits and sand dunes with relatively sparse vegetation. Adult flight from Jul to Oct and life span is about 3 days and do not visit	No potential to occur. Habitat not present.

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<i>SPECIES</i>	<i>STATUS (FED/CA/ SJMSCP)</i>	<i>GEOGRAPHIC DISTRIBUTION</i>	<i>HABITAT REQUIREMENTS</i>	<i>PRESENCE DETERMINATION</i>
<i>trochilus</i>			flowers/nectar. Females deposit eggs in and on the surface of sandy soil. Larvae burrow in fine sands up to 10 feet deep and are known to live for 3 years prior to pupation.	
molestan blister beetle <i>Lytta moesta</i>	--/--/Yes	Distribution of this species is poorly known.	Annual grasslands, foothill woodlands or saltbush scrub.	No potential to occur. Habitat not present. No known CNDDDB occurrences within 20 miles of Project site.
Western bumble bee <i>Bombus occidentalis</i>	T/--/No	Western North America, ranging from the tundra region in Alaska and Yukon south along the west coast to southern British Columbia to central California, Arizona and New Mexico and east into southern Saskatchewan and northwestern Great Plains	Open coniferous, deciduous and mixed-wood forests, wet and dry meadows, montane meadows and prairie grasslands, meadows bordering riparian zones, and along roadsides in taiga adjacent to wooded areas, urban parks, gardens and agricultural areas, subalpine habitats and more isolated natural areas	No potential to occur. Habitat not present. No known CNDDDB occurrences within 3 miles of Project site.
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T/--/Yes	Stream side habitats below 3,000 feet throughout the Central Valley	Riparian and oak savanna habitats with elderberry shrubs; elderberries are the host plant.	No potential to occur. Habitat not present. No known CNDDDB occurrences within 4 miles of Project site.
<i>AMPHIBIANS</i>				
California tiger salamander <i>Ambystoma californiense</i> (<i>A. tigrinum c.</i>)	T/SSC/Yes	Central Valley, including Sierra Nevada foothills, up to approximately 1,000 feet, and coastal region from Butte County south to northeastern San Luis Obispo County.	Small ponds, lakes, or vernal pools in grass-lands and oak woodlands for larvae; rodent burrows, rock crevices, or fallen logs for cover for adults and for summer dormancy.	No potential to occur. Habitat not present.
Foothill yellow-legged frog <i>Rana boylei</i>	--/C (SSC)/Yes	Occurs in the Klamath, Cascade, north Coast, south Coast, Transverse, and Sierra Nevada Ranges up to approximately 6,000 feet	Creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. Usually found near riffles with rocks and sunny banks nearby.	No potential to occur. Habitat not present.
California red-legged frog <i>Rana aurora draytoni</i>	T/SSC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	No potential to occur. Habitat not present.

SPECIES	STATUS (FED/CA/ SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS	PRESENCE DETERMINATION
Western spadefoot <i>Spea hammondi</i>	T/SSC/Yes	Found along the coast and coastal mountain ranges of California from Marin County to San Diego County and in the Sierra Nevada from Tehama County to Fresno County	Permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation. May estivate in rodent burrows or cracks during dry periods.	No potential to occur. Habitat not present.
<i>BIRDS</i>				
cackling (=Aleutian Canada) goose <i>Branta hutchinsii leucopareia</i>	--/WL/Yes	The entire population winters in Butte Sink, then moves to Los Banos, Modesto, the Delta, and East Bay reservoirs; stages near Crescent City during spring before migrating to breeding grounds.	Roosts in large marshes, flooded fields, stock ponds, and reservoirs; forages in pastures, meadows, and harvested grainfields; corn is especially preferred.	Habitat present (ditches and fields), none observed. Regionally common.
California black rail <i>Laterallus jamaicensis coturniculus</i>	-- /T(WL)/Yes	Permanent resident in the San Francisco Bay and east-ward through the Delta into Sacramento and San Joaquin Counties; small populations in Marin, Santa Cruz, San Luis Obispo, Orange, Riverside, and Imperial Counties	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations	No potential to occur. Habitat not present. No known CNDDDB occurrences within 11 miles of Project site.
Tricolored blackbird <i>Agelaius tricolor</i>	BCC/C (SSC)/Yes	Permanent resident in the Central Valley from Butte County to Kern County. Breeds at scattered coastal locations from Marin County south to San Diego County; and at scattered locations in Lake, Sonoma, and Solano Counties. Rare nester in Siskiyou, Modoc, and Lassen Counties	Nests in dense colonies in emergent marsh vegetation, such as tules and cattails, or upland sites with blackberries, nettles, thistles, and grainfields. Habitat must be large enough to support 50 pairs. Probably requires water at or near the nesting colony	Low potential to occur; potential nesting and foraging habitat present within region, but not within the Project site. CNDDDB occurrences within 1.5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
Burrowing owl <i>Athene cunicularia</i>	BCC/SSC/ Yes	Lowlands throughout California, including the Central Valley, northeastern plateau, southeastern deserts, and coastal areas. Rare along south coast	Level, open, dry, heavily grazed or low stature grassland or desert vegetation with available burrows	Moderate to high potential to occur. Suitable nesting and foraging habitat present on-site. Nearest CNDDDB record is approximately 0.54 miles east or further. No active nesting observed. Highly mobile species could pass through and could establish nests in future years.
Swainson's hawk <i>Buteo swainsoni</i>	BCC/T/Yes	Lower Sacramento and San Joaquin Valleys, the Klamath Basin, and Butte Valley. Highest nesting densities occur near Davis and Woodland, Yolo County	Nests in oaks or cottonwoods in or near riparian habitats. Forages in grasslands, irrigated pastures, and grain fields	High potential to occur. Suitable foraging and nesting habitat present on-site. Nearest CNDDDB record 0.8-miles south of site. Highly mobile species could pass through.

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<i>SPECIES</i>	<i>STATUS (FED/CA/ SJMSCP)</i>	<i>GEOGRAPHIC DISTRIBUTION</i>	<i>HABITAT REQUIREMENTS</i>	<i>PRESENCE DETERMINATION</i>
White-tailed kite <i>Elanus leucurus</i>	--/--/Yes	Gulf Coast in Texas and Mexico and in the valley and coastal regions of central and southern California	Grasslands, marshes, row crops and alfalfa, where they hover while foraging for rodents and insects.	Moderate potential to occur. Suitable foraging habitat present on-site. There are no CNDDDB record within 5 miles of the site. Nesting opportunities are absent. Highly mobile species could pass through.
California horned lark <i>Eremophila alpestris actia</i>	--/--/Yes	Central Valley and coastal valleys and foothills.	Forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat	Low potential to occur. Suitable habitat present on-site. There are no CNDDDB record within 15 miles of the site. No active nesting observed. Highly mobile species could pass through and could establish nests in future years.
yellow-headed blackbird <i>Xanthocephalus xanthocephalus</i>	--/SSC/Yes	Nests in freshwater emergent wetlands with dense vegetation and deep water. Often along borders of lakes or ponds.	Nests only where large insects such as odonatan are abundant, nesting timed with maximum emergence of aquatic insects.	Low potential to occur. Marginal habitat present on-site. There is one CNDDDB record 1.55 miles south of the site. Nesting opportunities are absent. Highly mobile species could pass through.
Loggerhead shrike <i>Lanius ludovicianus</i>	BCC/SSC/Yes	Resident and winter visitor in lowlands and foothills throughout California. Rare on coastal slope north of Mendocino County, occurring only in winter	Prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Low potential to occur. Marginal habitat present on-site. There is one CNDDDB record 3.9 miles south of the site. Highly mobile species could pass through.
merlin <i>Falco columbarius</i>	--/WL/Yes	Does not nest in California. Rare but widespread winter visitor to the Central Valley and coastal areas	Forages along coastline in open grasslands, savannas, and woodlands. Often forages near lakes and other wetlands	No potential to occur. Habitat not present.
song sparrow ("Modesto" population) <i>Melospiza melodia</i>	BCC/SSC/Yes	Restricted to California, where it is locally numerous in the Sacramento Valley, Sacramento–San Joaquin River Delta, and northern San Joaquin Valley. Exact boundaries of range uncertain.	Found in emergent freshwater marshes dominated by tules (<i>Scirpus</i> spp.) and cattails (<i>Typha</i> spp.) as well as riparian willow (<i>Salix</i> spp.) thickets. They also nest in riparian forests of Valley Oak (<i>Quercus lobata</i>) with a sufficient understory of blackberry (<i>Rubus</i> spp.), along vegetated irrigation canals and levees, and in recently planted Valley Oak restoration sites.	No potential to occur. Habitat not present.

SPECIES	STATUS (FED/CA/ SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS	PRESENCE DETERMINATION
western yellow-billed cuckoo <i>Coccyzus americanus occidentalis</i>	T/E/Yes	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak riparian habitats where scrub jays are abundant	No potential to occur. Habitat not present.
least Bell's vireo <i>Vireo bellii pusillus</i>	E/E/No	Central Valley of California and other low-elevation river valleys.	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak.	No potential to occur. Habitat not present. There is one CNDDDB record 6 miles north of the site. Nesting opportunities are absent. Highly mobile species could pass through.
<i>FISH</i>				
Delta smelt <i>Hypomesus transpacificus</i>	T/T/Yes	Primarily in the Sacramento–San Joaquin Estuary but has been found as far upstream as the mouth of the American River on the Sacramento River and Mossdale on the San Joaquin River; range extends downstream to San Pablo Bay.	Occurs in estuary habitat in the Delta where fresh and brackish water mix in the salinity range of 2–7 parts per thousand.	No potential to occur. Habitat not present.
green sturgeon - southern DPS <i>Acipenser medirostris pop. 1</i>	T/--/Yes	Spawns in the Sacramento, Feather and Yuba Rivers. Presence in upper Stanislaus and San Joaquin Rivers may indicate spawning.	Spawning site fidelity. Non-spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles. Spawning occurs primarily in cool (11-15 C) sections of mainstem rivers in deep pools (8-9 meters) with substrate containing small to medium sized sand, gravel, cobble, or boulder.	No potential to occur. Habitat not present.
hardhead <i>Mylopharodon conocephalus</i>	--/SSC/No	Tributary streams in the San Joaquin drainage; large tributary streams in the Sacramento River and the main stem.	Resides in low to mid-elevation streams and prefer clear, deep pools and runs with slow velocities. They also occur in reservoirs.	No potential to occur. Habitat not present.
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus pop. 11</i>	T/--/No	This distinct population segment, or DPS, includes all naturally spawned populations of steelhead (and their progeny) in the Sacramento and San Joaquin Rivers and their tributaries, excluding steelhead from San Francisco Bay and San Pablo Bays and their tributaries.	Free of heavy sedimentation with adequate flow and cool, clear water. Gravel that is between 0.5 to 6.0 inches in diameter, dominated by 2 to 3-inch gravel. Escape cover such as logs, undercut banks, and deep pools for spawning adults.	No potential to occur. Habitat not present.
Longfin smelt <i>Spirinchus thaleichthys</i>	--/SSC/Yes	Occurs in estuaries along the California coast. Adults concentrated in Suisun, San Pablo, and North San Francisco Bays.	Prior to spawning, these fish aggregate in deepwater habitats available in the northern Delta, including, primarily, the channel habitats of Suisun Bay and the Sacramento River.	No potential to occur. Habitat not present.

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SPECIES	STATUS (FED/CA/ SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS	PRESENCE DETERMINATION
			Spawning occurs in fresh water on the San Joaquin River below Medford Island and on the Sacramento River below Rio Vista.	
<i>MAMMALS</i>				
Pallid bat <i>Antrozous pallidus</i>	--/SSC/No	Occurs throughout California except the high Sierra from Shasta to Kern County and the northwest coast, primarily at lower and mid elevations	Occurs in a variety of habitats from desert to coniferous forest. Most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. Relies heavily on trees for roosts	Low potential to occur. No roosting habitat present on-site. There are no CNDDDB record within approximately 15 miles of the site. Highly mobile species could pass through or forage if roosting nearby.
riparian (=San Joaquin Valley) woodrat <i>Neotoma fuscipes riparia</i>	E/SSC/Yes	Nests along the upper Sacramento, lower Feather, south fork of the Kern, Amargosa, Santa Ana, and Colorado Rivers	Wide, dense riparian forests with a thick understory of willows for nesting; sites with a dominant cottonwood overstory are preferred for foraging; may avoid valley oak riparian habitats where scrub jays are abundant	No potential to occur. Habitat not present.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--/SSC/Yes	Coastal regions from Del Norte County south to Santa Barbara County.	Roosts in caves, tunnels, mines, and dark attics of abandoned buildings. Very sensitive to disturbances and may abandon a roost after one onsite visit.	Low potential to occur. No roosting habitat present on-site. Highly mobile species could pass through or forage if roosting nearby.
Western mastiff bat <i>Eumops perotis californicus</i>	--/SSC/Yes	Occurs along the western Sierra primarily at low to mid elevations and widely distributed throughout the southern coast ranges. Recent surveys have detected the species north to the Oregon border	Found in a wide variety of habitats from desert scrub to montane conifer. Roosts and breeds in deep, narrow rock crevices, but may also use crevices in trees, buildings, and tunnels	Low potential to occur. No roosting habitat present on-site. There are no CNDDDB record within 22 miles of the site. Highly mobile species could pass through or forage if roosting nearby.
San Joaquin pocket mouse <i>Perognathus inornatus</i>	--/--/Yes	Occurs throughout the San Joaquin Valley and in the Salinas Valley	Favors grasslands and scrub habitats with fine textured soils	Low potential to occur. Agricultural land use likely precludes this species from maintaining long-term populations on the site. During fallow periods, the habitat improves for this species. One CNDDDB record located approximately 10 miles west of the site.

SPECIES	STATUS (FED/CA/ SJMSCP)	GEOGRAPHIC DISTRIBUTION	HABITAT REQUIREMENTS	PRESENCE DETERMINATION
Riparian brush rabbit <i>Sylvilagus bachmani riparius</i>	E/E/Yes	Limited to San Joaquin County at Caswell State Park near the confluence of the Stanislaus and San Joaquin Rivers and Paradise Cut area on Union Pacific right-of-way lands	Native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees	No potential to occur. Habitat not present.
American badger <i>Taxidea taxus</i>	--/SSC/Yes	In California, badgers occur throughout the state except in humid coastal forests of northwestern California in Del Norte and Humboldt Counties	Badgers occur in a wide variety of open, arid habitats but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; the principal habitat requirements for the species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground	Low potential to occur. Suitable foraging habitat on-site; and highly mobile species. Agricultural land use likely precludes this species from maintaining burrows on the site. There is one CNDDDB record 10.3 miles southwest of the site.
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	E/T/Yes	Principally occurs in the San Joaquin Valley and adjacent open foothills to the west; recent records from 17 counties extending from Kern County north to Contra Costa County	Saltbush scrub, grassland, oak, savanna, and freshwater scrub	Low potential to occur. No dens present, but highly mobile species that could forage on the site. Agricultural land use likely precludes this species from maintaining dens on the site. No CNDDDB occurrences within 12-miles of the site.
REPTILES				
California glossy snake <i>Arizona elegans occidentalis</i>	--/SSC/No	Patchily distributed from the eastern portion of San Francisco Bay, southern San Joaquin Valley, and the Coast, Transverse, and Peninsular ranges, south to Baja California.	Generalist reported from a range of scrub and grassland habitats, often with loose or sandy soils	Low potential to occur. The Project site could provide some upland habitat, including nesting opportunities during fallow periods, however, active agricultural activities in the immediate vicinity, as well as regular disking for weed abatement on-site, largely inhibit upland nesting for this species.
Western pond turtle <i>Emys marmorata</i>	--/SSC/Yes	Occurs from the Oregon border of Del Norte and Siskiyou Counties south along the coast to San Francisco Bay, inland through the Sacramento Valley, and on the western slope of Sierra Nevada	Occupies ponds, marshes, rivers, streams, and irrigation canals with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests	No potential to occur. Habitat not present.
San Joaquin coachwhip <i>Masticophis</i>	--/SSC/Yes	From Colusa County in the Sacramento Valley southward to the grapevine in the San Joaquin Valley and westward into the inner coast ranges.	Occurs in open, dry, vegetative associations with little or no tree cover. It occurs in valley grassland and saltbush scrub associations. Often	Low potential to occur. Marginal habitat present in the Project area. No CNDDDB occurrences within 16-

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BIOLOGICAL RESOURCES

<i>SPECIES</i>	<i>STATUS (FED/CA/ SJMSCP)</i>	<i>GEOGRAPHIC DISTRIBUTION</i>	<i>HABITAT REQUIREMENTS</i>	<i>PRESENCE DETERMINATION</i>
<i>flagellum ruddocki</i>		An isolated population occurs at Sutter Buttes. Known elevational range from 20 to 900 meters	occurs in association with mammal burrows.	miles of the site.
giant gartersnake <i>Thamnophis gigas</i>	T/T/Yes	Rivers, canals, irrigation ditches, rice fields, and other aquatic habitats with slow moving water and heavy emergent vegetation.	Endemic to the Central Valley. In the Sacramento Valley, suitable habitats occur primarily in the central portion of the valley floor.	No potential to occur. Habitat not present.
Coast horned lizard <i>Phrynosoma blainvillii</i>	--/SSC/No	Sacramento Valley, including foothills, south to southern California; Coast Ranges south of Sonoma County; below 4,000 feet in northern California	Grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	No potential to occur. Habitat not present.

NOTES: THE PRESENCE DETERMINATIONS WERE MADE BY PRINCIPAL BIOLOGIST, STEVE MCMURTRY (DE NOVO PLANNING GROUP, 2023) AND ARE BASED ON THE SITE SURVEY, REVIEW OF ON-SITE HABITAT CONDITIONS, AND THE CNDDDB RESULTS.

STATUS EXPLANATIONS:

FEDERAL

E = ENDANGERED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE FEDERAL ENDANGERED SPECIES ACT.

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

D = DELISTED FROM FEDERAL LISTING STATUS.

BCC = BIRD OF CONSERVATION CONCERN

STATE

E = ENDANGERED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

T = THREATENED UNDER THE CALIFORNIA ENDANGERED SPECIES ACT.

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

FP = FULLY PROTECTED UNDER THE CALIFORNIA FISH AND GAME CODE.

SSC = SPECIES OF SPECIAL CONCERN IN CALIFORNIA.

3.4.2 REGULATORY SETTING

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

FEDERAL

Federal Endangered Species Act

The Federal Endangered Species Act (FESA), administered by the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), provides protection to plant and wildlife species listed as endangered or threatened. In general, USFWS has jurisdiction over terrestrial and fresh-water species, while NMFS has jurisdiction over ocean-going species.

Section 9 of FESA generally prohibits all persons from causing the "take" of any member of a listed species. (16 U.S.C. § 1538.) This prohibition applies mainly to animals; it only extends to plants in areas "under federal jurisdiction" and plants already protected under state law. (Id., subd. (a)(2)(B); see also Northern Cal. River Watch v. Wilcox (9th Cir. 2010) 620 F.3d 1075.)

"Take" is defined in statute as, "... to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." (16 U.S.C. § 1532(19).) Harass is defined in regulation as "...an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns that include, but are not limited to, breeding, feeding, or sheltering." (See 50 CFR § 17.3.) Harm is defined in regulation as "...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering." (Id.) Despite the general prohibition against take, FESA in some circumstances permits "incidental take," which means take that is incidental to, but not the purpose of, the carrying out of an otherwise lawful activity. (16 U.S.C. § 1539(a).) Under section 10 of FESA, persons seeking permission to engage in actions that could result in such incidental take can obtain such permission through the approval of a habitat conservation plan (HCP) by either USFWS or NMFS. (16 U.S.C., § 1539(a).)

Proposed federal actions that would result in take of a federal-listed or proposed species require consultation with USFWS or NMFS under section 7 of FESA. (Id., § 1536.) The objective of consultation is to determine whether the proposed federal action would jeopardize the continued existence of a listed species or destroy or adversely modify critical habitat. Where such an outcome would not occur, USFWS or NMFS must still impose reasonable and prudent measures to minimize the effects of the incidental taking. Where such an outcome could occur, USFWS or

NMFS must propose reasonable and prudent alternatives that, if implemented, would avoid such an outcome. (Id.)

Compliance with ESA can be achieved under Section 7 or 10 of FESA depending on the involvement of the federal government. Section 7 requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, such as the issuance of a “404 permit” for filling wetlands by the U.S. Army Corps of Engineers (USACE), on the potential of the action to jeopardize the continued existence of any listed species impacted by the action or to result in the destruction or adverse modification of such species’ critical habitat. Provisions of Section 10 are implemented when there is no federal involvement in a project except compliance with FESA. A take not specifically allowed by federal permit under Section 7 or Section 10(a)(1)(B) of the FESA is subject to enforcement through civil or criminal proceedings under Section II of the FESA.

Migratory Bird Treaty Act

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

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC Section 668) protects these birds from direct take and prohibits the take or commerce of any part of these species. The USFWS administers the act, and reviews Federal agency actions that may affect these species.

Clean Water Act – Section 404

Section 404 of the CWA regulates all discharges of dredged or fill material into waters of the U.S. Discharges of fill material includes the placement of fill that is necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes and subaqueous utility lines [33 C.F.R. §328.2(f)]. Waters of the U.S. include lakes, rivers, streams, intermittent drainages, mudflats, sandflats, wetlands, sloughs, and wet meadows. Wetlands are defined as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” [33 C.F.R. §328.3(b)]. Waters of the U.S. exhibit a defined bed and bank and ordinary high-water mark (OHWM). The OHWM is defined by the USACE as “that line on shore established by the fluctuations of water and indicated by physical character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” [33 C.F.R. §328.3(e)].

In general, Section 404 of the Clean Water Act requires permits for the discharge of dredged or fill material into waters of the United States, including wetlands. However, certain activities are exempt from permit requirements under Section 404(f)(1). Activities that are exempt under the Clean Water Act, Section 404(f)(1), include:

- Established (ongoing) farming, ranching, and silviculture activities such as plowing, seeding, cultivating, minor drainage, harvesting for the production of food, fiber, and forest products, or upland soil and water conservation practices
- Maintenance (but not construction) of drainage ditches
- Construction and maintenance of irrigation ditches
- Construction and maintenance of farm or stock ponds
- Construction and maintenance of farm and forest roads, in accordance with best management practices
- Maintenance of structures such as dams, dikes, and levees

Clean Water Act – Section 401

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

Department of Transportation Act - Section 4(f)

Section 4(f) has been part of Federal law since 1966. It was enacted as Section 4(f) of the Department of Transportation (DOT) Act of 1966 and set forth in Title 49 United States Code (U.S.C.), Section 1653(f). In January 1983, as part of an overall recodification of the DOT Act, Section 4(f) was amended and codified in 49 U.S.C. Section 303. This law established policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites as follows:

It is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites. The Secretary of Transportation shall cooperate and consult with the Secretaries of the Interior, Housing and Urban Development, and Agriculture, and with the States, in developing transportation plans and programs that include measures to maintain or enhance the natural beauty of lands crossed by transportation activities or facilities. The Secretary of Transportation may approve a transportation program or project (other than any project for a park road or parkway under section 204 of title 23) requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance, or land of a historic site of national, State, or local significance (as determined by the Federal, State, or local officials having jurisdiction over the park, area, refuge, or site) only if: a) There is no prudent and feasible alternative to using that land; and b) The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Rivers and Harbors Act of 1899

The Rivers and Harbors Act prohibits the obstruction or alteration of any navigable water of the United States. The Act requires authorization from the USACE for any excavation or deposition of

materials into these waters or for any work that could affect the course, location, condition, or capacity of rivers or harbors.

STATE

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

The California Department of Fish and Wildlife (CDFW) administers a number of laws and programs designed to protect fish and wildlife resources. Principal of these is the California Endangered Species Act of 1984 (CESA Fish and Game Code Section 2050 et seq.), which regulates the listing and take of state endangered and threatened species, as well as candidate species. Under Section 2081 of CESA, CDFW may authorize take of an endangered and/or threatened species, or candidate species, by an incidental take permit or Memorandum of Understanding (MOU) for scientific, educational, or management purposes. In approving an incidental take permit, CDFW must ensure, among other things, that “[t]he impacts of the authorized take shall be minimized and fully mitigated.” Further, “[t]he measures required to meet this obligation shall be roughly proportional in extent to the impact of the authorized taking on the species. Where various measures are available to meet this obligation, the measures required shall maintain the applicant's objectives to the greatest extent possible. All required measures shall be capable of successful implementation.” To be consistent with Federal regulations, CESA created the categories of "threatened" and "endangered" species. It converted all "rare" animals into the Act as threatened species, but did not do so for rare plants, as previously designated under the California Native Plant Protection Act (discussed below). Thus, there are three listing categories for plants in California: rare, threatened, and endangered. Under State law, plant and animal species may be formally designated by official listing by the California Fish and Game Commission.

Fish and Game Code §2800-2835 – Natural Communities Conservation Planning Act

The Natural Communities Conservation Planning Act is set forth in Fish and Game Code Sections 2800–2835. The intent of the legislation is to provide for conservation planning as an officially recognized policy that can be used as a tool to eliminate conflicts between the protection of natural resources and the need for growth and development. In addition, the legislation promotes conservation planning as a means of coordination and cooperation among private interests, agencies, and landowners, and as a mechanism for multispecies and multi-habitat management and conservation. The development of Natural Community Conservation Plans (NCCPs) is an alternative to obtaining take authorization under Section 2081 of the Fish and Game Code.

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

In 1977 the State Legislature passed the Native Plant Protection Act (NPPA) in recognition of rare and endangered plants of the state. The intent of the law was to preserve, protect, and enhance endangered plants. The NPPA gave the California Fish and Game Commission the power to designate native plants as endangered or rare, and to require permits for collecting, transporting, or selling such plants. The NPPA includes provisions that prohibit the taking of plants designated as

"rare" from the wild, and a salvage mandate for landowners, which requires notification of the CDFW 10 days in advance of approving a building site.

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

Under California Fish and Game Code section 3503, “[i]t is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” Under section 3503.5, “[i]t is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird, except as otherwise provided by this code or any regulation adopted pursuant thereto.” Section 3503 allows some destruction of nests or eggs (it cannot be done “needlessly”), while section 3503.5 prohibits such destruction outright. Under section 3800, it is generally unlawful to take “any nongame bird,” with some exceptions. Any activity that would cause a nest to be abandoned or cause a reduction or loss in a reproductive effort is commonly understood to constitute a take. This generally includes construction activities.

Fish and Game Code §1601-1603 – Streambed Alteration

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

Fish and Game Code §3511, 3513, 4700, and 5050 – Fully Protected Species

Fish and Game Code Sections 3511, 3513, 4700, and 5050 pertain to fully protected wildlife species (birds in Sections 3511 and 3513, mammals in Section 4700, and reptiles and amphibians in Section 5050) and strictly prohibit the take of these species. CDFW cannot issue a take permit for fully protected species, except under narrow conditions for scientific research or the protection of livestock, or if an NCCP has been adopted.

California Environmental Quality Act Guidelines § 15380 – Unlisted Species Worth of Protection

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

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

Public Resources Code § 21083.4 - Oak Woodlands Conservation

In 2004, the California legislature enacted SB 1334, which added oak woodland conservation regulations to the Public Resources Code. This new law requires a county to determine whether a project, within its jurisdiction, may result in a conversion of oak woodlands that will have a significant effect on the environment. If a county determines that there may be a significant effect to oak woodlands, the county must require oak woodland mitigation alternatives to mitigate the significant effect of the conversion of oak woodlands. Such mitigation alternatives include: conservation through the use of conservation easements; planting and maintaining an appropriate number of replacement trees; contribution of funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements; and/or other mitigation measures developed by the county.

California Wetlands Conservation Policy

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

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

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

Natural Community Conservation Planning Act

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

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.) is California's primary water quality control statute. But its protections extend to wetlands, and in some instances wetlands that are not subject to federal jurisdiction under the Clean Water Act. Under the Porter-Cologne Act definition, waters of the state are "any surface water or groundwater, including saline waters, within the boundaries of the state." (Wat. Code, § 13050[e].) Although all waters of the United States that are within the borders of California are also waters of the state, the reverse is not necessarily true. Therefore, California retains authority to regulate discharges of waste into any waters of the state, discharges to receiving waters more broadly than the CWA does.

Waters of the state fall under the jurisdiction of the nine Regional Water Quality Control Boards (RWQCBs). Under Porter-Cologne, each RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater, as well as actions to control nonpoint and point sources of pollution. California Water Code Section 13260 requires any person discharging waste, or proposing to discharge waste, in any region that could affect the waters of the state to file a report of discharge (an application for waste discharge requirements [WDRs]) with the applicable RWQCB. Construction activities that may discharge wastes into the waters of the state must meet the discharge control requirements of the Porter-Cologne Act.

On April 2, 2019, the State Water Resources Control Board (State Water Board) adopted Resolution 2019-0015, thereby adopting a document entitled, "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" ("Procedures") for inclusion in the Water Quality Control Plans for Inland Surface Waters, Enclosed Bays, and Estuaries of California.²

In taking this action, the State Water Board noted that under the Porter-Cologne Water Quality Control Act (Porter-Cologne Act) (Wat. Code, Div. 7, § 13000 et seq.), discharges of dredged or fill material to waters of the state are subject to waste discharge requirements or waivers thereof. The State Water Board further explained that "although the state has historically relied primarily on requirements in the Clean Water Act to protect wetlands, U.S. Supreme Court rulings reducing the jurisdiction of the Clean Water Act over wetland areas by limiting the definition of 'waters of the United States' have necessitated the use of California's independent authorities under the Porter-Cologne Act to protect these vital resources."

The Office of Administrative Law (OAL) approved the Procedures on August 28, 2019. Pursuant to the Procedures, the effective date is nine months upon OAL approval. Accordingly, the Procedures were effective May 28, 2020.

² See: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf

3.4 BIOLOGICAL RESOURCES

By adopting the Procedures, the State Water Board mandated and standardized the evaluation of impacts and protection of waters of the state from impacts due to dredge and fill activities. The Procedures include: 1) a wetland definition; 2) a jurisdictional framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for application submittal, and the review and approval of dredge or fill activities.

The Procedures define an area as a wetland if it meets three criteria: wetland hydrology, wetland soils, and (if vegetated) wetland plants. An area is a wetland if: (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

Waters of the State, by definition, includes more aquatic features than Waters of the U.S., which defines the jurisdiction of the federal government. Waters of the State are not so limited. In addition, the federal definition of a wetland requires a prevalence of wetland vegetation under normal circumstances. To account for wetlands in arid portions of the state, the State Water Board's definition differs from the federal definition in that an area may be a wetland even if it does not support vegetation. If vegetation is present, however, the State Water Board's definition requires that the vegetation be wetland vegetation. The State Water Board's definition clarifies that vegetated and unvegetated wetlands will be regulated in the same manner.

The Procedures also include a jurisdictional framework that applies to aquatic features that meet the wetland definition. The jurisdictional framework will guide applicants and staff in determining whether an aquatic feature that meets the wetland definition will be regulated as a water of the state. The jurisdictional framework is intended to exclude from regulation any artificially-created, temporary features, such as tire ruts or other transient depressions caused by human activity, while still capturing small, naturally-occurring features, such as seasonal wetlands and small vernal pools that may be outside of federal jurisdiction. The Procedures do not expand the State Water Board's jurisdiction beyond areas already under State Water Board's jurisdiction.

The Procedures exclude the following agricultural features from the protections accorded to wetlands: (1) ditches with ephemeral flow that are not a relocated water of the state or excavated in a water of the state; (2) ditches with intermittent flow that are not a relocated water of the state or excavated in a water of the state, or that do not drain wetlands other than any wetlands described in (4) or (5) below; (3) ditches that do not flow, either directly or through another water, into another water of the state; (4) artificially irrigated areas that would revert to dry land should application of waters to that area cease; or (5) artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, and settling basins.

The Procedures clarify what information and analysis the applicant needs to submit to have a complete application. The Procedures standardize when an alternative analysis needs to be conducted and set a minimum mitigation ratio for any permanent impacts to waters of the state resulting from dredge and fill activities.

When an alternatives analysis is required, the applicant must demonstrate that the proposed alternative is the Least Environmentally Damaging Practicable Alternative (LEDPA). The term practicable means available and capable of being done after taking into consideration cost, existing technology, and other logistics in light of the overall project purpose.

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

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), most recently revised in May 2018 by the CVRWQCB in 1998, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River Basins, including the Delta.

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

CDFW Staff Report on Burrowing Owl Mitigation

The CDFW has designated certain species as “species of special concern” when their population viability and survival is adversely affected by risk factors such as precipitous declines or other vulnerability factors (Shuford and Gardali 2008). Preliminary analyses of regional patterns for breeding populations of burrowing owls (*Athene cunicularia*) have detected declines both locally in their central and southern coastal breeding areas, and statewide where the species has experienced modest breeding range retraction (Gervais et al. 2008). In California, threat factors affecting burrowing owl populations include habitat loss, degradation and modification, and eradication of ground squirrels resulting in a loss of suitable burrows required by burrowing owls for nesting, protection from predators, and shelter.

The CDFW recognized the need for a comprehensive conservation and mitigation strategy for burrowing owls, and in 1995 directed staff to prepare a report describing mitigation and survey recommendations. This report, “1995 Staff Report on Burrowing Owl Mitigation” (Staff Report) (CDFG 1995), contained CDFW-recommended burrowing owl and burrow survey techniques and mitigation measures intended to offset the loss of habitat and slow or reverse further decline of this species. Notwithstanding these measures, over the subsequent 15+ years, burrowing owls continued to decline in portions of their range (DeSante et al. 2007, Wilkerson and Siegel, 2010). The CDFW therefore determined that reversing declining population and range trends for burrowing owls required implementation of more effective conservation actions, and evaluate the efficacy of the CDFW’s pre-existing recommended avoidance, minimization and mitigation approaches for burrowing owls. As such, the CDFW updated the 1995 Staff Report in 2012.

The CDFW has identified three main actions that together will facilitate a more viable, coordinated, and concerted approach to conservation and mitigation for burrowing owls in California. These include:

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1. Incorporating burrowing owl comprehensive conservation strategies into landscape-based planning efforts such as Natural Community Conservation Plans (NCCPs) and multi-species Habitat Conservation Plans (HCPs) that specifically address burrowing owls.
2. Developing and implementing a statewide conservation strategy (Burkett and Johnson, 2007) and local or regional conservation strategies for burrowing owls, including the development and implementation of a statewide burrowing owl survey and monitoring plan.
3. Developing more rigorous burrowing owl survey methods; working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level (the focus of this document).

The Staff Report on Burrowing Owl Mitigation (2012) sets forth the CDFW's recommendations for implementing the third approach identified above by revising the 1995 Staff Report, drawing from the most relevant and current knowledge and expertise, and incorporating the best scientific information. General strategies for mitigation include the following: designing projects to avoid negative impacts and disturbances that could result in take of burrowing owls, nests, or eggs; conducting take avoidance (pre-construction) surveys to detect the presence of burrowing owls on a project site at a fixed period in time in order to inform necessary take avoidance actions; engaging in site surveillance to ascertain whether burrowing owls may be attempting to colonize or re-colonize an area that will be impacted; minimizing impacts through the use of buffer zones, visual screens, or other measures while project activities are occurring; undertaking minimization measures such as eliminating actions that reduce burrowing owl forage and burrowing surrogates (e.g. ground squirrels); using burrow exclusion measures such as installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently excluding burrowing owls and closing burrows after verifying the burrows are empty; restoration of temporarily disturbed habitat to pre-project conditions; replacing or otherwise compensating for permanently impacted habitat; and creating artificial burrows to replace natural burrows.

LOCAL

City of Lathrop General Plan

POLICIES: RECREATION AND RESOURCES ELEMENT

- RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop's biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.
- RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.
- RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.

- RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.
- RR-4.6: Urban Forest. To the extent feasible, build upon existing streetscapes and develop an urban forest along the City's major corridors and in residential neighborhoods to provide avian habitat, sequester carbon emissions, foster pedestrian activity, and provide shade.
- RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.

ACTIONS: RECREATION AND RESOURCES ELEMENT

- RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.
- RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.
- RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.
- RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by SJMSCP, which may include, but are not limited to the following:
 - A. Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;
 - B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and
 - C. Pre-Construction training of contractors and sub-contractors shall be conducted by a qualified biologist to identify and avoid protected species and habitat.
- RR-7d: Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.

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

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

3.4 BIOLOGICAL RESOURCES

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

BACKGROUND

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

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

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

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

IMPLEMENTATION

The SJMSCP is administered by a Joint Powers Authority consisting of members of the San Joaquin County Council of Governments (SJCOG), the CDFW, and the USFWS. Development project applicants are given the option of participating in the SJMSCP as a way to streamline compliance with required local, State and federal laws regarding biological resources, and typically avoid having to approach each agency independently. According to the SJMSCP, adoption and implementation by local planning jurisdictions provides full compensation and mitigation for impacts to plants, fish and wildlife. Adoption and implementation of the SJMSCP also secures compliance pursuant to the state and federal laws such as CEQA, the National Environmental Policy Act (NEPA), the Planning and Zoning Law, the State Subdivision Map Act, the Porter-Cologne Act and the Cortese-Knox Act in regard to species covered under the SJMSCP.

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

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

City of Lathrop Municipal Code

The Lathrop Municipal Code provides rules and regulations to protect water courses (Chapter 12.28) and to manage and control stormwater and discharge (Chapter 13.28). Section 13.28.130 specifically provides requirement to prevent, control and reduce stormwater pollutants. This includes requirements to implement best management practices to the extent they are technologically achievable to prevent and reduce pollutants.

Additionally, Chapter 12.16 outlines requirements related to trees, including planting and removing trees. The Chapter is adopted to preserve, protect and promote the public health, safety, peace, comfort, convenience, prosperity and general welfare. More specifically, the Chapter is intended to achieve the following:

- A. To provide a comprehensive plan for the planting, replanting, removal and maintenance of trees within designated public streets, including arterial and collector streets and streets providing access to public facilities;

3.4 BIOLOGICAL RESOURCES

- B. To establish and maintain a pattern of street trees within all public streets which will enhance the living and working area of the city, enhance real property values, conserve energy, reduce glare, diminish the effects of vehicular noise, and avoid hazards to street improvements and to public safety occasioned by trees which are of such physical location or condition as to constitute a public nuisance. (Ord. 92-89)

3.4.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

CEQA Guidelines Appendix G is a sample Initial Study checklist that includes number of factual inquiries related to the subject of biological resources, as it does on a whole series of additional environmental topics. Notably, lead agencies are under no obligation to use these inquiries in fashioning thresholds of significance on the subject of air quality impacts, or indeed on any subject addressed in the checklist. (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Rather, with few exceptions, “CEQA grants agencies discretion to develop their own thresholds of significance.” (*Ibid.*) Even so, it is a common practice for lead agencies to take the language from the inquiries set forth in Appendix G and to use that language in fashioning thresholds. The City has done so here, though it has exercised its discretion to modify the language of the Appendix G threshold addressing impacts to wetlands so that it applies not only to federally-protected wetlands, but also to wetlands that are protected under State law (the reach of which is sometimes broader than federal law).

Although CEQA generally gives agencies considerable discretion in fashioning significance thresholds, there are some thresholds that must, as a matter of law, be used by public agencies. Many of these relate to biological resources, and are found in CEQA Guidelines section 15065 (“Mandatory Findings of Significance”).

Finally, the City is aware that neither Appendix G nor section 15065 sets forth language directly addressing potential effects on birds of prey or nesting birds due to violation of laws (described earlier) intended to protect them. The City has therefore exercised its discretion to formulate a threshold to address this particular category of impact.

In light of the foregoing, for purposes of this EIR, a significant impact would occur if implementation of the Project would:

- 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 an endangered, rare or threatened species;
- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on federally - or state- protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan;
- Result in the take or destruction of any nesting birds or birds of prey or the nest or eggs of such birds.

IMPACTS AND MITIGATION

Impact 3.4-1: The proposed Project would not have a substantial direct or indirect effect on special-status invertebrate species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of an animal community, or a drop in population levels below self-sustaining levels. (Less than Significant with Mitigation)

According to the CNDDB, there are 11 special-status invertebrates that are documented within the nine-quadrangle Project region, including: California linderiella (*Linderiella occidentalis*), crotch bumble bee (*Bombus crotchii*), conservancy fairy shrimp (*Branchinecta conservancy*), molestan blister beetle (*Lytta molesta*), Sacramento anthicid beetle (*Anthicus sacramento*), San Joaquin Valley giant flower-loving fly (*Rhaphiomidas trochilus*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), western ridged mussel (*Gonidea angulate*), and western bumble bee (*Bombus occidentalis*). As noted in Table 3.4-2, five of these are covered species under the SJMSCP.

The potential to have a substantial direct or indirect effect on special-status invertebrate species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of an invertebrate community, or a drop in population levels below self-sustaining levels, is discussed below.

VERNAL POOL INVERTEBRATES

California linderiella (*Linderiella occidentalis*) exclusively inhabit vernal pools or other seasonally ponded wetlands that sustain inundation during the winter before drying in the late spring.

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Western ridged mussel (*Gonidea angulate*) occurs primarily in creeks and rivers and less often lakes and was originally in most of state but is now extirpated from Central and Southern California. The Project site does not provide suitable habitat for these species.

Vernal pool fairy shrimp (VPFS) is a federal threatened invertebrate found in the Central Valley, central and south Coast Ranges from Tehama County to Santa Barbara County. They are commonly found in vernal pools and in sandstone rock outcrop pools. VPFS is not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not appropriate vernal pool habitat in the Project site.

Vernal pool tadpole shrimp (VPTS) is a federal endangered invertebrate found in vernal pools and stock ponds from Shasta County south to Merced County. VPTS is not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not appropriate vernal pool habitat in the Project site.

BEES AND FLIES

Crotch bumble bee (*Bombus crotchii*), western bumble bee (*Bombus occidentalis*), and San Joaquin Valley giant flower-loving fly (*Rhaphiomidas trochilus*) may occur in the region, and in the Project area at times. Crotch bumble bee and San Joaquin Valley giant flower-loving fly are tracked by CDFW, but are not specifically protected under state or federal law. Western bumble bee is a federally threatened species.

The crotch bumble bee occurs primarily in California, including the Mediterranean region, Pacific Coast, Western Desert, Great Valley, and adjacent foothills through most of southwestern California. It also occurs in Mexico (Baja California and Baja California Sur) and has been documented in southwest Nevada, near the California border. Their natural habitat is grassland and scrub areas, requiring a hotter and drier environment than other bumblebee species. This species can only tolerate a very narrow range of climatic conditions. This is a non-migratory species of bumble bee that nests underground, often in abandoned rodent dens.

The western bumble bee was once one of the most common bee species in the North West America. They have been found from the Mediterranean California all the way up to the Tundra regions of Alaska, making them one of the bees with the widest range geographic range. In the past decade, the population of has dropped over 40% and has been especially significant in the Pacific states from California to Washington. Declines have been attributed to a parasite, as well as an increase in the honeybees. Their natural habitat is shrubland, grassland, and artificial/terrestrial areas. They have been observed on a wide variety of plans in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows. This species is considered to be a more effective pollinator than honeybees and they have been commercially reared to pollinate crops such as alfalfa, avocados, apples, cherries, blackberries, cranberries, and blueberries.

Although not “natural habitat”, the existing agricultural fields and orchards provide habitat for these bumble bee species. It is noted, however, that habitat for bumble bee species would be provided after development on-site within landscaped areas, with the western bumble bee most likely to utilize these areas.

The San Joaquin Valley giant flower-loving fly are historically known from, and endemic to, sandy soils of the San Joaquin Valley from Antioch Dunes in Contra Costa County south to Sand Ridge in Kern County. This species is associated with sandy soils such as riverine deposits and sand dunes with relatively sparse vegetation. Adults do not visit flowers/nectar. Females deposit eggs in and on the surface of sandy soil. Larvae burrow in fine sands up to 10 feet deep and are known to live for three years prior to pupation. The Project site does not provide appropriate habitat for this species.

BEETLES

Essential habitat for Molestan blister beetle and Sacramento anthicid beetle is not present in the Project area. The proposed Project is not expected to have a significant impact on these species.

Valley elderberry longhorn beetle (VELB) is a federal threatened insect, proposed for delisting. Elderberry (*Sambucus* sp.), which is a primary host species for valley elderberry longhorn beetle (VELB) is a common plant found throughout the region, but especially in riparian zones. One occurrence of this species exists over four miles from the site. There are no elderberry plants located within the agricultural fields, or otherwise in areas that would be developed. VELB is not anticipated to be directly affected by any individual phase or component of the proposed Project because there is not appropriate habitat in the Project site.

CONCLUSION

Habitat for California California linderiella (*Linderiella occidentalis*), conservancy fairy shrimp (*Branchinecta conservation*), molestan blister beetle (*Lytta molesta*), Sacramento anthicid beetle (*Anthicus sacramento*), San Joaquin Valley giant flower-loving fly (*Rhaphiomidas trochilus*), valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardi*), western ridged mussel (*Gonidea angulate*), and western bumble bee (*Bombus occidentalis*) is not found on-site.

Potential habitat for crotch bumble bee (*Bombus crotchii*) is found on-site. This species is not covered under the SJMSCP. Mitigation Measure 3.4-1 requires preconstruction survey for special-status bumble bees and avoidance and mitigation measures should bumble bees be found. With implementation of this mitigation measure, the proposed Project would have a **less than significant** impact on special-status invertebrate species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of an invertebrate community, or a drop in population levels below self-sustaining levels.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-1: *The Project applicant shall implement the following measure to avoid or minimize impacts on special-status bumble bees:*

- *A qualified biologist(s) shall conduct a preconstruction survey with 7 days of the commencement of work. If special-status bees of any species are observed, they shall be*

photographed for identification. If construction begins between March 1 and November 1, the ground shall also be searched during the survey for active bumble bee colonies. If bee colonies are identified, these colonies shall be demarcated with a flagged avoidance buffer, as determined by a qualified biologist and shall be avoided during the active season from March 1 through November 1, or until the qualified biologist has determined that the colony is no longer active or until the colony is relocated.

Impact 3.4-2: The proposed Project has the potential to have substantial direct or indirect effects on special-status reptile and amphibian species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a reptile or amphibian community, or a drop in population levels below self-sustaining levels. (Less than Significant with Mitigation)

According to the CNDDDB, there are nine special-status amphibian and reptile species that are documented within the nine-quadrangle Project region, the: California glossy snake (*Arizona elegans occidentalis*), western pond turtle (*Emys marmorata*), San Joaquin coachwhip (*Masticophis flagellum ruddocki*), giant gartersnake (*Thamnophis gigas*), coast horned lizard (*Phrynosoma blainvillii*), California tiger salamander (*Ambystoma californiense* [*A. tigrinum c.*]), foothill yellow-legged frog (*Rana boylei*), California red-legged frog (*Rana aurora draytoni*), and western spadefoot (*Spea hammondi*). As noted in Table 3.4-3, all of the amphibians are covered species under the SJMSCP. Three of the five reptiles are covered species under the SJMSCP.

The potential to have a direct or indirect substantial effect on special-status reptile and amphibian species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a reptile or amphibian community, or a drop in population levels below self-sustaining levels, is discussed below.

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

According to the CNDDDB, there are no documented occurrences within 15 miles of the site. The Project site does not contain open sandy areas with scattered brush or rocky areas. Regular disking and mowing on-site for agriculture and weed/vegetation abatement is a regular disturbance to refuge and foraging habitat. There is no potential for this species to occur on-site and the California glossy snake is presumed absent from the site. Therefore, the proposed Project would have a **less than significant** impact on the California glossy snake species.

California Tiger Salamander: The federally and State-listed Threatened California tiger salamander (CTS) is a large terrestrial salamander. It occurs in central California from the Sacramento Valley to

the south-central San Joaquin Valley, and in the surrounding foothills of both the Coast Ranges and the Sierra Nevada Mountains. CTS are also recorded from the San Francisco Bay region, Sonoma County, the Monterey Bay region, and the valleys and foothills of San Luis Obispo and Santa Barbara counties.

CTS breed in temporary wetland pools, such as vernal pools, and other seasonal wetland bodies where ponded water is present for a minimum of three to four months, extending into the early spring. Such ponds and temporary wetlands provide necessary breeding and larval-stage habitat for the species. Adults spend most of the year in aestivation, underground in the burrows of small mammals, such as the California ground squirrel and/or Botta's pocket gopher, or within other suitable subterranean retreats. They emerge at night during winter rain events for brief periods to breed (Trenham et al. 2001). Aquatic juveniles (larvae) are mostly herbivorous (Stebbins 1985). CTS normally begin to reproduce after three to five years.

There are no CNDDDB records or mapped occurrences of CTS within four miles of the Project site. According to the CNDDDB, the nearest occurrence of CTS is approximately 4.7 miles south of the Project site south of SR 120. In 1996, about 50 larvae were observed in a seasonal pond that was created by the berm of SR 120. It is anticipated that CTS adults will disperse at night up to 1.3 miles to refuge sites. Because the Project site is over four miles away, and because the occurrences were documented 27 years ago, it is highly unlikely that the CTS observed in this area would travel to the Project site. There are no other known CTS breeding sites in the vicinity.

While there is no potential for CTS to occur within the Project site, the Project applicant will be required to obtain coverage under the SJMSCP. The CTS is a covered species under the SJMCP. The Project site does not provide suitable habitat for this species.

The CTS is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to CTS would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

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

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depending on local water conditions. The breeding season at any locality is usually about two weeks for most populations. Females deposit eggs in clusters of 200 to 300 (range 100 to 1000). They hatch in about five days. Tadpoles reach maximum sizes of 50 to 55 mm (2.2 in) and transform in three to four months.

FYLF is known to occur in aquatic habitats, such as creeks or rivers in woodland, forest, mixed chaparral, and wet meadow habitats with rock and gravel substrate and low overhanging vegetation along the edge. They are usually found near riffles with rocks and sunny banks nearby. The FYLF is not documented in the immediate vicinity of the Project site. Additionally, the Project site does not provide the necessary habitat for FYLF.

The FYLF is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to FYLF would be *less than significant* through compliance with Mitigation Measure 3.4-1, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

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

There are no CNDDDB occurrences within 15 miles of the Project site. The Project site does not provide suitable habitat. Because the closest documented occurrences within the Project vicinity are outside of the dispersal range of CRLF and the Project site has no suitable habitat, there is a low potential for CRLF to occur on-site. This species is not documented on and has not been observed on the Project site.

The CRLF is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to CRLF would be *less than significant* through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Giant Garter Snake: The giant garter snake (*Thamnophis gigas*) is a federal and state listed threatened species. Essential giant garter snake habitat components consist of 1) adequate water during early spring through mid-fall to provide prey base and cover, 2) emergent wetland vegetation for escape cover and foraging habitat, 3) uplands for basking and retreat sites, and 4) higher elevation upland for cover and flood refugia. The USFWS considers areas within 200 feet of aquatic habitat to represent potential upland habitat. Additionally, the USFWS identifies various levels of impact to giant garter snake habitat, from temporary to permanent, and applies mitigation requirements accordingly.

The closest occurrence of this species is approximately 6.0 miles northwest of the Project area or further, near the Port of Stockton. There are no CNDDDB records of this species in Lathrop, Manteca, or Tracy. There is no habitat for this species on site and they are presumed absent from the site.

The giant garter snake is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to giant garter snake would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Western Spadefoot: The California Species of Special Concern western spadefoot occurs primarily in grassland habitats, but can also be found in valley-foothill hardwood woodlands. The western spadefoot requires shallow, temporary pools or streams during breeding season and egg-laying. Where natural vernal pools are absent, western spadefoots may make use of artificial ponds and stock tanks. Most of the year, western spade foos reside in burrows at depths of up to 3 feet. Adult western spadefoot movement is limited to rainy or humid nights during the breeding season; adults are rarely found on the surface at other times of the year. This species feeds mainly on invertebrates such as insects and worms.

There are no CNDDDB records of this species within four miles of the Project site. Additionally, appropriate habitat for this species is not found in the Project site, and this species has no potential to occur on-site. There is no potential for this species to occur on-site and the western spadefoot is presumed absent from the site. Therefore, the proposed Project would have a **less than significant** impact on the western spadefoot species.

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

The necessary habitat for this species is not present within the Project site, and this species has no potential to occur on-site. The Project site could provide some upland habitat, including nesting

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opportunities during fallow periods, however, active agricultural activities in the immediate vicinity, as well as regular disking for weed abatement on-site, largely inhibit upland nesting for this species. The western pond turtle is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to western pond turtle would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

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

According to the CNDDDB records search, there are no documented occurrences within 16-miles of the Project site. The Project site is currently undeveloped with some previous disturbance associated with the former buildings. The site has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated the snake's food base and the mammal burrows it uses for refuge; therefore, this species has a low potential to occur. The San Joaquin coachwhip is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to the San Joaquin coachwhip would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Coast Horned Lizard: The coast horned lizard is a California Species of Special Concern that is not an uncommon species in the region even in the absence of records. This species requires loose sandy soil in which it can rapidly dig in order to avoid predators. The soils of the Project site are generally too heavy in clays for this type of digging by horned lizards. In addition, farming practices have disturbed the majority of the topsoil. Therefore, this species is presumed absent from the Project site, even though they are fairly common in the region. There are no CNDDDB records within 15 miles of the site. Therefore, the proposed Project would have a **less than significant** impact on the coast horned lizard species.

MITIGATION MEASURE(S)

Mitigation Measure 3.4-2: *Prior to commencement of any grading activities, the Project proponent shall obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species. Coverage involves compensation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species. These fees are used to preserve and/or create habitat in preserves to be managed in perpetuity. Obtaining coverage for a Project includes incidental take authorization (permits) under the Endangered Species Act Section 10(a), California Fish and Game Code Section 2081, and the MBTA. Coverage under the SJMSCP would fully mitigate all habitat impacts on covered special-status species.*

Impact 3.4-3: The proposed Project has the potential to have substantial direct or indirect effects on special-status bird species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a bird community, or a drop in population levels below self-sustaining levels. (Less than Significant with Mitigation)

According to the CNDDDB, there are 13 special-status birds that are documented within the nine-quadrangle Project region, including: cackling (=Aleutian Canada) goose (*Branta hutchinsii leucopareia*), California black rail (*Laterallus jamaicensis coturniculus*), tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), white-tailed kite (*Elanus leucurus*), California horned lark (*Eremophila alpestris actia*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), loggerhead shrike (*Lanius ludovicianus*), merlin (*Falco columbarius*), song sparrow ("Modesto" population) (*Melospiza melodia*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), and least Bell's vireo (*Vireo bellii pusillus*). As noted in Table 3.4-2, all but one of these bird species (least Bell's vireo) are covered species under the SJMSCP.

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

The potential to have substantial direct or indirect effects on special-status bird species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a bird community, or a drop in population levels below self-sustaining levels, is discussed below.

Year-Round Birds: Special-status birds that can be present in the region throughout the year include: burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), song sparrow (Modesto population) (*Melospiza melodia*), tricolored blackbird (*Agelaius tricolor*), among others. Some of these species are migratory, but also reside year-round in California.

Summering Birds: Special-status birds that are only present in the region in the spring and summer months include: Aleutian goose (*Branta canadensis leucopareia*), Swainson's hawk (*Buteo swainsoni*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), least Bell's vireo (*Vireo bellii pusillus*), California horned lark (*Eremophila alpestris actia*), and yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Overwintering Birds: Special-status birds that are only present in the region in the fall and winter months include: merlin (*Falco columbarius*).

Nesting Raptors (Birds of Prey): All raptors (owls, hawks, eagles, falcons), including species and their nests, are protected from take pursuant to the Fish and Game Code of California Section

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3503.5, and the federal Migratory Bird Treaty Act, among other federal and State regulations. Special-status raptors that are known to occur in the region include: burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), and white-tailed kite (*Elanus leucurus*), among others.

Analysis: Powerlines and trees located in the region represent potentially suitable nesting habitat for a variety of special-status birds. Powerlines exist throughout the region; however, mature trees are fairly limited in the region, and are absent from the Project site. The agricultural land represents potentially suitable nesting habitat for the ground-nesting birds. In general, most nesting occurs from late February and early March through late July and early August, depending on various environmental conditions. Additionally, highly mobile species could pass through the site.

Swainson's hawk: The CNDDDB currently contains records for Swainson's hawk and burrowing owl in the vicinity of the Project site. Swainson's hawk is state threatened and is a migrant species that spends much of the spring, summer, and early fall in California's Central Valley. Their preferred nesting habitat consists of valley oaks, cottonwoods, and other tall trees adjacent to both agricultural fields and grasslands. They have been observed more frequently in recent years within the Central Valley. Due to the recent expansion of their population, it is possible that agricultural, grassland, and rural residential areas may support foraging and possibly nesting hawks. However, the ruderal grasses, fallow ground, and trees in the northern and eastern portion of the Project site are not considered quality habitat for foraging or nesting. This species generally prefers open fields for foraging, and tall trees for nesting. The nearest CNDDDB occurrence of this species is 0.8 miles south of the Project site. The Project site is within the range of documented Swainson's hawk, and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

Burrowing owl: Burrowing owl is a species of concern in California. It is a small owl that typically lives in grassland habitats of the Central Valley region that also support California ground squirrels. The species will also sometimes overwinter or even nest within agricultural areas, using whatever is available (pipes, ground holes/burrows). The owl seeks shelter and breeds from February to July. Although the numbers of owls have declined in some parts of California over the past 20 years, their numbers have increased greatly in some agricultural areas. The ruderal grasses and fallow ground on the Project site are not considered quality habitat for foraging or nesting for this species. The nearest CNDDDB record is approximately 0.54 miles east or further from the Project site. The Project site is within the range of this species and given the high mobility of the species, it is possible that an individual could be present on the site at some future time even though none have been observed or recorded in the past.

White-tailed kite: White-tailed kite is a CDFW Fully Protected species. This non-migrating bird typically attains a wingspan of approximately 40 inches and feeds primarily on insects, small mammals, reptiles, and amphibians, which it forages from open grasslands. It builds a platform-like nest of sticks in trees or shrubs and lays 3 to 5 eggs, but may brood a second clutch if prey is abundant. The kite's distinct style of hunting includes hovering before diving onto its target. There

are no CNDDDB occurrences within 5 miles of the Project site. The Project site does not contain suitable nesting habitat for this species.

Cackling (=Aleutian Canada) goose: Cackling (=Aleutian Canada) goose is listed by CDFW as a Watch List species. They roost in large marshes, flooded fields, stock ponds, and reservoirs and forage in pastures, meadows, and harvested grainfields. No known CNDDDB occurrences exist within 13 miles of the Project site. The Project site does not provide the appropriate habitat for this species; however, this highly mobile species could pass through and could establish nests in future years.

California black rail: California black rail is listed by CDFW as a Threatened species. They inhabit freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. This species requires water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat. No known CNDDDB occurrences exist within 11 miles of the Project site. The Project site does not provide the appropriate aquatic habitat for this species.

Tricolored blackbird: Tricolored blackbirds are listed by CDFW as a Threatened species. During the breeding season, tricolored blackbirds typically nest in dense colonies (some estimated as having 200,000+ nests), with males defending small territories and mating with one to four females. Studies have shown that nesting colonies are often located in seasonal wetlands with tules and cattails present. More recent studies indicate that nesting colonies are also regularly found in Himalayan blackberries (*Rubus discolor*) and grain fields. Other substrates where they have been observed nesting include giant European reed (*Arundo donax*), safflower (*Carthamus tinctorius*), tamarisk (*Tamarix* spp.), elderberry (*Sambucus* spp.), poison-oak (*Toxicodendron diversilobum*), and riparian scrublands and forests (e.g., *Salix*, *Populus*, and *Fraxinus* spp.).

Tricolored blackbird foraging habitats in all seasons include annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields (such as large tracts of alfalfa and pastures with continuous haying schedules, and recently tilled fields), cattle feedlots, and dairies. They also forage occasionally in Mixed Riparian Scrub habitats along marsh borders. Weed-free row crops, intensively managed vineyards, and orchards do not serve as regular foraging sites (Beedy and Hamilton 1997, 1999; DeHaven 2000). CNDDDB occurrences for this species exist within 1.5 miles of the Project site. The Project site does not contain suitable nesting habitat for this species. The potential for this species to occur on-site is low; however, this highly mobile species could pass through and could establish nests in future years.

California horned lark: This species is listed by CDFW as a Watch List species. They prefer to forage in large groups in open grasslands, nesting in hollows on the ground, and are also regularly found breeding on the Valley floor in suitable habitat. The Project site does not contain suitable nesting habitat for this species. The potential for this species to occur on-site is low; however, this highly mobile species could pass through and could establish nests in future years.

Yellow-headed blackbird: Yellow-headed blackbird are CDFW listed as a species of special concern. They nest in freshwater emergent wetlands with dense vegetation and deep water. They are often found along borders of lakes or ponds and only nest where large insects, such as *Odonata* are

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abundant. Nesting is timed with maximum emergence of aquatic insects. The Project site does not contain suitable habitat for this species. The potential for this species to occur on-site is low; however, this highly mobile species could pass through and could establish nests in future years.

Loggerhead shrike: Loggerhead shrike is listed by CDFW as a species of special concern. Loggerhead shrikes occur in dry, open habitats including grasslands, pastures with fence rows, agricultural fields, open woodlands (savannas), scrub, and riparian areas. They inhabit open areas with clear visibility for hunting, perches for scanning, and scattered small trees and large shrubs for nesting. Loggerhead shrikes typically avoid completely treeless and shrubless areas (Cade and Woods 1997), as well as urbanized and densely wooded areas (Grinnell and Miller 1944). Winter foraging habitat is similar to summer breeding and foraging habitat; however, shrikes also use idle pastures and hayfields during the winter (Bartgis 1992). The Project site does not contain suitable nesting habitat for this species. The potential for this species to occur on-site is low; however, this highly mobile species could pass through and could establish nests in future years.

Merlin: The Merlin is a CDFW species of special concern that has never been observed nesting in California. Though it is a transient throughout most of the state, wintering populations are known to occur in the Central Valley and along the coast. The Project site does not contain suitable nesting habitat for this species.

Song sparrow: Song sparrows are listed by CDFW as a species of special concern due to declining populations in the Great Central Valley of California. They prefer open grasslands with barren ground for foraging and tend to be found in areas with vegetation and scrub cover especially in grasslands and prairies. The Project site does not contain suitable habitat for this species.

Western yellow-billed cuckoo: Western yellow-billed cuckoo are CDFW listed as Endangered. They are found in riparian forest nester, along the broad, lower flood-bottoms of larger river systems. They nest in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape. The Project site does not contain suitable habitat for this species.

Least Bell's vireo: This species is listed by CDFW as a federal and CDFW Endangered species. They are found in the Central Valley of California and other low-elevation river valleys. They prefer dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak. The Project site does not contain suitable nesting habitat for this species. Nesting opportunities are absent from the site, but this highly mobile species could pass through.

In addition to the species described above, common raptors and migratory birds may nest in or adjacent to the Project site.

Conclusion: New sources of noise and light during the construction and operational phases of the Project could adversely affect nesters if they are located adjacent to the Project site in any given year. Additionally, the proposed Project would eliminate the agricultural areas on the Project site, which serve as potential foraging habitat for birds throughout the year. Mitigation Measure 3.4-2 requires participation in the SJMSCP. As part of the SJMSCP, SJCOG requires preconstruction surveys for projects that occur during the avian breeding season (March 1 – August 31). When

active nests are identified, the biologists develop buffer zones around the active nests as deemed appropriate until the young have fledged. SJCOG also uses the fees to purchase habitat as compensation for the loss of foraging habitat. Implementation of the proposed Project, with the Mitigation Measure 3.4-2, would ensure that potential impacts to special status birds are reduced to a **less than significant** level.

MITIGATION MEASURE(S)

Implement Mitigation Measure 3.4-2.

Impact 3.4-4: The proposed Project has the potential for substantial direct or indirect effects on special-status mammal species, including through substantial reduction of habitat, substantial reduction of the number or restriction of the range of a listed species, elimination of a mammal community, or a drop in population levels below self-sustaining levels. (Less than Significant with Mitigation)

According to the CNDDDB, there are eight special-status mammals that are documented within the nine-quadrangle Project region, including: pallid bat (*Antrozous pallidus*), riparian (=San Joaquin Valley) woodrat (*Neotoma fuscipes riparia*), Townsend's big-eared bat (*Corynorhinus townsendii*), western mastiff bat (*Eumops perotis californicus*), San Joaquin pocket mouse (*Perognathus inornatus*), riparian brush rabbit (*Sylvilagus bachmani riparius*), American badger (*Taxidea taxus*), and San Joaquin kit fox (*Vulpes macrotis mutica*). As noted in Table 3.4-2, all but one of these mammal species (pallid bat) are covered species under the SJMSCP.

The potential to have substantial direct or indirect effects on special-status mammals species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a mammal community, or a drop in population levels below self-sustaining levels, is discussed below.

Riparian Woodrat: This species requires wide, dense riparian forests with a thick understory of willows for nesting, while sites with a dominant cottonwood overstory are preferred for foraging. There are no CNDDDB records of this species within 11 miles of the Project site. Additionally, appropriate habitat for this species is not found in the Project site. There is no potential for this species to occur on-site and the riparian woodrat is presumed absent from the site. Therefore, the proposed Project would have a **less than significant** impact on the riparian woodrat species.

Riparian Brush Rabbit: Similar to the riparian woodrat species, the riparian brush rabbit requires native valley riparian habitats with large clumps of dense shrubs, low-growing vines, and some tall shrubs and trees. There are CNDDDB records of this species within five miles of the Project site. However,, appropriate habitat for this species is not found in the Project site. There is no potential for this species to occur on-site and the riparian brush rabbit is presumed absent from the site. Therefore, the proposed Project would have a **less than significant** impact on the riparian brush rabbit species.

3.4 BIOLOGICAL RESOURCES

San Joaquin Pocket Mouse: The Project site is currently undeveloped with some previous disturbance associated with the former buildings. The site has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated high quality habitat for the San Joaquin pocket mouse, which is primarily found in grassland, oak savanna and arid scrubland in areas with fine-textured, sandy, and friable soils. The closest documented occurrence of San Joaquin pocket mouse is approximately 10.0 miles west of the Project site. Additionally, the majority of San Joaquin pocket mouse occurrences are recorded along or west of Interstate 580; therefore, it is unlikely that the Project site is used by San Joaquin pocket mouse. It is noted that during fallow periods, the site improves for this species, until it is disked for weed abatement on-site.

While there is low potential for this species to occur on-site, the San Joaquin pocket mouse is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be *less than significant* through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

American Badger: The Project site is currently undeveloped with some previous disturbance associated with the former buildings. The site has been previously used for agricultural uses. Previous disking on-site for agriculture likely eliminated high quality habitat for the American badger, which is primarily found in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. The closest documented occurrence of American badger is approximately 10.3 miles southwest of the Project site. Additionally, the majority of American badger occurrences are recorded southwest/west of Interstate 580. This species is highly mobile and will forage where opportunities exist. During fallow periods, the site improves for this species.

While there is low potential for this species to occur on-site, the American badger is a covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be *less than significant* through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

San Joaquin Kit Fox: San Joaquin kit fox is known to occur in western San Joaquin County within annual grasslands and alkali scrub communities with suitable prey base and loose-textured sandy soils where dens can be enlarged from California ground squirrel burrows. According to the CNDDDB, the nearest occurrence of the San Joaquin Kit Fox is approximately 12 miles southwest of the Project site. Low quality grassland foraging habitat occurs in the vicinity of the Project site where ground squirrels are abundant. This is a highly mobile species. Overall, there is a low potential for the San Joaquin Kit Fox to forage on the Project site at times, especially during fallow periods. There were no dens present on-site during the reconnaissance level site survey, and the active agricultural operations adjacent to the site, as well as the regular disking of the site for weed abatement, inhibit any establishment of dens. The San Joaquin kit fox is covered species under the SJMSCP; therefore, it is anticipated that any impacts to this species would be *less than significant* through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to

obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Special-Status Bats: The CNDDDB also identifies several special-status bats that occur within the 9-quad region of the Project site, including: Pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Eumops perotis californicus*), and Western mastiff bat (*Eumops perotis californicus*). These species are not federally state listed; however, they are considered a California Species of Special Concern and are tracked by the CNDDDB. Development of the Project site would eliminate foraging habitat for special status bats by removing the agricultural areas. These special status bat species are covered by the SJMSCP, with the exception of the pallid bat.

Pallid bats occur in a variety of habitats from desert to coniferous forest, but are most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in northern California and oak woodland, grassland, and desert scrub in southern California. This species relies heavily on trees for roosts. The Project site does not have appropriate roosting habitat to support the pallid bat. Additionally, there are no CNDDDB records within approximately 15 miles of the site. While bats are highly mobile, pallid bats are not anticipated to occur within the Project site and the proposed Project would have a **less than significant** impact on this species.

The remaining special status bat species (i.e., Townsend's big-eared bat and Western mastiff bat) have not been documented on the Project site. These special-status bat species, or evidence of bat presence (i.e. guano), were not observed during the field surveys; therefore, they are not expected to be directly affected. The Project site does not have appropriate roosting habitat to support the bats, and while they are highly mobile and may be present on adjacent properties, they are not expected to be directly affected by the proposed Project. However, development of the Project site would eliminate foraging habitat for special-status bats by removing the agricultural areas. These special status bat species are all covered species under the SJMSCP; therefore, it is anticipated that any impacts to the Townsend's big-eared bat and Western mastiff bat would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to provide compensation for the loss of the potential foraging habitat.

MITIGATION MEASURE(S)

Implement Mitigation Measure 3.4-2.

Impact 3.4-5: The potential for substantial direct or indirect effects on candidate, sensitive, or special-status plant species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a plant community, or a drop in population levels below self-sustaining levels. (Less than Significant)

The records search identified 25 documented special-status plant species within the nine-quadrangle Project region. These 25 special-status plants include: bristly sedge (*Carex comosa*),

3.4 BIOLOGICAL RESOURCES

Large-flowered fiddleneck (*Amsinckia grandiflora*), alkali-sink goldfields (*Lasthenia chrysantha*), Alkali milk-vetch (*Astragalus tener* var. *tener*), Heartscale (*Atriplex cordulata* var. *cordulata*), Lesser saltscale (*Atriplex minuscula*), Big tarplant (*Blepharizonia plumosa*), Palmate-bracted bird's-beak (*Chloropyron palmatum*), Recurved larkspur (*Delphinium recurvatum*), diamond-petaled California poppy (*Eschscholzia rhombipetala*), San Joaquin spearscale (*Extriplex joaquinana*), Sanford's arrowhead (*Sagittaria sanfordii*), Woolly rose-mallow (*Hibiscus lasiocarpus* var. *occidentalis*), Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*), Mason's lilaepsis (*Lilaeopsis masonii*), Delta mudwort (*Limosella australis*), Delta button-celery (*Eryngium racemosum*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), slough thistle (*Cirsium crassicaule*), Suisun Marsh aster (*Symphotrichum lentum*), Showy golden madia (*Madia radiata*), California alkali grass (*Puccinellia simplex*), Saline clover (*Trifolium hydrophilum*), Capar-fruited tropidocarpum (*Tropidocarpum caparideum*), and watershield (*Brasenia schreberi*).

Of the 25 documented species, two are federally listed (two endangered), four are state listed (three endangered and one rare), 21 are CNPS 1B listed species (including the federal and state listed species), and four are CNPS 2 listed species. As noted in Table 3.4-2, 17 of the 25 are covered species under the SJMSCP.

The Project site was subject to a field survey by Principal Biologist Steve McMurtry on April 21, and May 12, 2021. The collection of field surveys included surveys that coincided with the blooming period for most special status plants known to occur within the region.

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The Project site consists of highly disturbed areas (agricultural area).

SJMCP Covered Special-Status Plant Species: Of the 25 special status species which may occur in the Project area, 17 are covered under the SJMSCP. Therefore, any impacts to these species would be **less than significant** through compliance with Mitigation Measure 3.4-2, which requires the Project proponent to obtain coverage under the SJMSCP to mitigate for habitat impacts to covered special status species.

Remaining Special-Status Plant Species: The remaining eight plant species are not covered by the SJMSCP include: alkali-sink goldfields, lesser saltscale, big tarplant, palmate-bracted bird's-beak, San Joaquin spearscale, California alkali grass, saline clover, and watershield. No special-status plant species were observed within the Project site during the field survey and none are expected to be affected by the proposed Project. Due to the extent of past disturbance from agricultural production and other development activities in the area, the potential for these species-status plant species to occur on the Project site is generally considered to be low. It is noted that if given time without disturbance it is possible for the plant composition to shift away from its current ruderal grass composition. However, for the reasons presented above, the proposed Project would have a **less than significant** impact on special status plants.

Impact 3.4-6: The potential for substantial direct or indirect effects on candidate, sensitive, or special-status fish species, including through substantial reduction of habitat, substantial reduction of the number or restriction in the range of a listed species, elimination of a fish community, or a drop in population levels below self-sustaining levels. (Less than Significant)

The records search identified five documented special-status fish species within the nine-quadrangle Project region. These five special-status fish include: Delta smelt (*Hypomesus transpacificus*), green sturgeon - southern DPS (*Acipenser medirostris pop. 1*), hardhead (*Mylopharodon conocephalus*), steelhead - Central Valley DPS (*Oncorhynchus mykiss irideus pop. 11*), and Longfin smelt (*Spirinchus thaleichthys*). Of the five documented species, three are federally threatened. As noted in Table 3.4-2, three of the five special-status fish species are covered species under the SJMSCP.

The proposed Project site does not contain any aquatic habitats, including but not limited to streams, rivers, wetlands, estuaries, or pools. Aquatic habitats in some form are required for all the aforementioned special-status fish species. Therefore, the site does not contain habitat for these species. For these reasons, the proposed Project would have a *less than significant* impact on special status plants.

Impact 3.4-7: The potential to cause a substantial adverse effect on protected wetlands and jurisdictional waters. (No Impact)

The Project site does not contain protected wetlands or other jurisdictional areas and there is no need for permitting associated with the federal or state Clean Water Acts. The Project site is site previously used for agricultural uses. At times the Project site is fallow, and forms an annual grassland composed of non-native annuals, before it is disked for weed abatement on-site. Absent any wetlands or jurisdictional waters, implementation of the proposed Project would have *no impact* relative to this topic.

Impact 3.4-8: The potential to result in adverse effects on riparian habitat or other sensitive natural community. (No Impact)

The CNDDDB record search revealed documented occurrences of four sensitive habitats within the 9-quad region for the Project site including: Coastal and Valley Freshwater Marsh, Great Valley Cottonwood Riparian Forest, Great Valley Mixed Riparian Forest, and Elderberry Savanna. None of these sensitive natural communities occur within the Project site. Implementation of the proposed Project would have *no impact* on riparian habitats or natural communities.

Impact 3.4-9: The potential to result in interference 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. (Less than Significant)

The CNDDDB record search did not reveal any documented wildlife corridors or wildlife nursery sites on or adjacent to the Project site. As noted above, five special status fish species are documented within the region, including: species within the nine-quadrangle Project region. These five special-status fish include: Delta smelt (*Hypomesus transpacificus*), green sturgeon - southern DPS (*Acipenser medirostris pop. 1*), hardhead (*Mylopharodon conocephalus*), steelhead - Central Valley DPS (*Oncorhynchus mykiss irideus pop. 11*), and Longfin smelt (*Spirinchus thaleichthys*). The closest major natural movement corridor for native fish that is documented in the region is the San Joaquin River, located approximately 1.75 miles west of the Project site, and its tributaries. The proposed land use within the Project site would not have any direct disturbance to the San Joaquin River and its tributaries, and therefore, would not have any direct disturbance to the movement corridor or habitat. Implementation of the Project would result in a *less than significant* impact related to this topic.

Impact 3.4-10: The proposed Project has the potential to conflict with an adopted Habitat Conservation Plan. (Less than Significant with Mitigation)

The proposed Project is subject to the SJMSCP. The proposed Project does not conflict with the SJMSCP. Mitigation Measure 3.4-2 requires participation in the SJMSCP. Therefore, with this mitigation, the proposed Project would have a *less than significant* impact relative to this topic.

MITIGATION MEASURE(S)

Implement Mitigation Measure 3.4-2.

Impact 3.4-11: The potential to conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (Less than Significant with Mitigation)

The General Plan establishes numerous policies and actions related to biological resources and development review. These policies and actions are listed below. Additionally, the City's Municipal Code outlines regulations intended to protect biological resources and water quality. The Project's consistency with these General Plan policies and actions and the Municipal Code requirements are also described.

RECREATION AND RESOURCES ELEMENT POLICIES AND ACTIONS

RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop's biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.

- **Consistent:** *This EIR includes an in-depth analysis of impacts related to biological resources, including the potential for impacts to sensitive, rare or endangered plants and wildlife, as well*

as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable.

RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.

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

RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.

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

RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.

- **Consistent:** *There are no natural water bodies onsite. The Project site is designated for freeway commercial uses in the City's General Plan. As discussed in Chapter 2.0, Project Description, development of the proposed Project would include construction of a new storm drainage system.*

RR-4.6: Urban Forest. To the extent feasible, build upon existing streetscapes and develop an urban forest along the City's major corridors and in residential neighborhoods to provide avian habitat, sequester carbon emissions, foster pedestrian activity, and provide shade.

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

RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.

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

3.4 BIOLOGICAL RESOURCES

RR-4a: Cooperate with state, federal, and local agencies to ensure that development does not cause significant adverse impacts to existing riparian corridors.

- **Does Not Conflict:** *There are no riparian corridors located onsite.*

RR-4b: Require new development, infrastructure, long-range planning, and similar projects, to comply with the requirements of the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan to ensure that potentially significant impacts to special-status species and sensitive resources are adequately addressed.

- **Consistent:** *The proposed Project is subject to the SJMSCP. The proposed Project does not conflict with the SJMSCP. Mitigation Measure 3.4-2 requires participation in the SJMSCP.*

RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

- **Consistent:** *As discussed in Impact 3.9-2 in Section 3.9, Hydrology and Water Quality, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. As also discussed in Section 3.9, the Project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.*

RR-4e: Where sensitive biological habitats have been identified on or immediately adjacent to a project site, the project shall include appropriate mitigation measures identified by SJMSCP, which may include, but are not limited to the following:

- A. Pre-construction surveys for species listed under the State or Federal Endangered Species Acts, or species identified as special-status by the resource agencies, shall be conducted by a qualified biologist;
 - B. Construction barrier fencing shall be installed around sensitive resources and areas identified for avoidance or protection, and to reduce potential soil compaction in sensitive areas; and
 - C. Pre-Construction training of contractors and sub-contractors shall be conducted by a qualified biologist to identify and avoid protected species and habitat.
- **Consistent:** *As noted previously, the proposed Project is subject to the SJMSCP. Mitigation Measure 3.4-2 requires participation in the SJMSCP.*

RR-7d: Review and regulate new development, infrastructure, and levee improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.

- **Consistent:** *Impacts associated with potential flood events are discussed in Section 3.9, Hydrology and Water Quality, of this EIR. As discussed, the Project site is currently located in Zone X, protected by levee, which by definition indicates an area protected by levees from the 1% annual chance flood. Furthermore, the entire Project site is located in the 200-year floodplain. However, pursuant to the City Municipal Code, the proposed Project would be required to comply with regulations contained in Chapter 17.17 (200-Year Flood Protection) of the City Municipal Code.*

LATHROP MUNICIPAL CODE

The Lathrop Municipal Code provides rules and regulations to protect water courses (Chapter 12.28) and to manage and control stormwater and discharge (Chapter 13.28). Section 13.28.130 specifically provides requirement to prevent, control and reduce stormwater pollutants. This includes requirements to implement best management practices to the extent they are technologically achievable to prevent and reduce pollutants.

Additionally, Chapter 12.16 outlines requirements related to trees, including planting and removing trees. The Chapter is adopted to preserve, protect and promote the public health, safety, peace, comfort, convenience, prosperity and general welfare. More specifically, the Chapter is intended to achieve the following:

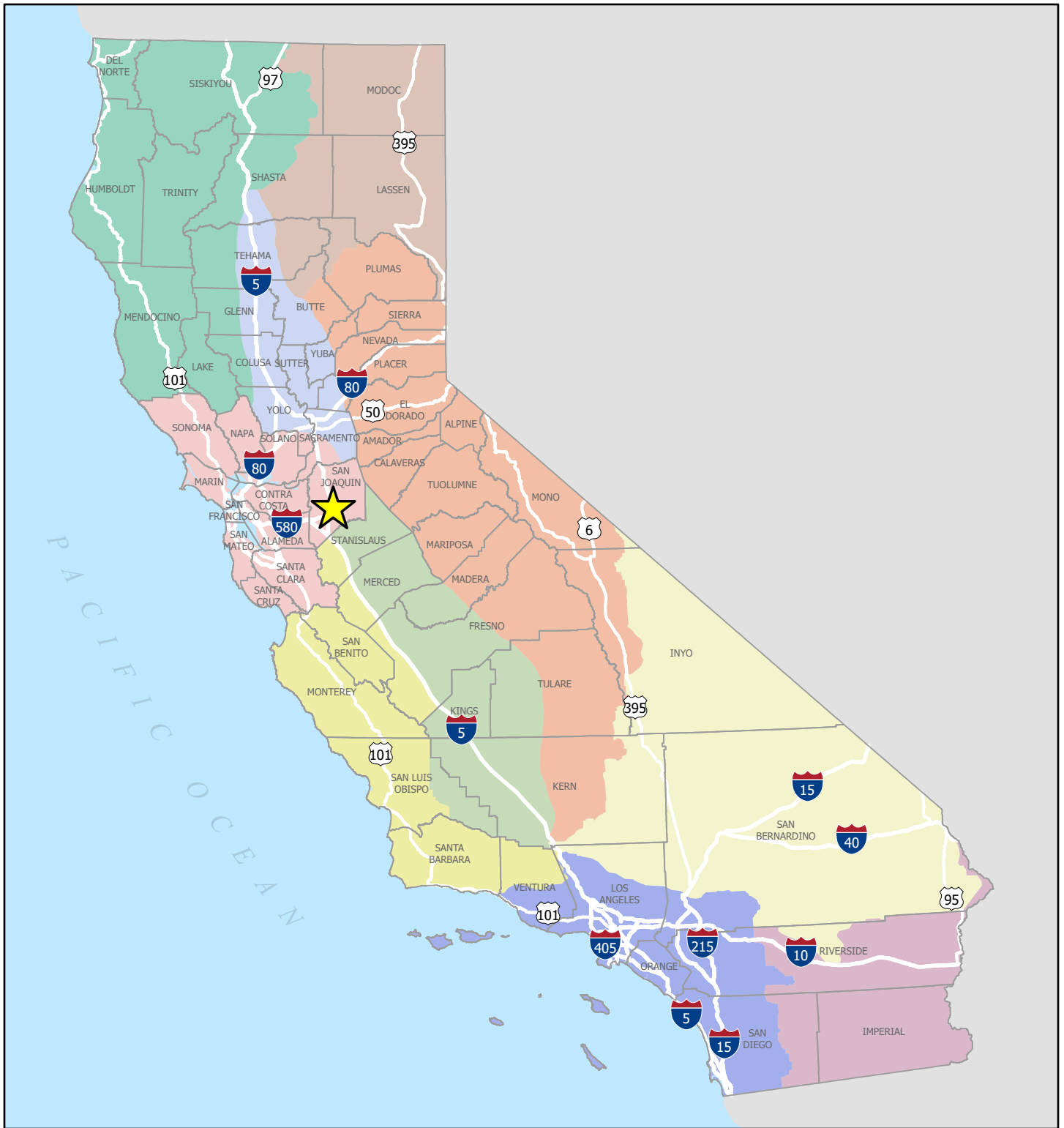
- A. To provide a comprehensive plan for the planting, replanting, removal and maintenance of trees within designated public streets, including arterial and collector streets and streets providing access to public facilities;
- B. To establish and maintain a pattern of street trees within all public streets which will enhance the living and working area of the city, enhance real property values, conserve energy, reduce glare, diminish the effects of vehicular noise, and avoid hazards to street improvements and to public safety occasioned by trees which are of such physical location or condition as to constitute a public nuisance. (Ord. 92-89)

The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter. The planting and removing of trees would be subject to the requirements of Chapter 12.16; therefore, the proposed Project is consistent with Chapter 12.16.

CONCLUSION

In summary, the proposed Project is substantially consistent with the local policies and ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Project has been designed with ample open space, park, and trail areas in order to maintain open space linkages to the extent feasible. The Project would be required to comply with applicable policies to minimize impacts to special-status species and their associated habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable. Therefore, this impact would be considered ***less than significant***.

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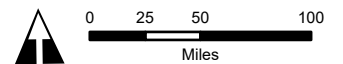


Legend

- Project Location
- County Boundary
- Bay Area / Delta
- Central Coast
- Colorado Desert
- Klamath / North Coast
- Modoc
- Mojave
- Sacramento Valley
- San Joaquin Valley
- Sierra
- South Coast

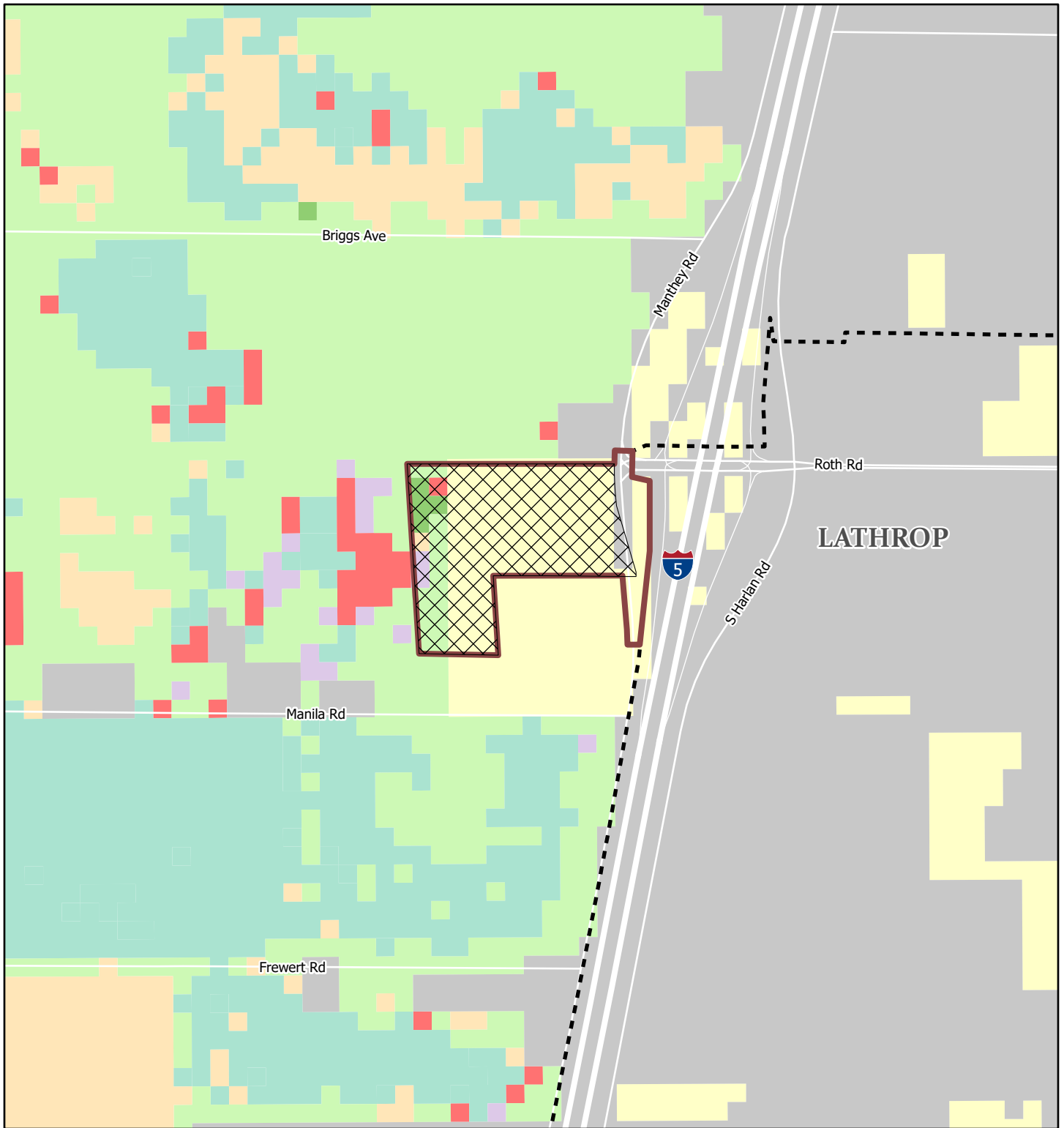
SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.4-1. Bioregions














Sources: San Joaquin County GIS; California State Geoportal; California Air Resources Board. Map date: November 8, 2022.

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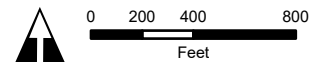


Legend

-  Project Site / Annexation Area
-  Development Area
-  Lathrop City Limits
- Land Cover Types**
-  Annual Grassland
-  Cropland
-  Deciduous Orchard
-  Dryland Grain Crops
-  Evergreen Orchard
-  Irrigated Hayfield, Grain, and Field Crops
-  Urban
-  Vineyard

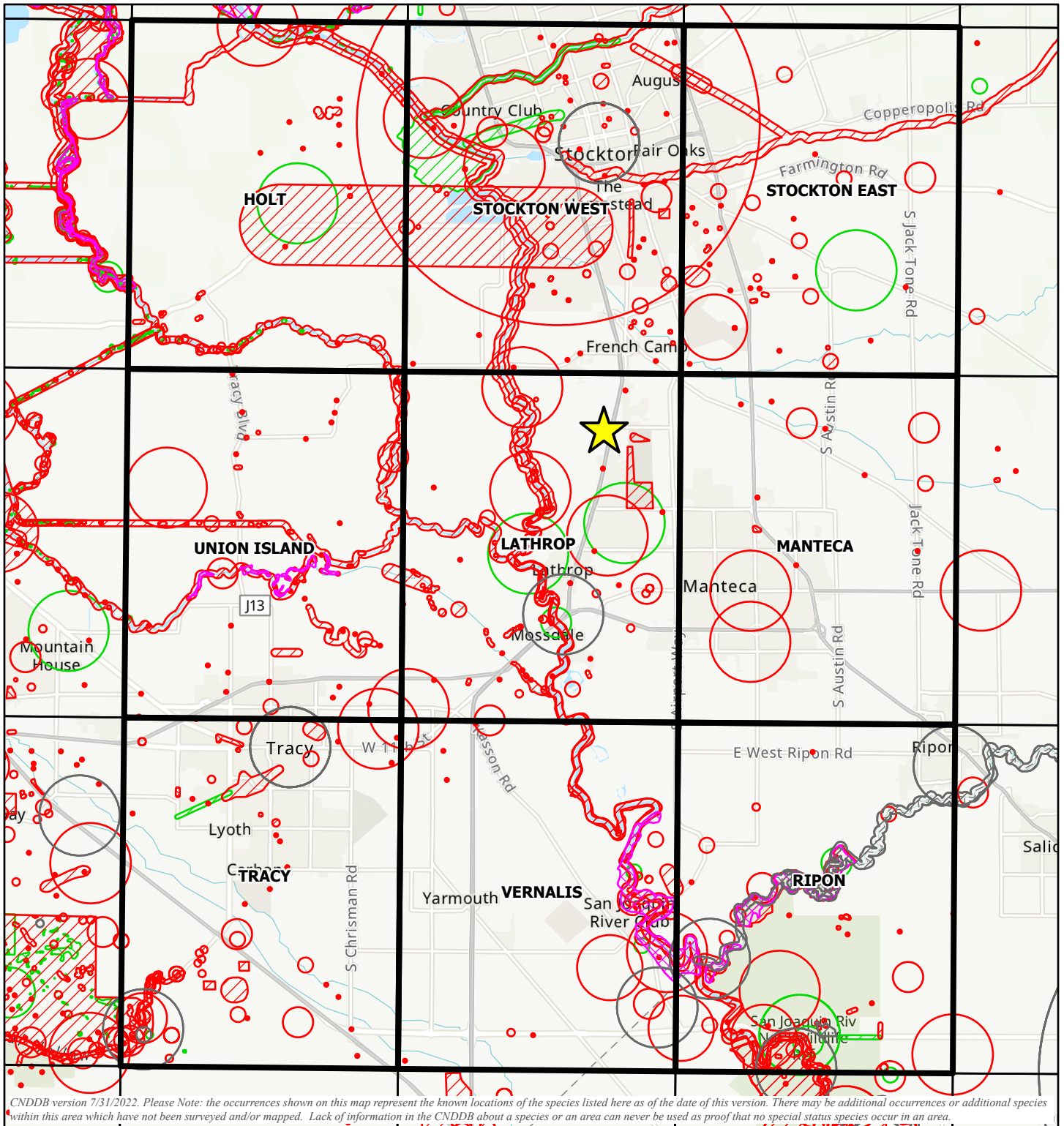
SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.4-2. Land Cover Types



Sources: San Joaquin County GIS; USGS Roads Database; FVEG_2015. Map date: December 13, 2022.

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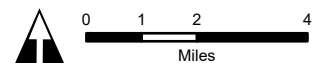
CNDDDB version 7/31/2022. Please Note: the occurrences shown on this map represent the known locations of the species listed here as of the date of this version. There may be additional occurrences or additional species within this area which have not been surveyed and/or mapped. Lack of information in the CNDDDB about a species or an area can never be used as proof that no special status species occur in an area.

Legend

- ★ Project Location
- Plant (80m)
- ▨ Plant (specific)
- ▧ Plant (non-specific)
- Plant (circular)
- Animal (80m)
- ▨ Animal (specific)
- ▧ Animal (non-specific)
- Animal (circular)
- ▨ Terrestrial Comm. (specific)
- ▧ Terrestrial Comm. (circular)
- ▨ Multiple (non-specific)
- Multiple (circular)

SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.4-3.
Special Status Species 9-quad Search



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This section provides a discussion of the prehistoric period background, ethnographic background, historic period background, known cultural resources in the region, the regulatory setting, an impact analysis, and mitigation measures. Information in this section is derived primarily from the *Cultural Resource Assessment for the Singh Petroleum Project, City of Lathrop, California* (Peak & Associates, Inc., January 2023).

The Notice of Preparation (NOP) for the proposed Project was sent to the Native American Heritage Commission (NAHC) via the State Clearinghouse. There NAHC provided comments during the public review period for the NOP related to cultural resources. Full comments received are included in Appendix A.

3.5.1 ENVIRONMENTAL SETTING

PROJECT SETTING

The Project site is located in section 14 of Township 1 South, Range 6 East. The overall Project site includes two distinct planning boundaries defined below.

- Project Site (or Annexation Area) – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- Development Area – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road.

The Project site is comprised of flat land with ruderal grasses, fallow ground, a few trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf.

The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The City of Stockton city limits are located approximately 2.5 miles to the northeast of the Project. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. The Project site is currently located within San Joaquin County. The Project site is outside the Lathrop city limits, but within the City's Primary Sphere of Influence (SOI).

CULTURAL AND HISTORICAL SETTING

Prehistory

The Central Valley region was among the first in the state to attract intensive fieldwork, and research has continued to the present day. This has resulted in a substantial accumulation of data. In the early decades of the 1900s, E.J. Dawson explored numerous sites near Stockton and Lodi, later collaborating with W.E. Schenck (Schenck and Dawson 1929). By 1933, the focus of work was directed to the Cosumnes locality, where survey and excavation studies were conducted by the Sacramento Junior College (Lillard and Purves 1936). Excavation data, in particular from the stratified Windmill site (CA-Sac-107), suggested two temporally distinct cultural traditions. Later work at other mounds by Sacramento Junior College and the University of California, Berkeley, enabled the investigators to identify a third cultural tradition, intermediate between the previously postulated Early and Late Horizons.

The three-horizon sequence, based on discrete changes in ornamental artifacts and mortuary practices, as well as on observed differences in soils within sites (Lillard, Heizer and Fenenga 1939), was later refined by Beardsley (1954). An expanded definition of artifacts diagnostic of each time period was developed, and its application extended to parts of the central California coast. Traits held in common allow the application of this system within certain limits of time and space to other areas of prehistoric central California.

The Windmill Culture (Early Horizon) is characterized by ventrally-extended burials (some dorsal extensions are known), with westerly orientation of heads; a high percentage of burials with grave goods; frequent presence of red ocher in graves; large projectile points, of which 60 percent are of materials other than obsidian; rectangular Haliotis beads; Olivella shell beads (types A1a and L); rare use of bone; some use of baked clay objects; and well-fashioned charmstones, usually perforated.

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

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

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

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

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

Ethnography

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

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

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

3.5 CULTURAL AND TRIBAL RESOURCES

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

Settlements were oriented along the water ways, with their village sites normally placed adjacent to these features for their nearby water and food resources. House structures varied in size and shape (Latta 1949; Kroeber 1925), with most constructed from the readily available tules found in the extensive marshes of the low-lying valley areas. The housepit depressions for the structures ranged in diameter from 3 meters to 18 meters (Wallace 1978:470).

Historical Background

The northern section of the City of Lathrop lies on a portion of the Rancho Campo de los Franceses, the ranch named for the early camp first occupied by French-Canadian trappers employed by the Hudson's Bay Company in 1832. The site of the present-day location of French Camp was the terminus of the Oregon Trail used by the trappers between 1832 and 1845. In 1843, William Gulnac, likely one of the trappers who had become a Mexican citizen, with Charles Weber, later founder of Stockton, organized a company of 12 men for the purpose of forming a colony at French Camp. Gulnac filed for a land grant, and was awarded a large tract of land including French Camp and the later site of Stockton by the Mexican government.

Much of the remainder of the land is a portion of the El Pescadero land grant. The Mexican land grant of 35,546 acres, lying in portions of what is now San Joaquin and Alameda counties, was awarded in 1843 to Antonio Maria Pico. Pico sold one half of the property to Henry Morris Naglee in 1849. Pico sold one half of the remainder of the property in 1852 to John C. Frémont. After California became a state, a claim was filed for the grant in 1852 and rejected in 1854, but ultimately the land grant was patented to Pico and Naglee in 1865. The land grant was settled by numerous squatters, and Fremont sold his land to Charles McLaughlin in 1867.

Lathrop first was a station on the Central Pacific, established in 1869 when the last stretch of the transcontinental railroad was built from Sacramento through this region, crossing the San Joaquin River at Mossdale to reach the Bay Area.

The site of Lathrop was first known as Wilson's Station, and included a store and a schoolhouse on land belonging to Thomas A. Wilson. Due to conflicts in the City of Stockton that infuriated Leland Stanford, the Central Pacific Railroad switched many operations to Wilson's Station, later re-named for Charles Lathrop, brother-in-law of Leland Stanford. The town drew significant commerce away from the City of Stockton. The railroad's machine shops and roundhouse were built here, and the town became an important division point and major stop on the railroad line beginning in 1871. The Visalia Division of the Stockton Branch of the Southern Pacific Railroad was completed at that

time, serving the San Joaquin Valley. Lathrop became an important shipping point for agricultural products.

The early major building in Lathrop was the 1871 Central Pacific Railroad restaurant, serving passengers from trains from the Bay Area to Sacramento, and passengers travelling to the San Joaquin Valley. After he physically struck United States Supreme Court Justice Stephen Field in 1889 in the Central Pacific restaurant, attorney David S. Terry was shot and killed by Field's bodyguard.

Lathrop remained important for the railroads, and in 1890, had about 500 residents. Daily, there were twelve passenger and 44 freight trains passing through. But that changed in the early 1890s with the growth of Tracy, and the transfer of the machine shop and roundhouse to that community. The completion of the Western Pacific railroad in 1909 did not affect the town, with the local station located about $\frac{3}{4}$ miles from the town.

In 1942, the Lathrop Holding and Reconsignment Point was established in the Lathrop vicinity on what had been a sheep ranch, holding supplies for shipment through Bay Area ports. As many as 450 railroad cars would be loaded and unloaded each day.

The facility has gone through many changes with the changing needs of the military during times of conflict. After the end of World War II, the depot went through administrative and supply mission changes, the government applied a new name in 1948: Sharpe General Depot. The conflict in Korea brought a demand for increased services as the staffing, shipments and missions doubled during the three years of the war. The Army curtailed supply operations, and the Sharpe site began providing medical supplies and subsistence items on a larger scale. In 1962, the facility became the Sharpe Army Depot.

In 1965, with the escalation of the war in Vietnam, Sharpe became the major conduit for supplies moving to Southeast Asia. The Sharpe facility has continued to operate with a large part of the staffing switched to the Tracy facility beginning in 1999.

In the 1950s, several industrial plants were built in the Lathrop area, providing additional employment in the region. Beginning in the 1980s, improvements to community infrastructure and the attractive pricing of homes brought even more growth. The pattern of rapid growth continues to this day, with industrial and commercial development in the area, as well as many residents commuting daily to the Bay Area. The City of Lathrop incorporated in 1989.

SITE SPECIFIC HISTORY

As part of the *Cultural Resource Assessment for the Singh Petroleum Project, City of Lathrop, California* (Peak & Associates, Inc., January 2023), site specific conditions were evaluated using the historical U.S. Geological Survey (USGS) topographic maps for Lathrop. According to the Assessment, the Project site was open land in 1915 with no buildings present, and located west of a major roadway (Lathrop USGS topographic map 1915). In 1952, the Project site was still vacant, and the major roadway has been identified as Highway 99 (Lathrop USGS topographic map 1952). The 1952 topographic map was revised in 1968, and the single-family house that currently exists

3.5 CULTURAL AND TRIBAL RESOURCES

had been added to the Project site by that date, and with the roadway was then identified as Highway 50. By 1976, the roadway was officially Interstate 5.

Google Earth aerial imagery of the Project site indicates that the site has remained relatively vacant for the majority of the recent history (1985-present day). Aerial imagery of the Project site suggest that the Project site and vicinity have been historically used for agricultural operations of irrigated crop and orchards (adjacent to the Project site).

METHODOLOGY

Records Search

A record search was conducted for the current area of potential effects (APE) and a 0.25-mile radius at the Central California Information Center (CCIC) of the California Historical Resources Information System (CHRIS) on September 9, 2020 (Record Search File No.: 11495L).

According to the CCIC CHRIS results, the Project site has never been surveyed. There are no cultural resources recorded in or near the Project site or search radius. One survey has been completed within the 0.25-mile survey area radius. The survey was completed in 2002 for the Lathrop Storm Drainage System (# SJ-4824).

Field Assessment

Peak & Associates, Inc. completed a field survey of a portion of the Project site on September 14, 2020. Survey strategy included parallel transects no greater than ten meters apart, with closer spacing in areas of exceptional ground visibility, such as animal trails or rodent excavations. Ground visibility was good to fair due to heavy dried grasses that are disintegrating and thinning in the late summer. Some scraping with a hoe was required to achieve acceptable soil observation. The Project site appears naturally flat, but possibly leveled for farming. Although no farming features were observed on-site, adjacent parcels show evidence of agricultural use in the form of tractors and implements, as well as crops. No observable natural water drainages, ditches or canals were present. The vegetation included native and introduced grasses and brush, a mature mulberry tree, and several unidentified introduced species. Soil throughout the parcel was consistent in type and coloration, composed of sandy loam with some silt, light tan in color with very few pebbles. Peak & Associates, Inc. completed a second survey covering the remainder of the Project site on January 22, 2023, again using full coverage. No prehistoric or historic resources were found in the Project site.

One historic site remnant was found and recorded as ML-20-06 (described below) in a 2021 field survey effort.

ML-20-06: The ML-20-06 site is the site of a former farm headquarters venture. The former headquarters was located adjacent west of Manthey Road, west of Interstate 5, and south of Roth Road. All that remains of the former farm headquarters is a small area of concrete, timber foundations and pavements covering an area of about 72 feet north-south by 70 feet east -west. According to Google Earth aerial imagery, as recently as 2017, there was a standing structure at

this location. In addition to the foundations, construction rubble is present which consists of bricks (including a section of fallen brick wall), planks of various sizes, and various pieces of hardware consistent with a date in the 1950s or 1960s. The foundation consists of poured concrete around the perimeter with pier blocks in the center. An uncompleted room on the west side has wooden forms with rebar, as well as pier-pits ready for concrete.

The former building was constructed after 1952 but before 1968, per publication date of the Lathrop 7.5' USGS maps. The house appears on the revision but not the original map. The building may have burned down as there is evidence of fire near an incomplete room on the west side. However, this could be the result of a fire after the house was abandoned.

Native American Consultation

Peak & Associates contacted the NAHC for a check of the Sacred Lands files. On October 19, 2020, the NAHC provided a reply with positive results from the Sacred Lands files search. All correspondence related to the consultation effort are presented in Appendix 3 of Appendix C.

Pursuant to both Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City of Lathrop sent a letter to the Northern Valley Yokuts tribe, Buena Vista Rancheria, California Valley Miwok tribe, and the Confederated Villages of Lisjan on January 22, 2021 including questions about the identified Sacred site and requesting information and evidence to support the presence of a Sacred site. On February 5, 2021, the City received letter from the Northern Valley Yokuts Tribe requesting consultation per Public Resources Code (PRC) Section 21080.3.2(a). The City confirmed the receipt of the consultation request on February 19, 2021, and set a meeting with Ms. Perez for February 26, 2021. Ms. Perez did not attend the meeting.

Further follow-up contacts with Ms. Perez resulted in a meeting scheduled for April 9, 2021. This meeting with Mark Meissner (Community Development Director, City of Lathrop) Steve McMurtry, De Novo Planning Group) David Niskanen (J.B. Anderson Land Use Planning), and Katherine Perez (Northern Valley Yokuts) was held on April 9, 2021. Ms. Perez was informed that a survey had been conducted and nothing related to the prehistoric people was found at the site. Ms. Perez stated that there was a nearby site considered to be a Sacred Land, but that the tribe had no information on the site in the Project site. She recommended the archeologist contact the NAHC for further information. If the NAHC would not provide specifics regarding Sacred Lands, then the archeologists could do an excavation with their group acting as monitors for the test effort.

On April 9, 2021, the NAHC was contacted by Peak & Associates, and they responded they would not provide any further information on a Sacred Land except to the tribe that registers the site. No further information was forthcoming from with the NAHC or the North Valley Yokuts tribe. Since archeological testing is not a normal action with no indication of a site or with the Project site containing the appropriate setting for a site, the City of Lathrop decided to close out the consultation effort on October 28, 2021.

The NAHC sent their standard letter on December 29, 2022 after their receipt of the NOP for the Project.

3.5.2 REGULATORY SETTING

FEDERAL

National Historic Preservation Act

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

Virtually any physical evidence of past human activity can be considered a cultural resource. Although not all such resources are considered to be significant and eligible for listing, they often provide the only means of reconstructing the human history of a given site or region, particularly where there is no written history of that area or that period. Consequently, their significance is judged largely in terms of their historical or archaeological interpretive values. Along with research values, cultural resources can be significant, in part, for their aesthetic, educational, cultural and religious values. Neither the City of Lathrop nor agency regional or state agencies are required to comply with the National Historic Preservation Act, which governs the actions of federal agencies such as the United States Army Corps of Engineers when it engages in wetland permitting.

National Register of Historic Places

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

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess aspects of integrity of location, design, setting, materials, workmanship, feeling, association, and

- (A) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or*
- (B) that are associated with the lives of persons significant in our past; or*
- (C) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that possess high artistic values or that represent a significant and distinguishable entity whose components may lack individual distinction; or*
- (D) that have yielded, or may be likely to yield, information important in prehistory or history.*

STATE

California Register of Historic Resources

The California Register of Historical Resources (CRHR) was established in 1992 and codified in the Public Resource Code Sections 5020, 5024 and 21085. The law creates several categories of

properties that may be eligible for the CRHR. Certain properties are included in the program automatically, including: properties listed in the NRHP; properties eligible for listing in the NRHP; and certain classes of State Historical Landmarks. Determining the CRHR eligibility of historic and prehistoric properties is guided by Section 15064.5(b) of the California Environmental Quality Act (CEQA) Guidelines and PRC Sections 21083.2 and 21084.1.

Historical resources, under CRHR guidelines, are defined as buildings, sites, structures, or objects that may have historical, architectural, archaeological, cultural, or scientific importance. A cultural resource may be eligible for listing on the CRHR if it:

- a) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- b) is associated with the lives of persons important in our past;
- c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or
- d) has yielded, or may be likely to yield, information important in prehistory or history.

California Environmental Quality Act

CEQA requires that lead agencies determine whether projects may have a significant effect on three categories of distinct but sometimes overlapping cultural resources: "unique archaeological resources," "historical resources," and "tribal cultural resources." The determination as to whether a particular cultural resource falls under one of these three categories requires the application of statutory criteria set forth in PRC Sections 21083.2[g] (unique archaeological resources), 21084.1 (historical resources), and 21074 (tribal cultural resources). Further guidance regarding the first categories is also found in CEQA Guidelines Section 15064.5.

If the agency determines that a project may cause a substantial adverse change in the significance of either an historical resource or a tribal cultural resource, then the project may have a significant environmental effect and an EIR is required for the project. (Pub. Resource Code, Section 21084.1, 210842.) If a cultural resource is found not to be significant under the qualifying criteria for these three statutory categories of cultural resources, then then the cultural resource need not be considered further in the planning process. Notably, the Legislature has directed that "[a]n [EIR], if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued." (PRC, Section 21083.2, subd. (a).)

CEQA emphasizes avoidance of unique archaeological resources and historical resources as the preferred means of reducing potential significant environmental effects resulting from projects. If avoidance is not feasible, an excavation program or some other form of mitigation must be developed to mitigate the impacts. In order to adequately address the level of potential impacts, and thereby design appropriate mitigation measures, the significance and nature of the cultural resources must be determined. The following are steps typically taken to assess and mitigate

3.5 CULTURAL AND TRIBAL RESOURCES

potential impacts to unique archaeological resources and historical resources for the purposes of CEQA:

- Identify cultural resources,
- Evaluate the significance of the cultural resources found,
- Evaluate the effects of the project on cultural resources, and
- Develop and implement measures to mitigate the effects of the project on cultural resources that would be significantly affected.

HISTORICAL RESOURCES

“Historical resource” is a term with a defined statutory meaning (PRC, Section 21084.1; State CEQA Guidelines, Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following (with qualifications explained below):

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (PRC, Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the California Register of Historical Resources (PRC, Section 5024.1), including the following:
 - a) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
 - b) Is associated with the lives of persons important in our past;
 - c) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
 - d) Has yielded, or may be likely to yield, information important in prehistory or history.
- 4) The fact that a resource is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to Section 5020.1(k) of the PRC), or identified in a historical resources survey (meeting the criteria in Section 5024.1(g) of the PRC) does not preclude a lead

agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

UNIQUE ARCHAEOLOGICAL RESOURCES

CEQA also requires lead agencies to consider whether projects will impact unique archaeological resources. PRC Section 21083.2, subdivision (g), states that unique archaeological resource means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

TRIBAL CULTURAL RESOURCES (AB 52)

CEQA also requires lead agencies to consider whether projects will impact tribal cultural resources. AB 52, approved in September 2014, creates a formal role for California Native American tribes by creating a formal consultation process and establishing that a substantial adverse change to a tribal cultural resource has a significant effect on the environment. PRC Section 21074 states the following:

- a) "Tribal cultural resources" are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

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AB 52 requires a lead agency, prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, to begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe, and (2) the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. Pursuant to both Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City of Lathrop sent a letter to the Northern Valley Yokuts tribe on January 22, 2021 including questions about the identified Sacred site and requesting information and evidence to support the presence of a Sacred site. On February 5, 2021, the City received letter from the Northern Valley Yokuts Tribe requesting consultation per Public Resources Code (PRC) Section 21080.3.2(a). The City confirmed the receipt of the consultation request on February 19, 2021, and set a meeting with Ms. Perez for February 26, 2021. Ms. Perez did not attend the meeting.

NATIVE AMERICAN REMAINS

CEQA also provides for the protection of Native American human remains (CCR Section 15064.5[d]). Native American human remains are also protected under the Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001 et seq.), which requires federal agencies and certain recipients of federal funds to document Native American human remains and cultural items within their collections, notify Native American groups of their holdings, and provide an opportunity for repatriation of these materials. This act also requires plans for dealing with potential future collections of Native American human remains and associated funerary objects, sacred objects, and objects of cultural patrimony that might be uncovered as a result of development projects overseen or funded by the federal government.

Assembly Bill 978

In 2001, AB 978 expanded the reach of Native American Graves Protection and Repatriation Act of 1990 and established a state commission with statutory powers to assure that federal and state laws regarding the repatriation of Native American human remains and items of patrimony are fully complied with. In addition, AB 978 also included non-federally recognized tribes for repatriation.

LOCAL

City of Lathrop General Plan

GOAL: RECREATION AND RESOURCES ELEMENT

- RR-3: Preserve and protect prehistoric, historic, archaeological, and paleontological resources, to bolster community identity and protect sensitive resources.

POLICIES: RECREATION AND RESOURCES ELEMENT

- RR-3.1: Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.
- RR-3.2: San Joaquin County Coordination. Coordinate with San Joaquin County to preserve local historic resources, conserve historical assets within the City, and allow for local community events to occur at these special locations.
- RR-3.3: Human Remains. Ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.
- RR-3.4: Tribal Consultation. Consult with Native American tribes that may be impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements.

3.5.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with PRC sections 21084.1, 21084.2, CEQA Guidelines section 15064.5[b], and Appendix G of the CEQA Guidelines, the proposed Project is considered to have a significant impact on cultural resources if it will:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5;
- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to CEQA Guidelines Section 15064.5;
- Disturb any human remains, including those interred outside of formal cemeteries; or
- Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC 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:
 - Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC Section 5020.1(k); or
 - A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1? In applying the criteria set forth in subdivision (c) of PRC Section 5024.1, the lead agency shall consider the significance of the resources to a California Native American tribe.

The CEQA guidelines use the following definitions to analyze impacts on historical or archaeological resources:

- Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate

3.5 CULTURAL AND TRIBAL RESOURCES

surroundings such that the significance of a historical resource would be materially impaired (§ 15064.5(b)(1)).

- The significance of a historical resource would be materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that convey its historic significance or justify its inclusion in, or eligibility for, the NRHP, CRHR, or local registers (§ 15064.5(b)(2)(A–C)).

IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project implementation has the potential to cause a substantial adverse change to a significant historical or archaeological resource, as defined in CEQA Guidelines §15064.5. (Less than Significant with Mitigation)

The Project site encompasses approximately 22.42 acres, encompassing the approximate 19.63 acre Development Area. The Development Area is intended for the development of a travel center and associated circulation and parking improvements over two phases. The Project site is comprised of flat land with ruderal grasses, fallow ground, a few trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf.

As noted earlier, Peak & Associates, Inc. completed a survey of the Project site on January 22, 2023. No prehistoric or historic resources were found in the Project site. A record search was conducted for the current APE and a 0.25-mile radius at the CCIC of the CHRIS on September 9, 2020 (Record Search File No.: 11495L). According to the CCIC CHRIS results, the Project site has never been surveyed. There are no cultural or archaeological resources recorded in or near the Project site or search radius. However, one historic site remnant was found and recorded as ML-20-06 (described below) in a 2021 field survey effort.

EVALUATION OF RESOURCE ML-20-06

Although it appears to be relatively evident for a remnant of a residence built sometime between 1952 and 1968, there are no known significant events in the Lathrop area in the 1950s-1980s related to this residence. Similarly, no association with important individuals can be found. The building was removed in 2017; the remnant that still exists does not embody a particular style, type, or method of construction. No specific important architect can be identified for the property. There are no particular archeological values for a property that undoubtedly participated in normal waste disposal practices, and there would be no value to any items remaining at the site. Therefore, the building remnant has been recorded, and is not eligible for the CRHR, and there are no significant cultural resources with the Project site.

CONCLUSION

While the CCIC records search found nothing documented on-site that could be considered a “historical resource” under Section 15064.5 in the CEQA Guidelines, as with most projects in the region, there is also the potential for discovery of previously unknown historical resources or archaeological resources during ground disturbing activities. Implementation of the following mitigation measure would ensure that this potential impact is *less than significant*.

MITIGATION MEASURE(S)

Mitigation Measure 3.5-1: *If subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin are discovered during construction and/or ground disturbance, all work must halt within a 100-foot radius of the discovery. A Native American Representative from traditionally and culturally affiliated Native American Tribes that requested consultation shall be immediately contacted and invited to assess the significance of the find and make recommendations for further evaluation and treatment, as necessary. If deemed necessary by the City, a qualified cultural resources specialist meeting the Secretary of Interior’s Professional Qualifications Standards for Archaeology, may also assess the significance of the find in joint consultation with Native American Representatives to ensure that Tribal values are considered. Work at the discovery location cannot resume until it is determined by the City, in consultation with culturally affiliated tribes, that the find is not a tribal cultural resource, or that the find is a tribal cultural resource and all necessary investigation and evaluation of the discovery under the requirements of the CEQA, including AB 52, has been satisfied. The qualified cultural resources specialist shall have the authority to modify the no-work radius as appropriate, using professional judgement.*

The following notifications and measures shall apply to potential unique archaeological resources and potential historical resources of an archaeological nature (as opposed to tribal cultural resources), depending on the nature of the find:

- If the professional archaeologist determines that the find does not represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature, work may resume immediately and no agency notifications are required.*
- If the professional archaeologist determines that the find does represent a cultural resource that might qualify as a unique archaeological resource or historical resource of an archaeological nature from any time period or cultural affiliation, he or she shall immediately notify the City and applicable landowner. The professional archaeologist and a representative from the City shall consult to determine whether any unique archaeological resources or historical resources of an archaeological nature are present, in part based on a finding of eligibility for inclusion in the NRHP or CRHR. If it is determined that unique archaeological resources or historical resources of an archaeological nature are present, the qualified archaeologist shall develop mitigation or treatment measures for consideration and approval by the City. Mitigation shall be developed and implemented in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines, with a preference for preservation in place. Consistent with Section*

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15126.4(b)(3), preservation in place may be accomplished through planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement. If approved by the City, such measures shall be implemented and completed prior to commencing further work for which grading or building permits were issued, unless otherwise directed by the City. Avoidance or preservation of unique archaeological resources or historical resources of an archaeological nature shall not be required where such avoidance or preservation in place would preclude the construction of important structures or infrastructure or require exorbitant expenditures, as determined by the City. Where avoidance or preservation are not appropriate for these reasons, the professional archaeologist, in consultation with the City, shall prepare a detailed recommended a treatment plan for consideration and approval by the City, which may include data recovery. If employed, data recovery strategies for unique archaeological resources that do not also qualify as historical resources of an archaeological nature shall follow the applicable requirements and limitations set forth in Public Resources Code Section 21083.2. Data recovery will normally consist of (but would not be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim of recovering important scientific data contained within the unique archaeological resource or historical resource of an archaeological nature. The data recovery plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and State repositories, libraries, and interested professionals. If data recovery is determined by the City to not be appropriate, then an equally effective treatment shall be proposed and implemented. Work may not resume within the no-work radius until the City, in consultation with the professional archaeologist, determines that the site either: 1) does not contain unique archaeological resources or historical resources of an archaeological nature; or 2) that the preservation and/or treatment measures have been completed to the satisfaction of the City.

- *If the find includes human remains, or remains that are potentially human, the contractor shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641). The archaeologist shall notify the County Coroner (per Section 7050.5 of the Health and Safety Code). The provisions of Section 7050.5 of the California Health and Safety Code, Section 5097.98 of the California Public Resources Code, and Assembly Bill 2641 will be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, then the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the landowner does not agree with the recommendations of the MLD, then the NAHC can mediate (Section 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (Section 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate Information*

Center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the county in which the property is located (AB 2641). Work may not resume within the no-work radius until the lead agency, through consultation as appropriate, determines that the treatment measures have been completed to their satisfaction.

Impact 3.5-2: Project implementation has the potential to disturb human remains, including those interred outside of formal cemeteries. (Less than Significant with Mitigation)

Indications suggest that humans have occupied San Joaquin County for over 10,000 years and it is not always possible to predict where human remains may occur outside of formal burials. Therefore, excavation and construction activities, regardless of depth, may yield human remains that may not be interred in marked, formal burials.

Under CEQA, human remains are protected under the definition of archaeological materials as being “any evidence of human activity.” Additionally, PRC Section 5097 has specific stop-work and notification procedures to follow in the event that human remains are inadvertently discovered during Project implementation.

While no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains. The following mitigation measure would reduce this impact to a *less-than-significant* level.

MITIGATION MEASURE(S)

Implement Mitigation Measure 3.5-1

Impact 3.5-3: Project implementation has the potential to cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 (Less than Significant with Mitigation)

The Project site is located in an area known to have historical, archaeological, and tribal cultural resources. As described under the *Native American Consultation* heading in the Existing Setting, the City of Lathrop sent outreach letters including questions about the identified Sacred site and for information and evidence to support the presence of a Sacred site. On February 5, 2021, the City received letter from the Northern Valley Yokuts Tribe requesting Consultation per PRC Section 21080.3.2(a). All consultation correspondence and a contact log are provided in Appendix C.

While no specific resources have been identified through consultation with affiliated tribes, it is possible that unknown tribal cultural resources may be present within the Project site. The proposed Project would be required to follow development requirements, including compliance

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with local policies, ordinances, and applicable permitting procedures related to protection of tribal resources.

As discussed under Impacts 3.5-1 and 3.5-2, development of the proposed Project could impact unknown archaeological resources including Native American Tribal artifacts and human remains. Implementation of Mitigation Measure 3.5-1 would ensure that the potential impact to tribal resources, including human remains, would be *less than significant*.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.5-1***

The purpose of this section is to disclose and analyze the potential impacts associated with the geology of the Project site and regional vicinity, and to analyze issues such as the potential exposure of people and property to geologic hazards, landform alteration, and erosion. This section is based in part on the following:

- *Draft Environmental Impact Report for the Lathrop General Plan Update* (City of Lathrop, 2022);
- *City of Lathrop General Plan* (City of Lathrop, 2022);
- *Natural Resources Conservation Service (NRCS) Web Soil Survey* (NRCS, 2022);
- *Geotechnical Engineering Investigation, Singh Petroleum Investments Percolation* (Construction Testing & Engineering, Inc., 2022)

There was one comment received from the Central Valley Regional Water Quality Control Board (CVRWQB) during the Notice of Preparation (NOP) scoping process related to soils, which is addressed in this chapter of the EIR and included in Appendix A.

As discussed in the Initial Study for the proposed Project (see Appendix A), the proposed Project would connect to the municipal sewer system for wastewater disposal. Septic tanks or septic systems are not proposed as part of the Project. Additionally, there are no significant deposits of mineral resources located in the Project site, as delineated by the Mineral Resources and Mineral Hazards Mapping Program (MRMHMP). The Project Area is not designated as a Mineral Resource Zone (MRZ). As such, these CEQA topics will not be further discussed.

3.6.1 ENVIRONMENTAL SETTING

GEOLOGIC SETTING

Geomorphic Province

The Project site is located in the central portion of the Great Valley Geomorphic Province of California. The Great Valley Province is a broad structural trough bounded by the tilted block of the Sierra Nevada on the east and the complexly folded and faulted Coast Ranges on the west. The San Joaquin River is the principal river in the area and is located just north and west of the City. Alluvial fans formed by this river are the largest geomorphic features in the Clovis area. The formation of the fans has resulted in rather flat regional topography.

Regional Geology

The Project site lies in the San Joaquin Valley in central California. The San Joaquin Valley is a topographically flat, northwest-trending, structural trough (or basin). It is bordered by the Tehachapi Mountains on the south, the Sierra Nevada on the east, the Coast Ranges on the west, and the beginning of the Sacramento Valley to the north.

3.6 GEOLOGY AND SOILS

The San Joaquin Valley is filled with thick sedimentary rock sequences that were deposited as much as 130 million years ago. Large alluvial fans have developed on each side of the Valley. The larger and more gently sloping fans are on the east side of the San Joaquin Valley and overlie metamorphic and igneous basement rocks. These basement rocks are exposed in the Sierra Nevada foothills and consist of meta-sedimentary, volcanic, and granitic rocks.

Local Setting

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

- **Project Site (or Annexation Area)** – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, show the Project's regional location and vicinity. Figure 2.0-3 provides the APN map.

The Project site is comprised of flat land with ruderal grasses, a few trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet and the impervious area is approximately 2,500 square feet. Fencing surrounds the Project site.

The Project Area is located within the northern boundary of the City of Lathrop Sphere of Influence (SOI), within the unincorporated area of Jan Joaquin County. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and rural residential properties to the north.

Soils

A Custom Soil Survey was completed for the Project site using the NRCS Web Soil Survey program. Table 3.6-1 identifies the type and range of soils found in the Project site. As shown in Table 3.6-1,

the soils within the Project site consist entirely of fine sandy loams. Below is a brief description of prominent soils within the Project site.

TABLE 3.6-1: PROJECT SITE SOILS

<i>UNIT SYMBOL</i>	<i>NAME</i>	<i>ACRES IN PROJECT SITE</i>	<i>PERCENT OF AREA OF INTEREST</i>
196	Manteca fine sandy loam, 0 to 2 percent slopes	6.8	32.7%
266	Veritas fine sandy loam, 0 to 2 percent slopes	14.9	67.3%

SOURCE: NRCS CUSTOM SOIL SURVEY 2023.

Manteca fine sandy loam. This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential and the existence of cemented pan.

Veritas fine sandy loam. This moderately well drained, nearly level soil formed in alluvium. Permeability is moderate in this soil. Runoff is slow, and the hazard of water erosion is slight. The shrink-swell potential of this soil is low. The risk of corrosion is high for uncoated steel, and low for concrete. Soil limitations on building site development are considered moderate to severe, due to flooding potential and the existence of cemented pan.

SOIL HAZARDS

Erosion

Erosion naturally occurs on the surface of the earth as surface materials (i.e. rock, soil, debris, etc.) is loosened, dissolved, or worn away, and transported from one place to another by gravity. Two common types of soil erosion include wind erosion and water erosion. The steepness of a slope is an important factor that affects soil erosion. Erosion potential in soils is influenced primarily by loose soil texture and steep slopes. Loose soils can be eroded by water or wind forces, whereas soils with high clay content are generally susceptible only to water erosion. The potential for erosion generally increases as a result of human activity, primarily through the development of facilities and impervious surfaces and the removal of vegetative cover.

The Geotechnical Engineering Investigation identified the erosion potential for the soils in the Project Area. This report summarizes those soil attributes used by the Revised Universal Soil Loss Equation Version 2 (RUSLE2) for the map units in the selected area. Soil property data for each map unit component includes the hydrologic soil group, erosion factors Kf for the surface horizon, erosion factor T, and the representative percentage of sand, silt, and clay in the surface horizon.

Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the

soil is to sheet and rill erosion by water. Within the Project site, the erosion factor Kf varies from 0.24 to 0.28, which is considered a low to moderate potential for erosion.

Expansive Soils

The NRCS delineates soil units and compiles soils data as part of the National Cooperative Soil Survey. The following description of linear extensibility (also known as shrink-swell potential or expansive potential) is provided by the NRCS Physical Properties Descriptions:

“Linear extensibility” refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at 1/3- or 1/10-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. The amount and type of clay minerals in the soil influence volume change.

The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Expansive soils can undergo significant volume change with changes in moisture content. They shrink and harden when dried and expand and soften when wet. If structures are underlain by expansive soils, it is important that foundation systems be capable of tolerating or resisting any potentially damaging soil movements. In addition, it is important to limit moisture changes in the surficial soils by using positive drainage away from buildings as well as limiting landscaping watering.

According to the NRCS Web Soil Survey, the soils in the Project site have a linear extensibility of 1.5 percent and, therefore, have a low shrink- swell potential.

Liquefaction

Liquefaction occurs when saturated fine-grained sands and/or silts lose their physical strength temporarily during earthquake induced shaking and behave as a liquid. This is due to loss of point-to-point grain contact and transfer of normal stress to the pore water. Liquefaction potential varies with water level, soil type, material gradation, relative density, and probable intensity and duration of ground shaking.

The California Geological Survey (CGS) has designated certain areas within California as potential liquefaction hazard zones. These mapped areas are considered at risk of liquefaction-related ground failure during a seismic event based upon mapped surficial deposits. The project site is not currently mapped for potential liquefaction hazard by the CGS. Based on readily available published geologic information, according to the Geotechnical Engineering Investigation prepared for the Project site, there is no historical record of liquefaction occurring at the site.

Landslides

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslides include rockfalls, deep slope failure, and shallow slope failure. Factors such as the geological conditions, drainage, slope, vegetation, and others directly affect the potential for landslides. One of the most common causes of landslides is construction activity that is associated with road building (i.e. cut and fill). The Project site is essentially flat; therefore, the potential for landslides is generally low.

Collapsible Soils

Collapsible soils undergo a rearrangement of their grains and a loss of cementation, resulting in substantial and rapid settlement under relatively low loads. Collapsible soils occur predominantly at the base of mountain ranges, where Holocene-age alluvial fan and wash sediments have been deposited during rapid run-off events. Soils prone to collapse are commonly associated with manmade fill, wind-laid sands and silts, and alluvial fan and mudflow sediments deposited during flash floods. During an earthquake, even slight settlement of fill materials can lead to a differentially settled structure and significant repair costs. Differential settlement of structures typically occurs when heavily irrigated landscape areas are near a building foundation. Examples of common problems associated with collapsible soils include tilting floors, cracking or separation in structures, sagging floors, and nonfunctional windows and doors.

Collapsible soils have not been identified in the Lathrop General Plan as an issue in the Lathrop area. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

Naturally Occurring Asbestos

The term “asbestos” is used to describe a variety of fibrous minerals that, when airborne, can result in serious human health effects. Naturally occurring asbestos is commonly associated with ultramafic rocks and serpentinite. Ultramafic rocks, such as dunite, peridotite, and pyroxenite are igneous rocks comprised largely of iron-magnesium minerals. As they are intrusive in nature, these rocks often undergo metamorphosis, prior to their being exposed on the Earth’s surface. The metamorphic rock serpentinite is a common product of the alteration process. Naturally occurring asbestos is not identified within San Joaquin County, although it is all located to the east and west of the City of Lathrop in mountainous areas in Contra Costa and Calaveras Counties. There is no naturally occurring asbestos mapped within Lathrop.

Subsidence

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Common causes of land subsidence from human activity include: pumping water, oil, and gas from underground reservoirs; dissolution of limestone aquifers (sinkholes); collapse of underground mines; drainage of organic soils; and initial wetting of dry soils.

Subsidence has not been identified in the Lathrop General Plan or General Plan EIR as an issue in the Lathrop area.

SEISMIC HAZARDS

Seismic Ground Shaking

The potential for seismic ground shaking in California is expected. As a result of the foreseeable seismicity in California, the State requires special design considerations for all structural improvements in accordance with the seismic design provisions in the California Building Code. These seismic design provisions require enhanced structural integrity based on several risk parameters. Seismic ground shaking in the Project site is expected during the life of the proposed Project. All structures will be built in accordance with the California Building Code's seismic design standards.

Liquefaction

Liquefaction, which is primarily associated with loose, saturated materials, is most common in areas of sand and silt or on reclaimed lands. Cohesion between the loose materials that comprise the soil may be jeopardized during seismic events and the ground will take on liquid properties. Thus, specific soil characteristics and seismic shaking must exist for liquefaction to be possible. Liquefaction susceptibility based on soil types, deposit, and age is presented below.

Liquefaction typically requires a significant sudden decrease of shearing resistance in cohesion-less soils and a sudden increase in water pressure, which is typically associated with an earthquake of high magnitude. The potential for liquefaction is highest when groundwater levels are high, and loose, fine, sandy soils occur at depths of less than 50 feet. Based on the explorations detailed in the Geotechnical Engineering Investigation prepared for the Project site, the near surface soil deposits at the site consist of approximately 7.5 ft of medium dense silty sand followed by interbedded layers of very stiff to hard low plastic silts and clays (ML and CL) to the maximum explored depth of 31.5. Groundwater was encountered at a depth of 30.5 ft BGS. Based on the site location, the relatively low intensity of ground shaking expected, the relatively deep ground water and the consistency of the subsurface materials, the possibility of large differential settlements due to seismic dry sand settlement or liquefaction is considered low.

Therefore, because of the relatively low intensity of ground shaking expected, the relatively deep ground water and the consistency of the subsurface materials, the possibility of large differential settlements due to seismic dry sand settlement or liquefaction is considered low.

Lateral Spreading

Lateral spreading typically results when ground shaking moves soil toward an area where the soil integrity is weak or unsupported, and it typically occurs on the surface of a slope, although it does not occur strictly on steep slopes. Oftentimes, lateral spreading is directly associated with areas of liquefaction. Since the potential for liquefaction is low, the potential for lateral spreading is low; additionally, because the Project site is essentially flat, lateral spreading of soils has not been observed.

Landslides

The California Geological Survey classifies landslides with a two-part designation based on Varnes (1978) and Cruden and Varnes (1996). The designation captures both the type of material that failed and the type of movement that the failed material exhibited. Material types are broadly categorized as either rock or soil, or a combination of the two for complex movements. Landslide movements are categorized as falls, topples, spreads, slides, or flows.

Landslide potential is influenced by physical factors, such as slope, soil, vegetation, and precipitation. Landslides require a slope, and can occur naturally from seismic activity, excessive saturation, and wildfires, or from human-made conditions such as construction disturbance, vegetation removal, wildfires, etc.

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent.

FAULTS

A fault is a fracture in the crust of the earth along which rocks on one side have moved relative to those on the other side. A fault trace is the line on the earth's surface defining the fault. Displacement of the earth's crust along faults releases energy in the form of earthquakes and in some cases in fault creep. Most faults are the result of repeated displacements over a long period of time.

Surface rupture occurs when movement on a fault deep within the earth breaks through to the surface. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. Rupture may occur suddenly during an earthquake or slowly in the form of fault creep. Sudden displacements are more damaging to structures because they are accompanied by shaking.

Faults are classified as Historic, Holocene, Late Quaternary, Quaternary, and Pre-Quaternary according to the age of most recent movement. These classifications are described as follows:

3.6 GEOLOGY AND SOILS

- **Historic:** faults on which surface displacement has occurred within the past 200 years;
- **Holocene:** shows evidence of fault displacement within the past 11,000 years, but without historic record;
- **Late Quaternary:** shows evidence of fault displacement within the past 700,000 years, but may be younger due to a lack of overlying deposits that enable more accurate age estimates;
- **Quaternary:** shows evidence of displacement sometime during the past 1.6 million years;
- **Pre-Quaternary:** without recognized displacement during the past 1.6 million years.

Faults are further distinguished as active, potentially active, or inactive:

- **Active:** An active fault is a Historic or Holocene fault that has had surface displacement within the last 11,000 years;
- **Potentially Active:** A potentially active fault is a pre-Holocene Quaternary fault that has evidence of surface displacement between about 1.6 million and 11,000 years ago; and
- **Inactive:** An inactive fault is a pre-Quaternary fault that does not have evidence of surface displacement within the past 1.6 million years. The probability of fault rupture is considered low; however, this classification does not mean that inactive faults cannot, or will not, rupture.

The U.S. Geological Survey identifies potential seismic sources within the vicinity of the Project site. Two of the closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 23.86 miles to the west, and the Foothills Fault System, located approximately 33 miles to the east. The Vernalis Fault, located approximately 13 miles to the west has had movement as recently as the Quaternary Period (Pliocene Epoch 2.588 million years ago to 11.7 thousand years ago) , thus, is considered a potentially active fault. Other faults that could potentially affect the Project site include the Mount Diablo Thrust, Calaveras, Hayward, Ortigalita and San Andreas Faults.

Fault Rupture

A fault rupture occurs when the surface of the earth breaks as a result of an earthquake, although this does not happen with all earthquakes. Surface ruptures have been known to extend up to 50 miles with displacements of an inch to 20 feet. Fault rupture almost always follows preexisting faults, which are zones of weakness. These ruptures generally occur in a weak area of an existing fault. Ruptures can be sudden (i.e., earthquake) or slow (i.e., fault creep). Sudden displacements are more damaging to structures because they are accompanied by shaking. The Alquist-Priolo Fault Zoning Act requires active earthquake fault zones to be mapped and it provides special development considerations within these zones. According to the California Division of Mines and Geology, a fault is active if it displays evidence of activity in the last 11,000 years (Hart and Bryant, revised 2007). Therefore, the potential for surface rupture from displacement or fault movement directly beneath the proposed Project is considered low. The Project site does not have surface expression of active faults and fault rupture is not anticipated.

SEISMIC HAZARD ZONES

Alquist-Priolo Fault Zones

An active earthquake fault, per California's Alquist-Priolo Act, is one that has ruptured within the Holocene Epoch ($\approx 11,000$ years). Based on this criterion, the California Geological Survey identifies Earthquake Fault Zones. These Earthquake Fault Zones are identified in Special Publication 42 (SP42), which is updated as new fault data become available. The SP42 lists all counties and cities within California that are affected by designated Earthquake Fault Zones. The Fault Zones are delineated on maps within SP42 (Earthquake Fault Zone Maps).

The California legislature passed the Alquist-Priolo Special Studies Zone Act in 1972 to address seismic hazards associated with faults and to establish criteria for developments for areas with identified seismic hazard zones. The California Geologic Survey (CGS) evaluates faults with available geologic and seismologic data and determines if a fault should be zoned as active, potentially active, or inactive. If CGS determines a fault to be active, then it is typically incorporated into a Special Studies Zone in accordance with the Alquist-Priolo Earthquake Hazard Act. Alquist-Priolo Special Study Zones are usually one-quarter mile or less in width and require site-specific evaluation of fault location and require a structure setback if the fault is found traversing a project site. Based on the Geotechnical Engineering Investigation prepared for the Project site it appears that geologic hazards at the site are primarily limited to those caused by violent shaking from earthquake generated ground motion waves. The Project site is not in an Alquist-Priolo special studies zone.

PALEONTOLOGICAL RESOURCES

The often-unseen records of past life buried in the sediments and rocks below the ground surface are among natural resources deserving conservation and preservation. These records are often under the pavement, buildings, soils, and vegetation that are covered by developed areas, but are also found in undeveloped areas that are either in their natural condition or under agricultural use. These records – fossils and their geologic context – can exist in large quantities below the surface in many areas in Stanislaus County, and span millions of years in age of origin. Fossils constitute a nonrenewable resource, meaning once they are lost or destroyed, the exact information they contained can never be reproduced.

Paleontology is the science that attempts to unravel the meaning of these fossils in terms of the organisms they represent, the ages and geographic distribution of those organisms, how they interacted in ancient ecosystems and responded to past climatic changes, and the changes through time of all of these aspects.

The sensitivity of a given area or body of sediment with respect to paleontological resources is a function of both the potential for the existence of fossils and the predicted significance of any fossils which may be found there. The primary consideration in the determination of paleontological sensitivity of a given area, body of sediment, or rock formation is its potential to include fossils.

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Information that can contribute to assessment of this potential includes: 1) direct observation of fossils within the project area; 2) the existence of known fossil localities or documented absence of fossils in the same geologic unit (e.g., “Formation” or one of its subunits); 3) descriptive nature of sedimentary deposits (such as size of included particles or clasts, color, and bedding type) in the area of interest compared with those of similar deposits known elsewhere to favor or disfavor inclusion of fossils; and 4) interpretation of sediment details and known geologic history of the sedimentary body of interest in terms of the ancient environments in which they were deposited, followed by assessment of the favorability of those environments for the preservation of fossils.

The most general paleontological information can be obtained from geologic maps, but geologic cross sections (slices of geologic layers to view the third dimension) must be reviewed for an area in question (i.e. if such resources are discovered). These usually accompany geologic maps or technical reports. Once it can be determined which formations may be present in the subsurface, the question of paleontological resources must be addressed. Even though a formation is known to contain fossils, they are not usually distributed uniformly throughout the many square miles the formation may cover. If the fossils were part of a marine environment when they died, perhaps a scattered layer of shells will be preserved over large areas. If on the other hand, a whale died in this bay, you might expect to find fossil whalebone only in one small area of less than a few hundred square feet.

Other resources to be considered in the determination of paleontological potential are regional geologic reports, site records on file with paleontological repositories and site-specific field surveys.

Paleontologists consider all vertebrate fossils to be of significance. Fossils of other types are considered significant if they represent a new record, new species, an oldest occurring species, the most complete specimen of its kind, a rare species worldwide, or a species helpful in the dating of formations. However, even a previously designated low potential site may yield significant fossils.

Regional Paleontological Setting

SAN JOAQUIN VALLEY

The following summary of the geological evolution of San Joaquin County and the potential for paleontological resources is based on the San Joaquin County General Plan Draft EIR. During the Mesozoic Era (208–65 million years ago), the Sierra Nevada formed, but the region that would become the San Joaquin Valley lay several thousand feet below the surface of the Pacific Ocean. During the Late Cretaceous Period (75–65 million years ago [mya]), flowering plants, early dinosaurs, and the first birds and mammals appeared. The basic form of the Great Central Valley took shape during the Cenozoic period, first as islands, then as mountains. During the late Cenozoic Era (65–2 mya), the Sierra Nevada eroded to mere hills compared to their earlier appearance, the Coast Ranges rose, and the San Joaquin Valley began to form.

During the Paleocene Epoch (65–53 mya), dinosaurs became extinct and mammals gradually evolved as the dominant group of animal life. During the Eocene Epoch (53–39 mya), the western edges of the San Joaquin Valley rose above sea level. Sedimentation and tectonic uplift of geological

formations continued until two million years ago. In the subsequent Oligocene Epoch (39–23 mya), sedimentation continued, and during the Miocene Epoch (23–5 mya) the Diablo Range was uplifted. The Pliocene Epoch (5–2 mya) was a time of tremendous uplift, and great quantities of sediment eroded from the nearby mountain ranges accumulated in the valley, eventually forming a deposit thousands of feet thick. In the Pleistocene Epoch (2 million to 10,000 years ago), the Sierra Nevada range was increasingly elevated and glaciated, resulting in the formation of spectacular features such as Yosemite Valley. During the Holocene Epoch (10,000 years ago to the present), the San Joaquin Valley was above sea level and achieved its present appearance, 466 miles long and 19 to 50 miles wide, enclosed by the Siskiyou, Sierra Nevada, Tehachapi, and Coast Ranges on the north, east, south, and west, respectively. The valley contained fresh water lakes and rivers attractive to herds of prehistoric grazing animals, including Columbian Mammoth, camel, bison, and native horse. The fossil remains of these creatures have been found in San Joaquin County and adjacent areas. The vast majority of paleontological specimens from San Joaquin County have been found in rock formations in the foothills of the Diablo Mountain Range. However, remains of extinct animals such as mammoth, could be found virtually anywhere in the county, especially along watercourses such as the San Joaquin River and its tributaries.

CITY OF LATHROP PLANNING AREA

The Geologic Map of California, prepared by the California Department of Conservation California Geological Survey, identifies the generalized rock types in the Planning Area is Quaternary Alluvium “Q” which is younger alluvium that consists of marine and nonmarine (continental) sedimentary rocks from the Pleistocene through Holocene Epochs that are composed of alluvium, lake, playa, and terrace deposits, both unconsolidated and semi-consolidated. This type is mostly nonmarine deposits but does include marine deposits near the coast.

According to a records search of the University of California Museum of Paleontology (UCMP) Collections Date, eighty fossils have been found and recorded within San Joaquin County. Over half of them are dated to the tertiary period, with quaternary being the second most frequent period. These are the first and second periods of the Cenozoic Era respectively, during which modern flora, apes, large mammals, and eventually humans developed. The majority of fossils found within the Lathrop area have been vertebrate in nature. These fossils include mammoth/mastodon, horse, pocket gopher, and other unspecified rodents, and unidentified artiodactyl (hoofed mammal) bone.

3.6.2 REGULATORY SETTING

FEDERAL

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act of 1977 (42 USC, 7701 et seq.) requires the establishment and maintenance of an earthquake hazards reduction program by the Federal government.

Executive Order 12699

Signed in January 1990, this executive order of the President implements provisions of the Earthquake Hazards Reduction Act for “federal, federally assisted or federally regulated new building construction” and requires the development and implementation of seismic safety programs by Federal agencies.

International Building Code (IBC)

The purpose of the International Building Code (IBC) is to provide minimum standards to preserve the public peace, health, and safety by regulating the design, construction, quality of materials, certain equipment, location, grading, use, occupancy, and maintenance of all buildings and structures. IBC standards address foundation design, shear wall strength, and other structurally related conditions.

STATE

California Building Standards Code

Title 24 of the California Code of Regulations, known as the California Building Standards Code (CBSC) or simply "Title 24," contains the regulations that govern the construction of buildings in California. The CBSC includes 12 parts: California Building Standards Administrative Code, California Building Code, California Residential Building Code, California Electrical Code, California Mechanical Code, California Plumbing Code, California Energy Code, California Historical Building Code, California Fire Code, California Existing Building Code, California Green Building Standards Code (CAL Green Code), and the California Reference Standards Code. Through the CBSC, the State provides a minimum standard for building design and construction. The CBSC contains specific requirements for seismic safety, excavation, foundations, retaining walls, and site demolition. It also regulates grading activities, including drainage and erosion control.

California Health and Safety Code

Section 19100 et seq. of the California Health and Safety Code establishes the State’s regulations for earthquake protection. This section of the code requires structural designs to be capable of resisting likely stresses produced by phenomena such as strong winds and earthquakes.

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 sets forth the policies and criteria of the State Mining and Geology Board, which governs the exercise of governments’ responsibilities to prohibit the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones, as delineated on maps officially issued by the State Geologist. Working definitions include:

- Fault – a fracture or zone of closely associated fractures along which rocks on one side have been displaced with respect to those on the other side;
- Fault Zone – a zone of related faults, which commonly are braided and sub parallel, but may be branching and divergent. A fault zone has a significant width (with respect to the scale at which the fault is being considered, portrayed, or investigated), ranging from a few feet to several miles;
- Sufficiently Active Fault – a fault that has evidence of Holocene surface displacement along one or more of its segments or branches (last 11,000 years); and
- Well-Defined Fault – a fault whose trace is clearly detectable by a trained geologist as a physical feature at or just below the ground surface. The geologist should be able to locate the fault in the field with sufficient precision and confidence to indicate that the required site-specific investigations would meet with some success.

“Sufficiently Active” and “Well Defined” are the two criteria used by the State to determine if a fault should be zoned under the Alquist-Priolo Act.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act, passed in 1990, addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically-induced landslides. Under the Act, seismic hazard zones are to be mapped by the State Geologist to assist local governments in land use planning. The program and actions mandated by the Seismic Hazards Mapping Act closely resemble those of the Alquist-Priolo Earthquake Fault Zoning Act (which addresses only surface fault-rupture hazards) and are outlined below:

The State Geologist is required to delineate the various “seismic hazard zones.”

- Cities and counties, or other local permitting authority, must regulate certain development “projects” within the zones. They must withhold the development permits for a site within a zone until the geologic and soil conditions of the site are investigated and appropriate mitigation measures, if any, are incorporated into development plans.
- The State Mining and Geology Board provides additional regulations, policies, and criteria to guide cities and counties in their implementation of the law. The Board also provides guidelines for preparation of the Seismic Hazard Zone Maps and for evaluating and mitigating seismic hazards.

Sellers (and their agents) of real property within a mapped hazard zone must disclose that the property lies within such a zone at the time of sale.

National Pollution Discharge Elimination System (NPDES) Construction General Permit

The California State Water Resource Control Board (SWRCB) Order No. 2009-0009-DWQ known as the “Construction General Permit” was adopted on September 2, 2009 and was amended by Order No 2012-0006-DWQ which became effective on July 17, 2012. This NPDES permit establishes a risk-

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based approach to stormwater control requirements for construction projects by identifying three project risk levels. The main objectives of the General Permit are to:

- Reduce erosion
- Minimize or eliminate sediment in stormwater discharges
- Prevent materials used at a construction site from contacting stormwater
- Implement a sampling and analysis program
- Eliminate unauthorized non-stormwater discharges from construction sites
- Implement appropriate measures to reduce potential impacts on waterways both during and after construction of projects
- Establish maintenance commitments on post-construction pollution control measures

California mandates requirements for all construction activities disturbing more than one acre of land to develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP documents the selection and implementation of Best Management Practices (BMPs) for a specific construction project, charging owners with stormwater quality management responsibilities. A construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit.

Division of Mines and Geology

The California Division of Mines and Geology (DMG) operates within the Department of Conservation. The DMG is responsible for assisting in the utilization of mineral deposits and the identification of geological hazards.

Surface Mining and Reclamation Act of 1975

The California Department of Conservation Surface Mining and Reclamation Act of 1975 (Section 2710), also known as SMARA, provides a comprehensive surface mining and reclamation policy that permits the continued mining of minerals, as well as the protection and subsequent beneficial use of the mined and reclaimed land. The purpose of SMARA is to ensure that adverse environmental effects are prevented or minimized and that mined lands are reclaimed to a usable condition and are readily adaptable for alternative land uses. The production and conservation of minerals are encouraged, while also giving consideration to values relating to recreation, wildlife, range and forage, as well as aesthetic enjoyment. Residual hazards to public health and safety are eliminated. These goals are achieved through land use planning by allowing a jurisdiction to balance the economic benefits of resource reclamation with the need to provide other land uses.

If a use is proposed that might threaten the potential recovery of minerals from an area that has been classified MRZ-2, SMARA would require the jurisdiction to prepare a statement specifying its reasons for permitting the proposed use, provide public notice of these reasons, and forward a copy of the statement to the State Geologist and the State Mining and Geology Board (Cal. Pub. Res. Code Section 2762). Lands classified MRZ-2 are areas that contain identified mineral resources.

State Geological Survey

Similar to the DMG, the California Geological Survey is responsible for assisting in the identification and proper utilization of mineral deposits, as well as the identification of fault locations and other geological hazards.

State Laws Pertaining to Paleontological Resources

Section 5097.5 of the California Public Resources Code prohibits “knowing and willful” excavation, removal, destruction, injury, and defacement of any “vertebrate paleontological site, including fossilized footprints,” on public lands, except where the agency with jurisdiction has granted express permission. “As used in this section, ‘public lands’ means lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof.” Section 30244 of the California Public Resources Code requires reasonable mitigation for impacts on paleontological resources that occur as a result of development on public lands.

Section 4307–4309 of the California Code of Regulations relating to the Department of Parks and Recreation affords protection to geologic features, “paleontological features”, and objects of archaeological, or historical interest or value, and grants the Department of Parks and Recreation the power to grant a permit to “remove, treat, disturb, or destroy plants or animals or geological, historical, archaeological or paleontological materials.” (California Code of Regulations, Title 14, Section 4307–4309).

LOCAL

City of Lathrop General Plan

General Plan policies applicable to the Project are identified below:

POLICIES: SAFETY ELEMENT

- PS-1.1. Geologic Hazard Identification. Review and monitor geologic and seismic hazards maps in concert with updates from the California Geologic Survey and local surveys.
- PS-1.2. Earthquake Protection. Enforce State seismic design standards and guidelines and all relevant building codes to reduce the risk of damage associated with seismic activity.
- PS-1.3. Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.
- PS-1.4. Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.

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- PS-1.6. Compliance. Require all structures located within areas containing expansive soils to be designed and engineered to comply with the California Code of Regulations (CCR), Title 24.

City of Lathrop Municipal Code

Chapter 15.04 of the Lathrop Municipal Code adopts the 2019 CBCS, with amendments to address administrative provisions, additional requirements to address connection of existing slabs to new construction, as the building code of the City. Additionally, Chapter 15.54 of the Lathrop Municipal Code describes when a geotechnical report would be required.

3.6.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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

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

IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: The proposed Project may expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides (Less than Significant)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with rupture of a known earthquake fault, strong seismic ground shaking, and seismic-related ground failure, including liquefaction, or landslides. Each are discussed below.

GROUND RUPTURE

The California Geologic Survey (CGS) evaluates faults and determines if a fault should be zoned as active, potentially active, or inactive. All active faults are incorporated into a Special Studies Zone, also referred to as an Alquist-Priolo Special Study Zone. The Project site is not within an Alquist-Priolo Special Study Zone.

Two of the closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 23 miles to the west, and the Foothills Fault System, located approximately 33 miles to the east. Therefore, because no faults are located on the Project sites, the potential for ground rupture (cracking or breaking of the ground during an earthquake) would be *less than significant*.

GROUND SHAKING

While there are no known active faults located within the City of Lathrop, the area could experience considerable ground shaking generated by faults outside Lathrop. For example, Lathrop could experience an intensity of MM V to VII generated by seismic events. The effect of this intensity level could have structural damage. Soil data from the NRCS Web Soil Survey (NRCS 2020) suggests that the potential for liquefaction ranges from low to high within the Planning Area given that many soils are high in sand and the water table is moderately high.

To reduce the impact of seismic ground shaking on the development, the Project would be required to comply with the provisions of the CBSC, which requires development projects to: perform geotechnical investigations in accordance with State law, engineer improvements to address potential seismic and ground failure issues and use earthquake-resistant construction techniques to address potential earthquake loads when constructing buildings and improvements. As future development and infrastructure projects are considered by the City, each project will be evaluated for conformance with the CBSC, General Plan, Zoning Ordinance, and other regulations. Subsequent development and infrastructure would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. In addition to the requirements associated with the CBSC and the Municipal Code, the General Plan includes policies and actions to address potential impacts

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associated with seismic activity. Design in accordance with these standards and policies would reduce any potential impact as a result of ground shaking to a *less than significant* level.

LIQUEFICATION

Soil liquefaction results from loss of strength during cyclic loading, such as imposed by earthquakes. Soils most susceptible to liquefaction are clean, loose, saturated, uniformly graded, fine-grained sands. Based on the Geotechnical Engineering Investigation prepared for the project site, the relatively low intensity of ground shaking expected, the relatively deep ground water and the consistency of the subsurface materials, the possibility of large differential settlements due to seismic dry sand settlement or liquefaction is considered low. Therefore, the potential for catastrophic building collapse due to a seismic liquefaction event is *less than significant*.

LANDSLIDES

The Project site is essentially flat; therefore, the potential for a landslide in the Project site is low to non-existent. Some limited potential for slope instability risk could arise during grading and construction activities, where slopes could be over-steepened. However, this risk is mitigated by adhering to relevant California Building Code requirements. Additionally, according to the California Earthquake Hazards Zone Application, the site is not located within a Landslide and Liquefaction Zone. As a result, the probability of landslides causing substantial adverse effects on people or structures is *less than significant*.

CONCLUSION

The Project site is subject to potential ground shaking caused by seismic activity. Seismic activity could come from a known active fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. As discussed under Section 3.6.2, Regulatory Setting, the California Building Code, Title 24, Part 2, Chapter 16 addresses structural design and Chapter 18 addresses soils and foundations. Collectively, these requirements, which have been adopted by the City of Lathrop (Chapter 15.04), include design standards and requirements that are intended to minimize impacts to structures in seismically active areas of California. Section 1613 of the California Building Code specifically provides structural design standards for earthquake loads. Therefore, with the implementation of the applicable State and City codes, potential impacts associated with a seismic event, including rupture of an earthquake fault, seismic ground shaking, liquefaction, and landslides would be *less than significant*.

Impact 3.6-2: Implementation and construction of the proposed Project may result in substantial soil erosion or the loss of topsoil. (Less than Significant)

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not

meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion and the loss of topsoil is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, stormwater runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of stormwater discharges which adversely affect the quality of our nation's waters. The program uses the NPDES permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed Project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

“...Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing stormwater contamination, and sediment control techniques should be used to capture any soil that becomes eroded...”

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

“Sediment control BMPs should be the secondary means of preventing stormwater contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed...Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a project site. Examples include: installing berms and other temporary run-on and runoff diversions...All measures

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must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended...”

To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California must prepare a Stormwater Pollution Prevention Plan (SWPPP) containing Best Management Practices (BMPs) to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is reviewed by the Regional Water Quality Control Board as part of the permitting process. The SWPPP, once approved, is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the lead agency.

The Geotechnical Engineering Investigation identified the erosion potential for the majority of soils in the Project site as low. Furthermore, because the Project site is essentially flat, the erosion potential is considered slight. Regardless of the potential for erosion, there is always the potential for human caused erosion associated with construction activities or through the operational phase of a project. Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities temporarily expose soils and increase the potential for soil erosion and sedimentation during rail events. Construction activities can also result in soil compaction and wind erosion effects that can adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

In accordance with the NPDES Stormwater Program, the Project requires an approved SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are existing regulatory requirements. Overall, the proposed project would have a ***less than significant*** impact relative to this topic.

Impact 3.6-3: The proposed Project has the potential to be located on a geologic unit or soil that is unstable, or that would become unstable as a result of Project implementation, and potentially result in landslide, lateral spreading, subsidence, liquefaction or collapse. (Less than Significant with Mitigation)

Development of the proposed Project could result in the exposure of people and structures to conditions that have the potential for adverse effects associated with ground instability or failure. Soils and geologic conditions in the Project site have the potential for landslides, lateral spreading, subsidence, liquefaction, or collapse. Each are discussed below:

LIQUEFACTION

As discussed in Impact 3.6-1, soil data from the NRCS Web Soil Survey suggests a low potential for liquefaction in the Project site. Additionally, the Geotechnical Engineering Investigation confirmed that liquefaction is not considered a significant threat.

LATERAL SPREADING

Lateral spreading generally is a phenomenon where blocks of intact, non-liquefied soil move down slope on a liquefied substrate of large areal extent. The potential for liquefaction at the Project site is low; therefore, the potential for lateral spreading of soils is also low.

LANDSLIDES

As discussed in Impact 3.6-1, the Project site is essentially flat and, to date, the Seismic Hazards Zonation Program of the CGS has not identified any seismically-induced landslide zones in the City of Lathrop or in the Project site. Therefore, the potential for a landslide in the Project site is low to non-existent.

COLLAPSIBLE SOILS

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. Collapsible soils have not been identified in the Lathrop General Plan as an issue in the Lathrop area. However, in areas subject to potential liquefaction, the potential for liquefaction induced settlement is present.

SUBSIDENCE

Land subsidence is the gradual settling or sinking of an area with little or no horizontal motion due to changes taking place underground. It is a natural process, although it can also occur (and is greatly accelerated) as a result of human activities. Subsidence has not been identified in the Lathrop General Plan as an issue in the Lathrop area.

CONCLUSION

The Project site does not have a significant risk of becoming unstable as a result of landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. Nevertheless, while the Geotechnical Engineering Investigation concludes that construction of the Project is feasible from a geotechnical standpoint provided the site preparation, grading and building recommendations in the Investigation are incorporated. Therefore, with implementation of the following mitigation measures, as recommended by the Geotechnical Engineering Investigation, in addition to compliance with applicable laws, standards, and guidelines, (including the CBSC and

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City's Municipal Code), the proposed Project would have a **less than significant** impact relative to this topic.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-1: *Prior to the start of ground disturbing activities, a geotechnical engineer shall review project improvement plans (including but not limited to grading plans and site plans) to identify potential conflicts and to verify that the recommendations contained in the Geotechnical Engineering Investigation completed for the project (CTE CAL, Inc., 2022) (Appendix D of the Draft EIR) are noted on project improvement plans. The recommendations are generally outlined in Mitigation Measure 3.6-2 while the complete recommendations are included in Chapter 5 of the Geotechnical Engineering Investigation.*

Mitigation Measure 3.6-1: *All grading operations and construction shall be conducted in conformance with the recommendations included in the Geotechnical Engineering Investigation for Singh Petroleum Investments Percolation (CTE CAL, Inc., 2022) (Appendix D of the Draft EIR). Specific recommendations in the Geotechnical Engineering Investigation address the following and shall be incorporated into the final Project plans and construction-level geotechnical report:*

- 1. The Project proponent shall ensure that any loose, wet or otherwise unstable soil in the Project site shall be excavated and evaluated by Construction Testing & Engineering, Inc. (CTE) for possible re-use as engineered fill or disposed of offsite. Utilities that extend into the construction area and are scheduled to be abandoned shall be properly capped at the perimeter of the construction zone or moved as directed in the plans. A licensed Geotechnical Engineer shall observe and confirm that all asphalt and concrete debris, vegetation, and other organic material has been adequately removed in all proposed improvement areas.*
- 2. Reinforced continuous and isolated spread footing foundations shall be used to support the proposed structures as the subject site consistent with the recommendations provided in Section 5.4, Lateral Load Resistance, provided in the Geotechnical Engineering Investigation.*
- 3. Shallow footings shall be designed to resist lateral loads using the coefficient of friction.*
- 4. Free draining retaining walls backfilled using permeable onsite soils or import fill, shall be designed using the equivalent fluid weights consistent with the recommendations provided in Section 5.5, Retaining Walls, provided in the Geotechnical Engineering Investigation.*
- 5. Utility trenches placed along the perimeter of proposed foundations shall be constructed consistent with Section 5.6, Foundation Setback, provided in the Geotechnical Engineering Investigation.*
- 6. All concrete slabs-on-ground placed beneath the structures shall be constructed consistent with Section 5.7, Concrete Slabs-On-Grade, provided in the Geotechnical Engineering Investigation.*

7. *All pavements shall be designed and constructed according to California Department of Transportation (Caltrans) standards consistent with Section 5.9, Pavement Section Alternatives, recommendations provided in the Geotechnical Engineering Investigation. The subgrade beneath all pavements shall be moisture conditioned and compacted in accordance with Table 5.2 of the Geotechnical Engineering Investigation as per ASTM D1557.*
8. *Ground conditions shall be consistent with Section 5.10, Drainage, provided in the Geotechnical Engineering Investigation.*
9. *The project shall be consistent with Section 5.8, Seismic Design Criteria, provided in the Geotechnical Engineering Investigation.*
10. *The exposed over excavated surface shall then be scarified to a depth of approximately 12 inches, moisture conditioned and recompacted to the moisture and relative compaction required in Table 5.2 of the Geotechnical Engineering Investigation. Moisture density relationship shall be established in accordance with ASTM D1557. The compaction percent listed in Table 5.2 shall be based on percent relative compaction when compared to the maximum dry density determined in accordance with ASTM D1557. Additional engineered fill, if required, shall then be placed in 8 inch loose lifts, moisture conditioned and compacted in accordance with Table 5.2.*

After stripping in pavement improvement areas is conducted, the stripped areas shall be over excavated to 12 inches below the proposed pavement subgrade. The excavated surface shall then be scarified to a minimum depth of 12 inches, moisture conditioned and recompacted to the moisture and relative compaction required in Table 5.2. Moisture-density relationship shall be established in accordance with ASTM D1557. Proof rolling with heavy equipment shall be performed with CTE Cal present to confirm that subgrade is compacted, stable and does not deflect under heavy equipment loads. Additional engineered fill, if required, shall then be placed in 8-inch loose lifts, moisture conditioned and compacted in accordance with Table 5.2.

Import soils proposed for engineered fill shall consist of soil deposits having an Expansion Index $EI < 20$ or liquid limit less than 30 ($LL < 12$), with no particles greater than 3 inches and 20 to 80% of the soil particles passing the #200 sieve. Imported fill meeting these requirements shall be placed in 8 inch loose lifts, moisture conditioned and compacted to the moisture content and percent relative compaction stated in table 5.2. A CTE representative shall approve all imported soils prior to delivery to the site.

If unanticipated, unsuitable or unstable materials are encountered at the surface improvement subgrade or structure over-excavation such that proper compacted and stable materials cannot be obtained, over-excavations to remove such materials may be required. A licensed Geotechnical Engineer shall inspect and approve all structure over-excavations, pavement and surface improvement subgrade areas to confirm that adequate soil conditions have been reached. The geotechnical engineer shall also observe and approve the

3.6 GEOLOGY AND SOILS

scarification, moisture conditioning and recompaction of the excavated surfaces and the placement of all engineered fill.

11. *All earthworks shall be observed and tested by a licensed Geotechnical Engineer to verify that grading activity has been performed according to the recommendations contained within the Geotechnical Engineering Investigation prepared for the Project. The project engineer shall evaluate all footing excavations before reinforcing steel placement. To assure that the recommendations contained within the Geotechnical Engineering Investigation are adhered to the following minimum inspection and testing services shall be performed with regard to the geotechnical design of the project.*
 - a. *Continuous observation and testing during mass grading.*
 - b. *Footing excavation inspection.*
 - c. *Periodic Utility trench backfill testing for moisture and relative compaction.*
 - d. *Slab subgrade inspection and testing prior to the placement of capillary moisture break materials for moisture and relative compaction.*
 - e. *Pavement Class 2 Base inspection and testing prior to the placement of asphalt or concrete pavement.*
 - f. *Asphalt relative compaction testing during pavement placement.*
12. *During Project construction, the Project proponent shall ensure that the areas underlying proposed structures be over excavated to the depth stated in Table 5.2 of the Geotechnical Engineering Investigation prepared for the Project by Construction Testing & Engineering, Inc. (CTE). The building pad over excavation shall extend to a minimum distance of at least 5 feet outside of all proposed structure areas if possible.*

Impact 3.6-4: The proposed Project has the potential to result in development 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. (Less than Significant)

Expansive soils are those that undergo volume changes as moisture content fluctuates; swelling substantially when wet or shrinking when dry. According to the Geotechnical Engineering Investigation prepared for the Project, the soils in the Project Area have a low shrink-swell potential.

The California Building Code Title 24, Part 2, Chapter 18, Section 1803.1.1.2 requires specific geotechnical evaluation when a preliminary geotechnical evaluation determines that expansive or other special soil conditions are present, which, if not corrected, would lead to structural defects. As mentioned before, a Geotechnical Engineering Investigation was prepared for the proposed Project by CTE which addresses structural design, tests and inspections, and soils and foundation standards performed by a certified geotechnical engineer. The final Geotechnical Engineering Investigation included design recommendations to ensure that soil conditions do not pose a threat to the health and safety of people or structures.

The grading and improvement plans, as well as the storm drainage and building plans, are required to be designed in accordance with the recommendations provided in the final geotechnical evaluation. There is nothing proposed that would exacerbate existing environmental hazards or conditions that already exist and the project would not create a substantial direct or indirect risk to life or property due to the effects of developing on expansive soil. Therefore, the proposed project would have a **less than significant** impact relative to this topic.

Impact 3.6-5: The proposed Project has the potential to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature (Less than Significant with Mitigation)

Although the Project site is not expected to contain subsurface paleontological resources, the Project site is in an area known to have these resources and it is possible that undiscovered paleontological resources could be encountered during ground-disturbing activities. Damage to or destruction of a paleontological resource would be considered a potentially significant impact under local, state, or federal criteria. Implementation of Mitigation Measure 3.6-3 would ensure steps would be taken to reduce impacts to paleontological resources in the event that they are discovered during construction, including stopping work in the event potential resources are found, evaluation of the resource by a qualified paleontologist and appropriate handling of any potential resource. This mitigation measure would reduce this impact to a **less than significant** level.

MITIGATION MEASURE(S)

Mitigation Measure 3.6-3: *Prior to approval of a grading permit, the Project proponent shall ensure that grading and improvement plans include the following note: "If any paleontological resources are found during grading and construction activities of the Project, all work shall be halted immediately within a 200-foot radius of the discovery until a qualified paleontologist has evaluated the find. Work shall not continue at the discovery site until the paleontologist evaluates the find and makes a determination regarding the significance of the resource and identifies recommendations for conservation of the resource, including preserving in place or relocating on the Project site, if feasible, or collecting the resource to the extent feasible and documenting the find with the University of California Museum of Paleontology."*

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This section discusses regional greenhouse gas (GHG) emissions, climate change, and energy conservation impacts that could result from Project implementation. The analysis contained in this section is intended to be at a Project level, and covers impacts associated with the conversion of the entire site to urban uses. This section provides a background discussion of greenhouse gases and climate change linkages and effects of global climate change. This section is organized with an existing setting, regulatory setting, approach/methodology, and impact analysis. The analysis and discussion of the GHG, climate change, and energy conservation impacts in this section focuses on the proposed Project's consistency with local, regional, and statewide climate change planning efforts and discusses the context of these planning efforts as they relate to the proposed Project. Disclosure and discussion of the Project's estimated energy usage and greenhouse gas emissions are provided.

One comment was received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the San Joaquin Valley Air Pollution Control District (October 29, 2021). This comment is addressed within this section. The full comment is included in Appendix A.

3.7.1 ENVIRONMENTAL SETTING

GREENHOUSE GASES AND CLIMATE CHANGE LINKAGES

Various gases in the Earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the Earth's surface temperature. Solar radiation enters Earth's atmosphere from space, and a portion of the radiation is absorbed by the Earth's surface. The Earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation.

Naturally occurring GHGs include water vapor (H₂O), carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also GHGs, but they are, for the most part, solely a product of industrial activities. Although the direct GHGs CO₂, CH₄, and N₂O occur naturally in the atmosphere, human activities have changed their atmospheric concentrations. From the pre-industrial era (i.e., ending about 1750) to 2011, concentrations of these three GHGs have increased globally by 40, 150, and 20 percent, respectively (IPCC, 2013).

GHGs, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide (CO₂), methane (CH₄), ozone (O₃), water vapor, nitrous oxide (N₂O), and chlorofluorocarbons (CFCs).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

agricultural sectors. In California, the transportation sector is the largest emitter of GHGs, followed by the industrial and electricity generation sectors (California Energy Commission, 2023).

As the name implies, global climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern, respectively. California produced 369 million gross metric tons of carbon dioxide equivalents (MMTCO₂e) in 2022 (California Air Resources Board, 2023).

Carbon dioxide equivalents are a measurement used to account for the fact that different GHGs have different potential to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. This potential, known as the global warming potential of a GHG, is also dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO₂ were being emitted.

Consumption of fossil fuels in the transportation sector was the single largest source of California's GHG emissions in 2022, accounting for 38% of total GHG emissions in the State. This category was followed by the industrial sector (23%), the electricity generation sector (including both in-state and out of-state sources) (16%), the agriculture and forestry sector (9%), the residential energy consumption sector (8%), and the commercial energy consumption sector (6%) (California Air Resources Board, 2023).

EFFECTS OF GLOBAL CLIMATE CHANGE

The effects of increasing global temperature are far-reaching and extremely difficult to quantify. The scientific community continues to study the effects of global climate change. In general, increases in the ambient global temperature as a result of increased GHGs are anticipated to result in rising sea levels, which could threaten coastal areas through accelerated coastal erosion, threats to levees and inland water systems and disruption to coastal wetlands and habitat.

If the temperature of the ocean warms, it is anticipated that the winter snow season would be shortened. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the State. The snowpack portion of the supply could potentially decline by 50% to 75% by the end of the 21st century (National Resources Defense Council, 2014). This phenomenon could lead to significant challenges securing an adequate water supply for a growing state population. Further, the increased ocean temperature could result in increased moisture flux into the State; however, since this would likely increasingly come in the form of rain rather than snow in the high elevations, increased precipitation could lead to increased potential and severity of flood events, placing more pressure on California's levee/flood control system.

Sea level has risen approximately seven inches during the last century and it is predicted to rise an additional 22 to 35 inches by 2100, depending on the future GHG emissions levels (California Environmental Protection Agency, 2010). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion and disruption of wetlands. As the existing climate throughout

California changes over time, mass migration of species, or failure of species to migrate in time to adapt to the perturbations in climate, could also result. Under the emissions scenarios of the Climate Scenarios report (California Environmental Protection Agency, 2010), the impacts of global warming in California are anticipated to include, but are not limited to, the following.

Public Health

Higher temperatures are expected to increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation are projected to increase from 25% to 35% under the lower warming range and to 75% to 85% under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55% more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures will increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts capture and transport water throughout the State from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snow pack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snow pack, increasing the risk of summer water shortages.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater would degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta, a major State fresh water supply. Global warming is also projected to seriously affect agricultural areas, with California farmers projected to lose as much as 25% of the water supply they need; decrease the potential for hydropower production within the State (although the effects on hydropower are uncertain); and seriously harm winter tourism. Under the lower warming range, the snow dependent winter recreational season at lower elevations could be reduced by as much as one month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing, snowboarding, and other snow dependent recreational activities.

If GHG emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snow pack by as much as 70% to 90%. Under the lower warming scenario, snow pack losses are expected to be only half as large

as those expected if temperatures were to rise to the higher warming range. How much snow pack will be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snow pack would pose challenges to water managers, hamper hydropower generation, and nearly eliminate all skiing and other snow-related recreational activities.

Agriculture

Increased GHG emissions are expected to cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. Although higher carbon dioxide levels can stimulate plant production and increase plant water-use efficiency, California's farmers will face greater water demand for crops and a less reliable water supply as temperatures rise.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures are likely to worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts, and milk.

Crop growth and development will be affected, as will the intensity and frequency of pest and disease outbreaks. Rising temperatures will likely aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

In addition, continued global warming will likely shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion is expected in many species while range contractions are less likely in rapidly evolving species with significant populations already established. Should range contractions occur, it is likely that new or different weed species will fill the emerging gaps. Continued global warming is also likely to alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

Global warming is expected to alter the distribution and character of natural vegetation thereby resulting in a possible increased risk of large wildfires. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55%, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the State. For example, if precipitation increases as temperatures rise, wildfires in southern California are expected to increase by approximately 30% toward the end of the century. In contrast, precipitation decreases could increase wildfires in northern California by up to 90%.

Moreover, continued global warming will alter natural ecosystems and biological diversity within the State. For example, alpine and sub-alpine ecosystems are expected to decline by as much as 60%

to 80% by the end of the century as a result of increasing temperatures. The productivity of the State's forests is also expected to decrease as a result of global warming.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures will increasingly threaten the State's coastal regions. Under the higher warming scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

ENERGY CONSUMPTION

Energy in California is consumed from a wide variety of sources. Fossil fuels (including gasoline and diesel fuel, natural gas, and energy used to generate electricity) are the most widely used form of energy in the State. However, renewable sources of energy (such as solar and wind) are growing in proportion to California's overall energy mix. A large driver of renewable sources of energy in California is the State's current Renewable Portfolio Standard (RPS), which requires the State to derive at least 60 percent of electricity generated by 2030, and to achieve zero-carbon emissions by 2045 (as passed in September 2018, under SB 100). The 2021 SB 100 Joint Agency Report was published in 2021, which found that the long-term goals contained in SB 100 are technically achievable through multiple pathways. Achieving 100% clean electricity would increase the total annual electricity system cost by 6% relative to the cost under the state's Renewables Portfolio Standard requirement of having at least 60 percent clean electricity by the end of 2030. These estimates will change over time as markets change, new technologies are commercialized, and additional factors such as grid reliability are included in future analyses.

Overall, in 2019, California's per capita energy usage was ranked second-lowest in the nation (U.S. EIA, 2020b). California's per capita rate of energy usage has remained relatively constant since the 1970's. Many State regulations since the 1970s, including new building energy efficiency standards, vehicle fleet efficiency measures, as well as growing public awareness, have helped to keep per capita energy usage in the State in check.

The consumption of non-renewable energy (i.e. fossil fuels) associated with the operation of passenger, public transit, and commercial vehicles results in GHG emissions that contribute to global climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to global climate change.

Electricity Consumption

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and a very small amount of nuclear generation resources. In 2020, nearly one-half of the electricity supply came from facilities outside of the State. Much of the power delivered to California from states in the Pacific Northwest was generated by wind. States in the Southwest delivered power generated at coal-fired power plants, at natural gas-fired power plants, and from

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

nuclear generating stations (U.S. EIA, 2022). In 2020, approximately 41 percent of California’s utility-scale net electricity generation was fueled by natural gas. In addition, about 48 percent of the State’s utility-scale net electricity generation came from renewable sources, such as solar, wind, geothermal, hydropower, and biomass. Nuclear energy powered an additional 11 percent. The amount of electricity generated from coal was effectively zero (U.S. EIA, 2022). The percentage of renewable resources as a proportion of California’s overall energy portfolio is increasing over time, as directed the State’s Renewable Portfolio Standard (RPS).

According to the California Energy Commission (CEC), total statewide electricity consumption increased from 166,979 gigawatt-hours (GWh) in 1980 to 228,038 GWh in 1990, which is an estimated annual growth rate of 3.66 percent. The statewide electricity consumption in 1997 was 246,225 GWh, reflecting an annual growth rate of 1.14 percent between 1990 and 1997 (U.S. EIA, 2023b). Statewide consumption was 274,985 GWh in 2010, an annual growth rate of 0.9 percent between 1997 and 2010. In 2021, electricity consumption in San Joaquin County was 5,608 GWh (California Energy Commission, 2023).

PG&E is a publicly traded utility company that, under contract with the California Public Utilities Commission (CPUC), generates, purchases, and distributes energy. PG&E’s service area covers 70,000 square miles, roughly extending north to south from Eureka to Bakersfield and east to west from the Sierra Nevada to the Pacific Ocean. PG&E’s electricity distribution system consists of 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines.

PG&E’s, electricity is generated from a combination of traditional sources, such as coal-fired plants, nuclear power plants, and hydroelectric dams, as well as newer sources of energy, such as wind turbines and photovoltaic plants, or “solar farms.” “The grid,” or bulk electric grid, is a network of high-voltage transmission lines that link power plants to the PG&E system. The distribution system, comprising lower-voltage secondary lines, is at the street and neighborhood level. It consists of overhead or underground distribution lines, transformers, and individual service “drops” that connect to individual customers.

In addition to its base plan, PG&E has three plan options, known as Solar Choice options and Green Saver, which give customers the option of purchasing energy from solar resources. The first Solar Choice option provides up to 50 percent of a customer’s energy from solar resources, while the other option provides up to 100 percent of a customer’s energy from solar resources, and the Green Saver option provides up to 90 percent of a customer’s energy from solar resources.

Table 3.7-1 outlines PG&E’s power mix in 2021, compared to the power mix for the state. The table identifies the renewable and non-renewable energy sources for PG&E. It should be noted that some GHG free sources are not considered renewable (e.g., nuclear is GHG free but not renewable).

TABLE 3.7-1. PG&E AND THE STATE OF CALIFORNIA POWER MIX IN 2021

ENERGY RESOURCES	PG&E OPTION: BASE	PG&E OPTION: 50% SOLAR CHOICE	PG&E OPTION: 100% SOLAR	PG&E OPTION: GREEN SAVER	CALIFORNIA POWER MIX 2021
Eligible Renewable	47.7%	70.9%	93.9%	89.9%	33.6%
Biomass and waste	4.2%	2.1%	0.0%	0.0%	2.3%
Geothermal	5.2%	2.6%	0.0%	0.0%	4.8%
Small hydroelectric	1.8%	0.9%	0.0%	0.0%	1.0%
Solar	25.7%	59.8%	93.9%	89.9%	14.2%
Wind	10.9%	5.5%	0.0%	0.0%	11.4%
Coal	0.0%	0.0%	0.0%	0.0%	3.0%
Large Hydroelectric	4.0%	2.0%	0.0%	0.0%	9.2%
Natural Gas	8.9%	7.4%	0.0%	0.0%	37.9%
Nuclear	39.3%	19.7%	0.0%	0.0%	9.3%
Other	0.0%	0.0%	0.0%	0.0%	0.2%
Unspecified	0.0%	0.0%	6.1%	10.1%	6.8%

SOURCE: PG&E. 2021. BUILDING A CLEANER, SAFER ENERGY FUTURE. AVAILABLE: [HTTPS://WWW.PGE.COM/PGE_GLOBAL/COMMON/PDFS/YOUR-ACCOUNT/YOUR-BILL/UNDERSTAND-YOUR-BILL/BILL-INSERTS/2022/1022-POWER-CONTENT-LABEL.PDF](https://www.pge.com/pge_global/common/pdfs/your-account/your-bill/understand-your-bill/bill-inserts/2022/1022-POWER-CONTENT-LABEL.PDF). ACCESSED: SEPTEMBER 11, 2023.

^A. ELECTRICITY FROM TRANSACTIONS THAT ARE NOT TRACEABLE TO SPECIFIC GENERATION SOURCES ARE CLASSIFIED AS UNSPECIFIED SOURCES OF POWER.

In 2021, the latest year for which data is available, statewide consumption was 277,205 GWh (California Energy Commission, 2022). In 2020, electricity consumption in San Joaquin County was 5,737 GWh (California Energy Commission, 2021).

Oil

The primary energy source for the United States is oil, which is refined to produce fuels like gasoline, diesel, and jet fuel. Oil is a finite, nonrenewable energy source. World consumption of petroleum products has grown steadily in the last several decades. As of 2019, world consumption of oil had reached approximately 98 million barrels per day. The United States, with approximately five percent of the world's population, accounts for approximately 19 percent of world oil consumption, or approximately 18.6 million barrels per day (U.S. EIA, 2020c). The transportation sector relies heavily on oil. In California, petroleum-based fuels currently provide approximately 95 percent of the State's transportation energy needs.

Natural Gas/Propane

The State produces approximately 12 percent of its natural gas, while obtaining 22 percent from Canada and 65 percent from the Rockies and the Southwest (California Energy Commission, 2012). PG&E is the largest publicly-traded utility in California and provides natural gas for residential, industrial, and agency consumers within the San Joaquin County area. PG&E's natural gas (i.e.,

methane) delivery system includes 42,000 miles of natural gas distribution pipelines and 6,700 miles of transmission pipelines. PG&E's gas transmission system serves approximately 15 million energy customers in California. The system is operated under an inspection and monitoring program in real time on a 24-hour basis, with leak inspections, surveys, and patrols continuously taking place along the pipelines. Gas delivered by PG&E originates in gas fields in California, the Southwest, the Rocky Mountains, and Canada. Transmission pipelines send natural gas from the fields and storage facilities. The smaller distribution pipelines deliver gas to individual businesses or residences.

As of March 2022, California produced 11.4 billion cubic feet of natural gas per month (U.S. EIA, 2022). PG&E is the largest publicly-owned utility in California and provides natural gas for residential, industrial, and agency consumers within the San Joaquin County area. In 2018, natural gas consumption in San Joaquin County was 259 million therms (California Energy Commission, 2020).

3.7.2 REGULATORY SETTING

FEDERAL

Clean Air Act

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

The EPA is responsible for administering the FCAA. The FCAA requires the EPA to set NAAQS for several problem air pollutants based on human health and welfare criteria. Two types of NAAQS were established: primary standards, which protect public health, and secondary standards, which protect the public welfare from non-health-related adverse effects such as visibility reduction.

In 2007, in the court case of *Massachusetts et al. vs. the USEPA et al.* (549 U.S. 497), the U.S. Supreme Court found that GHGs are air pollutants covered by the federal Clean Air Act (42 USC Sections 7401-7671q). The Supreme Court held that the Administrator of the United States Environmental Protection Agency must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. In making these decisions, the Administrator is required to follow the language of Section 202(a) of the Clean Air Act. On December 7, 2009, the Administrator signed two distinct findings regarding GHGs under Section 202(a) of the Clean Air Act:

- **Endangerment Finding:** The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) in the atmosphere threaten the public health and welfare of current and future generations.

- **Cause or Contribute Finding:** The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action was a prerequisite for implementing GHG emission standards for vehicles. In collaboration with the National Highway Traffic Safety Administration (NHTSA) and CARB, the USEPA developed emission standards for light-duty vehicles (2012-2025 model years), and heavy-duty vehicles (2014-2027 model years).

Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. Through this Act, Congress established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic and Safety Administration, which is part of the U.S. Department of Transportation (USDOT), is responsible for establishing additional vehicle standards and for revising existing standards.

Since 1990, the fuel economy standard for new passenger cars has been 27.5 mpg. Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, which is administered by the EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The EPA calculates a CAFE value for each manufacturer based on city and highway fuel economy test results and vehicle sales. Based on the information generated under the CAFE program, the USDOT is authorized to assess penalties for noncompliance.

Federal Climate Change Policy

According to the U.S. EPA, "the United States government has established a comprehensive policy to address climate change" that includes slowing the growth of emissions; strengthening science, technology, and institutions; and enhancing international cooperation. To implement this policy, "the Federal government is using voluntary and incentive-based programs to reduce emissions and has established programs to promote climate technology and science." The U.S. EPA administers multiple programs that encourage voluntary GHG reductions, including "ENERGY STAR", "Climate Leaders", and Methane Voluntary Programs.

The following are actions taken at the federal level relating to GHG emissions.

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the U.S. EPA and the Department

of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light duty trucks, and medium duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO₂ level solely through fuel economy improvements. Together, these standards would cut CO₂ emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second phase joint rulemaking, establishing national standards for light duty vehicles for model years 2017 through 2025 in August 2012.¹ The new standards for model years 2017 through 2025 apply to passenger cars, light duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO₂ in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The U.S. EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, which became effective November 14, 2011. For combination tractors, the agencies adopted engine and vehicle standards that began in the 2014 model year and achieve up to a 20 percent reduction in CO₂ emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies adopted separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10 percent reduction for gasoline vehicles, and a 15 percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Finally, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO₂ emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the U.S. EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the U.S. EPA.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. There is no federal GHG

¹ United States Environmental Protection Agency (EPA). 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. Website: <http://www.epa.gov/otaq/climate/documents/420f12051.pdf>. Accessed January 21, 2021.

cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the cap-and-trade program.

STATE

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives. The discussion below will address each of these key sets of statutes, as well as CARB “Scoping Plans” intended to achieve GHG reductions under the first set of statutes and recent building code requirements intended to reduce energy consumption.

Statutes Setting Statewide GHG Reduction Targets

ASSEMBLY BILL 32 (GLOBAL WARMING SOLUTIONS ACT)

In 2006, the California State Legislature enacted the California Global Warming Solutions Act of 2006 (Health & Safety Code Section 38500 et seq.), also known as Assembly Bill (AB) 32 (Stats. 2006, ch. 488). AB 32 establishes regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 required that statewide GHG emissions be reduced to 1990 levels by 2020. This reduction was accomplished through an enforceable statewide cap on GHG emissions that was phased in starting in 2012. To effectively implement the cap, AB 32 directed the California Air Resources Board (CARB) to develop and implement regulations to reduce statewide GHG emissions from stationary sources.

SENATE BILL 32

SB 32 (Stats. 2016, ch. 249) added Section 38566 to the Health and Safety Code. It provides that “in adopting rules and regulations to achieve the maximum technologically feasible and cost-effective greenhouse gas emissions reductions authorized by [Division 25.5 of the Health and Safety Code], [CARB] shall ensure that statewide greenhouse gas emissions are reduced to at least 40 percent below the statewide greenhouse gas emissions limit no later than December 31, 2030.” In other words, SB 32 requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

EXECUTIVE ORDERS S-3-05, B-30-15, AND B-55-18

The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger’s 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a “new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050.” SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to “achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter.” The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals. As discussed below, the 2022 Scoping Plan lays out a path towards achieving carbon neutrality by 2045.

SB 350

Senate Bill 350 (SB 350) (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that “the Legislature finds and declares that... reducing emissions of GHGs to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification.” Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, ... and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

AB 1279

In September 2022, the Legislature enacted AB 1279 (Stats. 2022, ch. 337). The bill declares the policy of the state to achieve net zero GHG emissions as soon as possible, but no later than 2045,

and achieve and maintain net negative GHG emissions thereafter. Additionally, the bill requires that by 2045, statewide anthropogenic GHG emissions be reduced to at least 85% below 1990 levels.

Statutes Setting Target for the Use of Renewable Energy for the Generation of Electricity

CALIFORNIA RENEWABLES PORTFOLIO STANDARD

Senate Bill X1-2 (Stats. 2011, 1st Ex. Sess., ch. 1) set more aggressive statutory targets for renewable electricity, culminating in the requirement that 33 percent of the State's electricity come from renewables by 2020. This legislation applies to all electricity retailers in the State, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. All of these entities were required to meet renewable energy goals of 20 percent of retail sales from renewables by the end of 2013, 25 percent by the end of 2016, and 33 percent by the end of 2020. (See Pub. Utility Code, Section 399.11 et seq. [subsequently amended].) SB 350, discussed below, increases the Renewable Portfolio Standard to require 50 percent of electricity generated to be from renewables by 2030. (Pub. Utility Code, Section 399.11, subd (a); see also Section 399.30, subd. (c)(2).) In 2018, Senate Bill 100 (Stats. 2018, ch. 312) revised the above-described deadlines and targets so that the State will have to achieve a 50% renewable resources target by December 31, 2026 (instead of by 2030) and achieve a 60% target by December 31, 2030. The legislation also establishes a State policy that eligible renewable energy resources and zero-carbon resources supply 100% of retail sales of electricity to California end-use customers and 100% of electricity procured to serve all State agencies by December 31, 2045.

Statutes and CARB Regulations Addressing the Carbon Intensity of Petroleum-based Transportation Fuels

ASSEMBLY BILL 1493, PAVLEY CLEAN CARS STANDARDS

In 2002, the Legislature enacted Assembly Bill 1493 ("Pavley Bill") (Stats. 2002, ch. 200), which directed CARB to develop and adopt regulations that achieve the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty trucks beginning with model year 2009. (See Health and Safety Code Section 43018.5.) In September 2004, pursuant to this directive, CARB approved regulations to reduce GHG emissions from new motor vehicles beginning with the 2009 model year. These regulations created what are commonly known as the "Pavley standards." In September 2009, CARB adopted amendments to the Pavley standards to reduce GHG emissions from new motor vehicles through the 2016 model year. These regulations created what are commonly known as the "Pavley II standards." (See California Code of Regulations, Title 13, Sections 1900, 1961, and 1961.1 et seq.)

In 2012, CARB adopted an Advanced Clean Cars (ACC) program aimed at reducing both smog-causing pollutants and GHG emissions for vehicles model years 2017-2025. This historic program, developed in coordination with the USEPA and NHTSA, combined the control of smog-causing (criteria) pollutants and GHG emissions into a single coordinated set of requirements for model years 2015 through 2025. The regulations focus on substantially increasing the number of plug-in hybrid cars and zero-emission vehicles in the vehicle fleet and on making fuels such as electricity and hydrogen

readily available for these vehicle technologies. The components of the ACC program are the Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles in the 2018 through 2025 model years. (See California Code of Regulations, Title 13, Sections 1900, 1961, 1961.1, 1961.2, 1961.3, 1965, 1968.2, 1968.5, 1976, 1978, 2037, 2038, 2062, 2112, 2139, 2140, 2145, 2147, 2235, and 2317 et seq.)

It is expected that the Pavley regulations will reduce GHG emissions from California passenger vehicles by about 34 percent below 2016 levels by 2025, all while improving fuel efficiency and reducing motorists' costs.

Statute Intended to Facilitate Land Use Planning Consistent with Statewide Climate Objectives

CALIFORNIA SENATE BILL 375 (SUSTAINABLE COMMUNITIES STRATEGY)

This 2008 legislation built on AB 32 by setting forth a mechanism for coordinating land use and transportation on a regional level for the purpose of reducing GHGs. The focus is to reduce miles traveled by passenger vehicles and light trucks. CARB is required to set GHG reduction targets for each metropolitan region for 2020 and 2035.² Each of California's metropolitan planning organizations then prepares a sustainable communities strategy that demonstrates how the region will meet its GHG reduction target through integrated land use, housing, and transportation planning. Once adopted by the metropolitan planning organizations, the sustainable communities strategy is to be incorporated into that region's federally enforceable regional transportation plan. If a metropolitan planning organization is unable to meet the targets through the sustainable communities strategy, then an alternative planning strategy must be developed that demonstrates how targets could be achieved, even if meeting the targets is deemed to be infeasible.

Climate Change Scoping Plans

2017 SB 32 SCOPING PLAN

With the passage of SB 32, the Legislature also passed companion legislation AB 197, which provided additional direction for developing the scoping plan. In response, CARB adopted an updated Scoping Plan in December 2017. The document reflects the 2030 target of reducing statewide GHG emissions by 40 percent below 1990 levels codified by SB 32. The GHG reduction strategies in the plan that CARB will implement to meet the target include:

- SB 350 - achieve 50 percent Renewables Portfolio Standard (RPS) by 2030 and doubling of energy efficiency savings by 2030;
- Low Carbon Fuel Standard - increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020);

² The San Joaquin COG region was assigned reduction targets of 12% by 2020 and 16% by 2035.

- Mobile Source Strategy (Cleaner Technology and Fuels Scenario) - maintaining existing GHG standards for light- and heavy-duty vehicles, put 4.2 million zero-emission vehicles on the roads, and increase zero-emission buses, delivery and other trucks.
- Sustainable Freight Action Plan - improve freight system efficiency, maximize use of near-zero emission vehicles and equipment powered by renewable energy, and deploy over 100,000 zero-emission trucks and equipment by 2030;
- Short-Lived Climate Pollutant Reduction Strategy - reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030 and reduce emissions of black carbon 50 percent below 2013 levels by 2030;
- SB 375 Sustainable Communities Strategies - increased stringency of 2035 targets;
- Post-2020 Cap-and-Trade Program - declining caps, continued linkage with Québec, and linkage to Ontario, Canada;
- 20 percent reduction in GHG emissions from the refinery sector; and
- By 2018, develop an Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

2022 SCOPING PLAN UPDATE

The Draft 2022 Scoping Plan Update was released on May 10, 2022, but has yet to be adopted. The 2022 Scoping Plan Update assesses progress toward the statutory 2030 target, while laying out a path to achieving carbon neutrality no later than 2045. The 2022 Scoping Plan Update focuses on outcomes needed to achieve carbon neutrality by assessing paths for clean technology, energy deployment, natural and working lands, and others, and is designed to meet the State's long-term climate objectives and support a range of economic, environmental, energy security, environmental justice, and public health priorities.

SB 605 AND SB 1383

SB 605 (2014) required CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the state, and SB 1383 (2016) required CARB to approve and implement that strategy by January 1, 2018. SB 1383 also establishes specific targets for the reduction of short-lived climate pollutants (40% below 2013 levels by 2030 for methane and HFCs, and 50% below 2013 levels by 2030 for anthropogenic black carbon), and provides direction for reductions from dairy and livestock operations and landfills. Accordingly, CARB adopted its Short-Lived Climate Pollutant Reduction Strategy (Reduction Strategy) in March 2017. The Reduction Strategy establishes a framework for the statewide reduction of emissions of black carbon, methane, and fluorinated gases.

ASSEMBLY BILL 1757

AB 1757 (September 2022) requires the CNRA to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions that reduce GHG emissions for future years 2030, 2038, and 2045. These targets are to be determined by no later than January 1, 2024, and are established to support the state's goals to achieve carbon neutrality and foster climate adaptation and resilience.

Building Code Requirements Intended to Reduce GHG Emissions

CALIFORNIA ENERGY CODE

The California Energy Code (California Code of Regulations, Title 24, Part 6), which is incorporated into the Building Energy Efficiency Standards, was first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Although these standards were not originally intended to reduce GHG emissions, increased energy efficiency results in decreased GHG emissions because energy efficient buildings require less electricity and thus less consumption of fossil fuels, which emit GHGs. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current 2022 Building Energy Efficiency Standards, commonly referred to as the "Title 24" standards, include changes from the previous standards that were adopted, to do the following:

- Provide California with an adequate, reasonably priced, and environmentally sound supply of energy.
- Respond to Assembly Bill 32, the Global Warming Solutions Act of 2006, which mandates that California must reduce its GHG emissions to 1990 levels by 2020.
- Pursue California energy policy that energy efficiency is the resource of first choice for meeting California's energy needs.
- Act on the California Energy Commission's Integrated Energy Policy Report, which finds that standards are the most cost-effective means to achieve energy efficiency, states an expectation that the Building Energy Efficiency Standards will continue to be upgraded over time to reduce electricity and peak demand, and recognizes the role of the Building Energy Efficiency Standards in reducing energy related to meeting California's water needs and in reducing GHG emissions.
- Meet the West Coast Governors' Global Warming Initiative commitment to include aggressive energy efficiency measures into updates of State building codes.
- Meet Executive Order S-20-04, the Green Building Initiative, to improve the energy efficiency of non-residential buildings through aggressive standards.

The most recent Title 24 standards are the 2022 Title 24 standards. Buildings permitted on or after January 1, 2023, must comply with the 2022 Standards. The California Energy Commission updates the standards every three years. The CEC estimates that the 2022 Title 24 standards will reduce 10 million metric tons of GHG over 30 years. When compared to the 2019 Title 24 standards, the 2022 update focuses on: encouraging electric heat pump technology and use; establishing electric-ready requirements when natural gas is installed; expanding solar photovoltaic (PV) system and battery storage standards; and strengthening ventilation standards to improve indoor air quality.

CALIFORNIA GREEN BUILDING STANDARDS CODE

The purpose of the California Green Building Standards Code (California Code of Regulations Title 24, Part 11) is to improve public health and safety and to promote the general welfare by enhancing the design and construction of buildings through the use of building concepts having a reduced negative impact or positive environmental impact and encouraging sustainable construction practices in the

following categories: 1) planning and design; 2) energy efficiency; 3) water efficiency and conservation; 4) material conservation and resource efficiency; and 5) environmental quality. The California Green Building Standards, which became effective on January 1, 2011, instituted mandatory minimum environmental performance standards for all ground-up new construction of commercial, low-rise residential uses, and State-owned buildings, as well as schools and hospitals. The mandatory standards require the following:

- 20 percent mandatory reduction in indoor water use relative to baseline levels;
- 50 percent construction/demolition waste must be diverted from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency; and
- Low-pollutant emitting exterior and interior finish materials such as paints, carpets, vinyl flooring, and particle boards.

The voluntary standards require the following:

- **Tier I:** 15 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 65 percent reduction in construction waste, 10 percent recycled content, 20 percent permeable paving, 20 percent cement reduction, and cool/solar reflective roof.
- **Tier II:** 30 percent improvement in energy requirements, stricter water conservation requirements for specific fixtures, 75 percent reduction in construction waste, 15 percent recycled content, 30 percent permeable paving, 30 percent cement reduction, and cool/solar reflective roof.

TITLE 20

CCR Title 20 requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. The CEC certifies an appliance based on a manufacturer's demonstration that the appliance meets the standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwashers; clothes washers and dryers; cooking products; electric motors; low-voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing each type of appliance covered under the regulations, and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

SENATE BILL 1

SB 1 (Murray) (August 2006) established a \$3 billion rebate program to support the goal of the state to install rooftop solar energy systems with a generation capacity of 3,000 megawatts through 2016.

SB 1 added sections to the Public Resources Code, including Chapter 8.8 (California Solar Initiative), that require building projects applying for ratepayer-funded incentives for photovoltaic systems to meet minimum energy efficiency levels and performance requirements. Section 25780 established that it is a goal of the state to establish a self-sufficient solar industry. The goals included establishing solar energy systems as a viable mainstream option for homes and businesses within 10 years of adoption and placing solar energy systems on 50% of new homes within 13 years of adoption. SB 1, also termed “Go Solar California,” was previously titled “Million Solar Roofs.”

SOLID WASTE

AB 939, AB 341, and AB 1826. In 1989, AB 939, known as the Integrated Waste Management Act (PRC Sections 40000 et seq.), was passed because of the increase in waste stream and the decrease in landfill capacity. The statute established the California Integrated Waste Management Board, which oversees a disposal reporting system. AB 939 mandated a reduction of waste being disposed where jurisdictions were required to meet diversion goals of all solid waste through source reduction, recycling, and composting activities of 25% by 1995 and 50% by 2000.

AB 341 (Chapter 476, Statutes of 2011 [Chesbro]) amended the California Integrated Waste Management Act of 1989 to include a provision declaring that it is the policy goal of the state that not less than 75% of solid waste generated be source-reduced, recycled, or composted by 2020, and annually thereafter. In addition, AB 341 required the California Department of Resources Recycling and Recovery (CalRecycle) to develop strategies to achieve the state’s policy goal. CalRecycle conducted several general stakeholder workshops and several focused workshops and in August 2015, published a discussion document titled AB 341 Report to the Legislature, which identified five priority strategies that CalRecycle believed would assist the state in reaching the 75% goal by 2020, legislative and regulatory recommendations, and an evaluation of program effectiveness (CalRecycle, 2012).

AB 1826 (Chapter 727, Statutes of 2014, effective 2016) requires businesses to recycle their organic waste (i.e., food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste) depending on the amount of waste they generate per week. This law also requires local jurisdictions across the state to implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units. The minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

REGIONAL

PG&E Integrated Resource Plan PG&E adopted the 2020 Integrated Resource Plan (IRP) on September 1, 2020, to provide guidance for serving the electricity and natural gas needs of residents and businesses within its service area while fulfilling regulatory requirements. The IRP contains the following objectives that are relevant to the Project:

- **Clean Energy:** In 2021, PG&E delivered nearly 50 percent of its electricity from RPS-eligible renewable resources, such as solar, wind, geothermal, biomass, and small hydropower. In addition, PG&E's GHG-free energy production, which encompasses renewable resources, large hydropower, and nuclear, satisfied all of PG&E's bundled retail sales in 2021.
- **Reliability:** PG&E's IRP analysis includes PG&E's contribution to system and local reliability, in compliance with the CPUC's resource adequacy requirements, especially as California transitions toward higher shares of GHG-free generation resources.
- **Affordability:** PG&E's IRP analysis selects resources to meet the state's clean energy and reliability goals and provides a system average rate forecast in compliance with the CPUC's requirements for investor-owned utilities.

LOCAL

San Joaquin Air Pollution Control District

CLIMATE CHANGE ACTION PLAN

On August 21, 2008, the Valley Air District Governing Board approved a proposal called the Climate Change Action Plan (CCAP). The CCAP began with a public process bringing together stakeholders, land use agencies, environmental groups, and business groups to conduct public workshops to develop comprehensive policies for CEQA Guidelines, a carbon exchange bank, and voluntary GHG emissions mitigation agreements for the Governing Board's consideration. The CCAP contains the following goals and actions:

- Develop GHG significance thresholds to address CEQA projects with GHG emission increases.
- Develop the San Joaquin Valley Carbon Exchange for banking and trading GHG reductions.
- Authorize use of the SJVAPCD [Valley Air District's] existing inventory reporting system to allow use for GHG reporting required by AB 32 regulations.
- Develop and administer GHG reduction agreements to mitigate proposed emission increases from new projects.
- Support climate protection measures that reduce greenhouse gas emissions as well as toxic and criteria pollutants. Oppose measures that result in a significant increase in toxic or criteria pollutant emissions in already impacted areas.

On December 17, 2009, the Valley Air District Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The Valley Air District concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The Valley Air District found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The Valley Air District found that this cumulative impact

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

The Valley Air District's approach is intended to streamline the process of determining whether project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is no applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as a Best Performance Standard, to reduce GHG emissions. The Best Performance Standards (BPS) have not yet fully been established, though they must be designed to effect a 29 percent reduction when compared with the BAU projections identified in the ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. These standards thus would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The Valley Air District has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction, storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, the ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to Valley Air District guidance, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an EIR is required, regardless of whether the project incorporates BPS.

Nevertheless, it should be noted that, in light of the Newhall Ranch case, the Supreme Court concluded that a BAU analysis requires substantial evidence to demonstrate what the required percentage reduction from BAU would be for an individual project. The court expressed skepticism that a percentage reduction goal applicable to the State as a whole would apply without change to an individual development project, regardless of its size or location. Therefore, the BAU analysis as identified by SJVAPCD is not employed for this EIR.

SAN JOAQUIN VALLEY CARBON EXCHANGE

The Valley Air District initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the Valley Air District has pursued an alternative strategy that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. The Valley Air District is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding (MOU) with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality, GHG exchange for credits created in California. The GHG Rx is intended to help fulfill compliance obligations, or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations.

RULE 2301

While the CCAP indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the Valley Air District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301-Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

City of Lathrop General Plan

The City of Lathrop General Plan includes several goals, policies, and implementation actions that are relevant to air quality. General Plan goals, policies, and implementation actions applicable to the Project are identified below:

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

GOALS – LAND USE ELEMENT

- LU-1: Accommodate a mix of land uses that meet the needs of residents, businesses, and visitors with places to live, work, shop, be entertained and culturally engaged.
- LU-2: Promote objectives and development in special planning areas consistent with adopted specific plans, overlay districts, Master Plans and density bonus provisions.
- LU-3: Participate in coordinated local and regional land use planning activities.
- LU-4: Coordinate and integrate land use planning and transportation objectives.
- LU-5: Ensure that new development is compatible with existing development.

GOALS – CIRCULATION ELEMENT

- CIR-1: Develop and maintain a roadway system that accommodates all users.
- CIR-2: Create a system of pedestrian, bicycle, and transit facilities that enables non-automotive accessibility and increases the health and livability of the community.
- CIR-4: Plan for the future of transportation to ensure accessibility for all, reduce the environmental impacts of Transportation, and improve the quality of life.

GOAL – RECREATION AND RESOURCES ELEMENT

- RR-6: Provide the community with optimal air quality.

POLICIES – LAND USE ELEMENT

- LU-1.1: Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.3: Maintain a supply of developable lands sufficient to meet desired levels of housing, jobs, economic, educational, and recreational needs of the city over the planning horizon.
- LU-1.4: Continue to support the development of a variety of housing types and densities that meet the needs of individuals and families, and offers residents of all income levels, age groups and special needs sufficient housing opportunities and choices. (Additional policies specifically related to Housing are included in the General Plan's Housing Element)
- LU-1.8: Recognize that the General Plan and Land Use Map may be amended in accordance with State law in order to ensure that there is an adequate supply of commercial, industrial, public facility, parks, residential, and other desired land uses to serve the City's needs.
- LU-3.1: Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.
- LU-3.2: Utilize planning tools and objectives that promote transit-oriented and mixed-use development objectives near future ACE and Valley Link Transit Facilities. Land use plans for these areas should complement transit facilities to accommodate transit oriented development (TOD) developments and/or park-and-ride facilities near ACE stations and future Valley Link station.

- LU-3.3: Integrate climate change and adaptation planning principles into future updates of the Zoning Code, and other related long-range utilities and facilities planning documents. (See the Safety Element for additional policies related to climate change and resiliency planning).
- LU-3.4: Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.
- LU-4.2: Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.
- LU-4.3: Encourage the development of new industrial and business park which facilitate efficient circulation patterns that reduce truck traffic near residential uses.
- LU-4.4: As the city grows, encourage and support the development of a transit system with regular service connecting destinations within the city, to ACE and Valley Link stations, and to adjacent jurisdictions.
- LU-5.1: Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.
- LU-5.2: Prohibit the establishment or encroachment of incompatible uses into industrial-designated lands. Examples include, but are not limited to, new residential uses in areas designated for industrial development, which may be subject to existing and future nuisance impacts associated with industrial operations and associated activities.
- LU-5.3: Require that new residential development be designed to protect residents from potential conflicts with adjacent land uses, and other features including rail corridors, and high-volume roadways.
- LU-5.4: In industrial areas located within 1,000 feet of existing and planned sensitive receptors, promote industrial uses that are environmentally sustainable with limited potential to create nuisances such as noise and odors.
- LU-5.5: Ensure that industrial development projects, including warehouse, distribution, logistics, and fulfillment projects, mitigate adverse impacts (including health risks and nuisances) to nearby residential land uses and other existing and planned sensitive receptors.

POLICIES – CIRCULATION ELEMENT

- CIR-1.2: Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-2.1: Bicycle and Pedestrian Networks. Establish a network of identified bicycle and pedestrian routes connecting residential areas with schools, recreation, shopping, and employment areas within the City.
- CIR-2.3: Safe Routes to School. Consider walking and bicycling school access as a priority over vehicular movements when any such conflicts occur.

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

- CIR-2.4: Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5: Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.
- CIR-4.1: Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2: Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3: New Technologies. Monitor deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.
- CIR-4.4: Electric Vehicle Charging. Support the creation of electric vehicle charging stations at multifamily residential, commercial, government, and other employment and community destinations.

POLICIES – RECREATION AND RESOURCES ELEMENT

- RR-6.1: Regional Standards. Coordinate planning efforts with the San Joaquin Valley Air Pollution Control District (SJVAPCD), San Joaquin Council of Governments, and the California Air Resource Board to meet local and regional air quality standards and ensure attainment of established goals.
- RR-6.2: Sensitive Receptors. Minimize the community's exposure to toxic and harmful air emissions and odors by requiring an adequate buffer or distance between residential and other sensitive receptors and industrial-type uses that typically generate air pollutants, toxic air contaminants, and/or obnoxious fumes or odors.
- RR-6.3: Construction Activities. Require new construction to minimize fugitive dust and construction vehicle emissions.
- RR-6.4: Development. Encourage the development of mixed-use residential opportunities and live-work environments within the City to lessen the impacts of traffic congestion on local air quality.
- RR-6.5: Appliances and Equipment. Require appliances and equipment, including wood-burning devices, in development projects to meet current standards for controlling air pollution, including particulate matter and toxic air contaminants.
- RR-6.6: Combustible Materials. Cooperate with the Air District to ensure that burning of any combustible material within the City is consistent with Air District regulations to minimize particulate air pollution.
- RR-6.7: Mitigation. Require the implementation of relevant mitigation measures for all future development upon identification of potential air quality impacts.

- RR-6.8: Local Reduction Targets. The City of Lathrop establishes the following per capita GHG reduction targets, in order to meet the requirements established by the state under AB 32 and SB 32, consistent with the CARB's 2017 Scoping Plan:
 - 3.99 MT CO₂e per capita by 2030
 - 2.66 MT CO₂e per capita by 2040; and
 - 1.33 MT CO₂e per capita by 2050.
- RR-6.9: GHG Reduction. Consider, and implement as feasible, new policies and programs that will help to provide energy efficient alternatives to fossil fuel use and reduce consumption in order to reduce greenhouse gas emissions.
- RR-6.10: Public Engagement. Promote regional air quality programs to inform the public on regional air quality concerns and encourage the engagement of all Lathrop residents in future planning decisions related to air quality.

IMPLEMENTATION ACTIONS – LAND USE ELEMENT

- LU-3.b: Work with adjacent jurisdictions to facilitate increased compatibility and access across barriers to travel such as discontinuous streets, bike lanes, sidewalks, and paths.
- LU-3.c: Work with developers, reclamation districts and utility providers to create or expand linear parks, trails, and publicly-accessible greenways along levees, drainage and utility rights-of-way that provide opportunities for greenway connections and passive recreational opportunities.
- LU-5b: Through the development review process, analyze land use compatibility and require adequate buffers and/or architectural enhancements to protect sensitive receptors from intrusion of development activities that may cause unwanted nuisances and health risks.
- LU-5c: When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the preparation of a Health Risk Assessment (HRA) that meets the standards established by the Office of Environmental Health Hazard Assessment (OEHHA), and the San Joaquin Valley Air Pollution Control District (SJVAPCD). Projects shall not be approved until it can be demonstrated that the project would not result in an exceedance of the established thresholds of significance for public health risks at nearby sensitive receptors.
- LU-5d: When industrial projects, including warehouse projects, fulfillment centers, and other projects that may generate high volumes of truck trips and/or air quality emissions are proposed within 1,000 feet of existing or planned residential uses or other sensitive receptors, the City shall require the implementation of best management practices (BMPs) to reduce pollution exposure to sensitive receptors, particularly diesel particulate matter (DPM). The appropriate BMPs shall be established on a case-by-case basis, and should consider the following tools, methods, and approaches:
 - Creating physical, structural, and/or vegetative buffers that adequately prevent or substantially reduce pollutant dispersal between warehouses and any areas where sensitive receptors are likely to be present, such as homes, schools, daycare centers, hospitals, community centers, and parks.

- Providing adequate areas for on-site parking, on-site queuing, and truck check-in that prevent trucks and other vehicles from parking or idling on public streets.
- Placing facility entry and exit points from the public street away from sensitive receptors, e.g., placing these points on the north side of the facility if sensitive receptors are adjacent to the south side of the facility. Exceptions can be made for emergency vehicle access (EVA) points.
- Locating warehouse dock doors and other onsite areas with significant truck traffic and noise away from sensitive receptors.
- Screening dock doors and onsite areas with significant truck traffic and noise with physical, structural, and/or vegetative barriers that adequately prevent or substantially reduce pollutant dispersal from the facility towards sensitive receptors.
- Posting signs clearly showing the designated entry and exit points from the public street for trucks and service vehicles.
- Posting signs indicating that all parking and maintenance of trucks must be conducted within designated on-site areas and not within the surrounding community or public streets.
- LU-5e: Update the Lathrop Municipal Code to include Good Neighbor Guidelines for Warehouse Distribution Facilities. The new Good Neighbor Guidelines should include:
 - A. A definition of the type and size of facility that is subject to the Guidelines;
 - B. Standards to minimize exposure to diesel emissions to sensitive receptors that are situated in close proximity to the proposed facility;
 - C. Standards and practices that eliminate diesel trucks from unnecessarily traversing through residential neighborhoods;
 - D. Standards and practices that eliminate trucks from using residential areas and repairing vehicles on the streets;
 - E. Strategies to reduce and/or eliminate diesel idling within the facility's site;

IMPLEMENTATION ACTIONS – CIRCULATION ELEMENT

- CIR-1a: Review and revise roadway standards to establish complete streets standards addressing the following factors as applicable: number of travel lanes, lane width, medians, drainage control, shoulder width, parking lanes, bike lanes, fire and emergency response standards, curb and gutter design, landscaped strips, and sidewalk width.
- CIR-1b: Require development projects to arrange streets in an interconnected pattern, so that pedestrians, bicyclists, and drivers are not forced onto arterial streets for inter- or intra-neighborhood travel. This approach will also increase the safety and efficiency of movement of emergency responders and reduce vehicle miles traveled within the community.
- CIR-1c: Apply signals, roundabouts, traffic circles and other traffic management techniques appropriately at residential and collector street intersections with collector and arterial streets in order to allow bicyclists and pedestrians to travel more conveniently and more safely from one neighborhood to another.

- CIR-1d: Use traffic calming tools to assist in implementing complete street principles; possible tools include roundabouts, raised intersections, curb extensions, reduced roadway width, and high visibility crosswalks.
- CIR-2a: Create an active transportation plan supporting the development of bicycle and pedestrian networks across the City and funding applications for bicycle and pedestrian improvements.
- CIR-2b: Add planned bicycle and pedestrian facilities in conjunction with road rehabilitation, reconstruction, or re-striping projects whenever feasible.
- CIR-2c: Enhance sidewalks to create a high-quality pedestrian environment, including wider sidewalks and improved pedestrian crossings, landscaping, buffers between sidewalks and vehicle travel lanes, enhanced pedestrian lighting, wayfinding signage, shade trees, and canopies, increased availability of benches, and other features.
- CIR-2d: Improve bicycle facilities to include attractive and secure bicycle parking, bicycle lanes, bike paths, and wayfinding signage along appropriate roadways.
- CIR-2e: Encourage and support the enhancement of transit stops with high quality, well-maintained shelters, and provision of wayfinding signage and transit timetables.
- CIR-2f: Provide access for bicycles and pedestrians at the ends of cul-de-sacs and through walls and berms, where right-of-way is available, to provide convenient access within and between neighborhoods and to encourage walking and bicycling to neighborhood destinations.
- CIR-2g: Ensure that development and infrastructure projects are designed to provide pedestrian and bicycle access and leave no gaps in the bicycle and pedestrian networks.
- CIR-2h: Require new development to provide bicycle parking and shower and locker facilities at commercial, business/professional and light industrial uses in accordance with the California Green Building Standards Code. Encourage existing uses to provide such facilities.
- CIR-2i: Require new multifamily developments to provide bicycle parking facilities in accordance with the California Green Building Standards Code. Encourage existing multifamily developments to provide such facilities.
- CIR-2j: Create an off-street shared-use path system for use by pedestrians and bicyclists for transportation and recreation.
- CIR-2k: Create bicycle and pedestrian connections to adjacent jurisdictions via shared use paths, bikeways, and sidewalks.
- CIR-2l: Create bicycle and pedestrian connections to the ACE station, planned Valley Link stations, and other transit stops.
- CIR-2m: Encourage transit providers to improve passenger pick-up and drop-off areas at the ACE and planned Valley Link stations to provide more convenient access.
- CIR-2n: Partner with neighboring jurisdictions and regional transit providers (including San Joaquin Regional Transit District, Manteca Transit, and Tracy TRACER Bus Services) to expand transit service between Lathrop and destinations in other jurisdictions.
- CIR-2o: Coordinate with transit providers and encourage them to enhance transit amenities for safe and comfortable access to transit including waiting areas, seating, landscaping, lighting, shade and rain cover, trash receptacles, and passenger loading zones.

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

- CIR-4a: Refine and update the City of Lathrop interim VMT thresholds and screening criteria to reflect the updated VMT analysis completed for the General Plan update if such updates are deemed necessary or warranted.
- CIR-4b: Evaluate the feasibility of a local or regional VMT impact fee program, bank, or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot eliminate VMT impacts, the project could contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.
- CIR-4c: Require proposed development projects that could have a potentially significant VMT impact to consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction.
- CIR-4d: Require development projects that employ 100 or more full-time equivalent employees to establish transportation demand management (TDM) programs consistent with San Joaquin Valley Air Pollution Control District requirements.
- CIR-4e: Partner with SJCOG on the Dibs program, which is the regional smart travel program, including rideshare, transit, walking, and biking.
- CIR-4f: As new transportation technologies and mobility services, including autonomous vehicles, electric vehicles, electric bicycles and scooters, and transportation network companies (e.g., Uber and Lyft) are implemented and used by the public, review and update City policies and plans to maximize the benefit to the public of such technologies and services without adversely affecting the City's transportation network. Updates to the City's policies and plans may cover topics such as electric vehicle charging stations, curb space management, changes in parking supply requirements, policies regarding electric scooter use, etc.
- CIR-4g: Encourage open data sharing. Anonymized data can improve the City's decision-making and help to develop more informed policies and plans while preserving people's privacy.
- CIR-4i: As part of the development of or participation in any ridesharing program, including for shared automated vehicle fleets, ensure that the program considers the safety needs of vulnerable populations and loading needs of seniors, families with children, and individuals with mobility impairments.
- CIR-4j: As need for transit grows, review and consider alternatives to conventional bus systems, such as smaller shuttle buses (micro-transit), on-demand transit services, or transportation networking company services that connect neighborhood centers to local activity centers with greater cost efficiency.
- CIR-4k: Require new development to incorporate electric vehicle charging in accordance with the California Green Building Standards Code. Encourage installation of electric vehicle charging stations at existing development.

IMPLEMENTATION ACTIONS – RECREATION AND RESOURCES ELEMENT

- RR-6a: Review development, infrastructure, and planning projects for consistency with SJVAPCD requirements during the CEQA review process. Require project applicants to prepare air quality analyses to address SJVAPCD and General Plan requirements, which include analysis and identification of:
 - A. Air pollutant emissions associated with the project during construction, project operation, and cumulative conditions.
 - B. Potential exposure of sensitive receptors to toxic air contaminants.
 - C. Significant air quality impacts associated with the project for construction, project operation, and cumulative conditions.
 - D. Mitigation measures to reduce significant impacts to less than significant or the maximum extent feasible where impacts cannot be mitigated to less than significant.
- RR-6b: Review all new industrial and commercial development projects for potential air quality impacts to residences and other sensitive receptors. Ensure that mitigation measures and best management practices are implemented to reduce significant emissions of criteria pollutants.
- RR-6c: Work with SJCOG and the SJVAPCD to implement plans and programs aimed at improving regional air quality.
- RR-6d: Continue to review development projects to ensure that all new public and private development complies with the California Code of Regulations (CCR), Title 24 standards as well as the energy efficiency standards established by the Lathrop Municipal Code.
- RR-6e: Monitor GHG emissions generated by the community over time for consistency with the established GHG reduction targets, and update the City's community GHG Inventory every five years. In the event that the City determines that ongoing efforts to reduce GHG emissions are not on track to meet the City's adopted GHG reduction targets, the City shall establish and adopt new and/or revised GHG reductions measures that will effectively meet the established GHG reduction targets.
- RR-6f: Continue the expansion of infrastructure to facilitate the use of City-owned low or zero emission vehicles such as electric vehicle charging facilities and conveniently located alternative fueling stations at key City facilities as operations necessitate and/or as funding becomes available.
- RR-6g: Evaluate and consider multi-modal transportation benefits to all City employees, such as free or low-cost monthly transit passes. Encourage employer participation in similar programs. Encourage new transit/shuttle services and use.
- RR-6h: Encourage community car-sharing and carpooling.
- RR-6i: Support the establishment and expansion of a regional network of electric vehicle charging stations and encourage the expanded use of electric vehicles.
- RR-6j: Establish and adopt standards and requirements for electric vehicle parking, including minimum requirements for the installation of electric vehicle charging stations in new multi-family residential and commercial, office, and light industrial development.

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- RR-6k: Consider instituting a Green Building Program to reflect best practices, such as encouraging the use of cement substitutes and recycled building materials for new construction.
- RR-6l: Continue cooperating with the SJVAPCD by requiring a dust management plan to prevent fugitive dust from leaving the property boundaries and causing a public nuisance or a violation of an ambient air standard prior to construction and grading.

3.7.3 IMPACTS AND MITIGATION MEASURES

GREENHOUSE GAS EMISSIONS THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, climate change-related impacts are considered significant if implementation of the proposed Project would do any of the following:

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

For future projects, the significance of GHG emissions may be evaluated based on locally adopted quantitative thresholds, or consistency with a regional GHG reduction plan (such as a Climate Action Plan). The City of Lathrop does not currently have a formal GHG emissions reduction plan or recommended emissions thresholds for determining significance associated with GHG emissions from development projects.

Since no other local or regional Climate Action Plan is in place, the Project is assessed for its consistency with CARB's adopted Scoping Plans. This would be achieved with an assessment of the project's compliance with relevant Scoping Plan measures contained in the CARB's most recent Scoping Plan, as well as the latest RTP/SCS for the region the Project is located within (i.e. the San Joaquin Council of Governments 2022 RTP/SCS, or the SJCOG 2022 RTP/SCS). It should be noted that the Scoping Plan is consistent with the AB 1279 GHG reduction targets of achieving carbon neutrality by 2045, and reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Therefore, consistency with the CARB's most recent Scoping Plan would also demonstrate consistency with the carbon neutrality requirements encapsulated by AB 1279.

Additionally, the Project is assessed to the extent to which it is able to reduce GHG emissions from Project design features. Therefore, this analysis provides a qualitative assessment of the Project's compliance with the applicable plans, policies, and regulations for the purposes of reducing

greenhouse gas emissions to determine whether the project would have a significant impact on the environment relative to GHGs. Separately, the Project's estimated construction and operation-related GHG emissions are provided for the purposes of disclosure.³

IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Project implementation would not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment and would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases (Less than Significant)

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project's GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact. Implementation of the Project would contribute to increases of GHG emissions that are associated with global climate change. Estimated GHG emissions attributable to Project development would be primarily associated with increases of CO₂ and other GHG pollutants, such as methane (CH₄) and nitrous oxide (N₂O), from mobile sources and utility usage.

The Project's short-term construction-related and long-term operational GHG emissions were estimated using the California Emission Estimator Model (CalEEMod)TM (v.2022.1). CalEEMod is a statewide model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify GHG emissions from land use projects. The model quantifies direct GHG emissions from construction and operation (including vehicle use), as well as indirect GHG emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. Emissions are expressed in annual metric tons of CO₂ equivalent units of measure (i.e., MT CO₂e), based on the global warming potential of the individual pollutants.

SHORT-TERM CONSTRUCTION GHG EMISSIONS

Estimated maximum GHG emissions associated with construction of the proposed Project are summarized in Table 3.7-2. These emissions include all worker vehicle, vendor vehicle, hauler vehicle, and off-road construction vehicle GHG emissions. For the purposes of this analysis, based on input from the Project applicant, the proposed Project is assumed to commence construction in 2024 and finish in 2026. See Appendix A for further detail.

³ Project GHG emissions were provided using the latest version of CalEEMod (v2022.1), which represents the Air District's recommended modeling tool for estimating emissions for projects under CEQA.

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

TABLE 3.7-2: TOTAL CONSTRUCTION GHG EMISSIONS (MT CO₂E/YEAR)

YEAR	BIO- CO ₂	NON-BIO- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
2024	0	147	147	0.01	0.01	148
2025	0	313	313	0.01	0.01	315
2026	0	34.2	34.2	0.01	0.01	34.4
Total	0	494.2	494.2	0.03	0.03	497.4

SOURCES: CALIEMOD (V.2022.1)

As presented in the table, short-term construction emissions of GHGs are estimated to be a total of approximately 497.4 MT CO₂e.

OPERATIONAL GHG EMISSIONS

The operational GHG emissions estimate for the proposed Project includes on-site area, energy, mobile, waste, and water emissions. Estimated GHG emissions associated with operation of the proposed Project are summarized in Table 3.7-3, below. It should be noted that CalEEMod does not account for Governor Newsom’s Zero-Emission by 2035 Executive Order (N-79-20), which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035; CalEEMod also does not account for the new CARB rules related to truck electrification (e.g. Advanced Clean Trucks Regulation). The new Executive Order and CARB rules are anticipated to substantially reduce the operational emissions (i.e., mobile emissions) associated with passenger vehicles and freight trucks over time. The operational emissions results provided in Table 3.7-3 are likely an overestimate for mobile emissions, given the state’s ongoing effort to increase electric vehicles and trucks. As shown in the following table, the annual GHG emissions associated with the proposed Project would be approximately 5.238 MT CO₂e.

TABLE 3.7-3: OPERATIONAL GHG EMISSIONS AT BUILDOUT (METRIC TONS/YEAR)

	BIO- CO ₂	NON-BIO- CO ₂	TOTAL CO ₂	CH ₄	N ₂ O	CO ₂ E
Area	0	0.50	0.50	0.01	0.01	0.50
Energy	0	75.5	75.5	0.01	0.01	75.9
Mobile	0	4,502	4,502	0.19	0.48	4,656
Waste	7.44	0	7.44	0.74	0	26.0
Water	0.91	0.86	1.77	0.09	0.01	4.76
Refrigerants	0	0	0	0	0	475
Total	8.34	4,587	4,587	1.04	0.49	5,238

SOURCES: CALIEMOD (V.2022.1)

CONSISTENCY WITH 2022 SCOPING PLAN

The CARB’s 2022 Scoping Plan (the latest version of the Scoping Plan) provides policies that are considered needed to meet the State’s mid-term and long-term GHG emissions reduction targets. Specifically, the CARB’s 2022 Scoping Plan identifies that it “...lays out the sector-by-sector roadmap for California, the world’s fifth largest economy, to achieve carbon neutrality by 2045 or earlier...”. The Scoping Plan addresses recent legislation and direction from Governor Newsom, by extending and expanding upon the earlier Scoping Plans with a target of reducing anthropogenic

emissions to 85 percent below 1990 levels by 2045, and adding carbon neutrality as a science-based guide and touchstone for California’s climate work. The Scoping Plan is therefore consistent with the AB 1279 GHG reduction targets of achieving carbon neutrality by 2045, and reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. The Project’s consistency with the applicable 2022 Scoping Plan policies is discussed in Table 3.7-4, below.

TABLE 3.7-4: PROJECT CONSISTENCY WITH THE 2022 SCOPING PLAN

POLICY	PROJECT CONSISTENCY
<i>TRANSPORTATION ELECTRIFICATION</i>	
Convert local government fleets to ZEVs and provide EV charging at public sites	No Conflict. While this goal is not applicable to an individual commercial development project, the Project includes an EV parking requirement.
Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans)	
<i>VMT REDUCTION</i>	
Reduce or eliminate minimum parking standards	No Conflict. This goal is not applicable to an individual commercial development project. Nevertheless, the Project would construct the minimum number of spaces required by City code, and would work with the City to explore whether an even lower number of spaces is feasible.
Implement Complete Streets policies and investments, consistent with general plan circulation element requirements	
Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.	
Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking	
Implement parking pricing or transportation demand management pricing strategies	
Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood)	
Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert “greenfield” land to urban uses (e.g., green belts, strategic conservation easements)	
<i>BUILDING DECARBONIZATION</i>	
Adopt all-electric new construction reach codes for residential and commercial uses	No Conflict. This goal is not applicable to an individual commercial development project.
Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers)	
Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances	
Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)	
Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings)	

SOURCE: 2022 SCOPING PLAN, TABLE 1, APPENDIX D

Separately, proposed Project’s operational emissions would be reduced as regulations are implemented by the CARB and other State agencies to comply with the statewide GHG reduction targets. Many of these regulations are already identified in the 2022 Scoping Plan. These statewide actions are anticipated to reduce operational GHG emissions even further below those identified

3.7 GREENHOUSE GASES, CLIMATE CHANGE AND ENERGY

in Table 3.7-2 and Table 3.7-3. For example, the proposed Project’s transportation emissions would be expected to decline as vehicle efficiency standards are implemented beyond the Advanced Clean Cars II program and the Low Carbon Fuel Standard is strengthened. Furthermore, CalEEMod does not account for Governor Newsom’s Zero-Emission by 2035 Executive Order (N-79-20) or CARB’s subsequent regulations, which requires that all new cars and passenger trucks sold in California be zero-emission vehicles by 2035 and that heavy duty truck emissions be reduced by greater truck electrification. These programs are anticipated to substantially reduce the operational emissions (i.e., mobile emissions) associated with passenger vehicles and freight trucks further, over time.

Overall, the proposed Project would not conflict with the 2022 Scoping Plan. The proposed Project incorporates a wide array of construction- and operation-related Project features that reduce Project emissions, as provided previously (see the list of Project features under the *Project Sustainability Features* discussion, above). Therefore, the Project would be considered consistent with the 2022 Scoping Plan. Since the proposed Project would be consistent with the CARB’s 2022 Scoping Plan, buildout of the proposed Project would not interfere with the main programs the CARB has identified to support its conclusions that the State is on a trajectory to meet the 2045 GHG target. Overall, the proposed Project would not impede the 2022 Scoping Plan and would help the State to progress towards this target.

CONSISTENCY WITH SJCOG’S 2022 RTP/SCS

The SJCOG’s 2022 RTP/SCS includes eight policies with corresponding implementation strategies for conserving energy, maximizing mobility and accessibility, increasing safety and security, preserving the transportation system, supporting economic development, promoting interagency cooperation and public participation, maximizing cost effectiveness, and improving quality of life for residents. These strategies include similar measures to the 2022 Scoping Plan, such as supporting energy and water efficiency. The Project’s consistency with the applicable 2022 RTP/SCS strategies is discussed in Table 3.7-5, below.

TABLE 3.7-5: PROJECT CONSISTENCY WITH THE SJCOG’S 2022 RTP/SCS

POLICY	PROJECT CONSISTENCY
Enhance the Environment for Existing and Future Generations and Conserve Energy	<u>No Conflict</u> . The Project would utilize electricity provided by Pacific Gas & Electric (PG&E) which is required to meet the future year renewable portfolio performance standards. In addition, future development associated with Project implementation would be required to meet the applicable requirements of the 2022 (or more current) Title 24 Building Energy Efficiency Standards.
Maximize Mobility and Accessibility	<u>No Conflict</u> . The Project would enhance mobility by providing vehicle fueling and parking.
Increase Safety and Security	<u>No Conflict</u> . The Project would be developed using the latest State and local requirements relating to safety and security.
Preserve the Efficiency of the Existing Transportation System	<u>Not applicable</u> . The Project would not interfere with the efficiency of any existing transportation system.
Support Economic Vitality	<u>No Conflict</u> . The proposed Project would create local jobs as well as provide new commercial options for local and regional residents, thereby supporting economic vitality.

POLICY	PROJECT CONSISTENCY
Promote Interagency Coordination and Public Participation for Transportation Decision-Making and Planning Efforts	<u>No Conflict</u> . The proposed Project would engage in the required interagency coordination and public participation efforts, as applicable.
Maximize the Cost Effectiveness	<u>No Conflict</u> . The proposed Project would be developed based on market demand.
Improve the Quality of Life for Residents	<u>No Conflict</u> . The proposed Project would provide additional shopping options for local and regional residents, thereby improving the quality of life for residents.

SOURCE: SJCOG 2022 RTP/SCS

As shown in Table 3.7-5, above, the Project would not conflict with any of the GHG emissions reduction strategies contained in the SJCOG’s 2022 RTP/SCS. Therefore, the Project is considered to be consistent with SJCOG’s 2022 RTP/SCS.

EXECUTIVE ORDER S-3-05

The Executive Order S-3-05 2050 target has not been codified by legislation. However, studies have shown that, in order to meet the 2050 target, aggressive pursuit of technologies in the transportation and energy sectors, including electrification and the decarbonization of fuel, will be required. Because of the technological shifts required and the unknown parameters of the regulatory framework in 2050, quantitatively analyzing the project’s impacts further relative to the 2050 goal is speculative for purposes of CEQA.⁴

The CARB recognizes that AB 32 establishes an emissions reduction trajectory that will allow California to achieve the more stringent 2050 target: “These [greenhouse gas emission reduction] measures also put the State on a path to meet the long-term 2050 goal of reducing California’s GHG emissions to 80 percent below 1990 levels. This trajectory is consistent with the reductions that are needed globally to stabilize the climate.” In addition, the CARB’s First Update to the Scoping Plan “lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050,” and many of the emission reduction strategies recommended by the CARB would serve to reduce the proposed project’s post-2020 emissions level to the extent applicable by law:

- Energy Sector: Continued improvements in California’s appliance and building energy efficiency programs and initiatives, such as the State’s zero net energy building goals, would serve to reduce the proposed project’s emissions level. Additionally, further additions to California’s renewable resource portfolio would favorably influence the project’s emissions level.

⁴ California Air Resources Board (CARB). 2014. First Update to the Climate Change Scoping Plan. Website: <http://www.arb.ca.gov/cc/scopingplan/document/updatedscopingplan2013.htm>. Accessed September 11, 2023.

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- Transportation Sector: Anticipated deployment of improved vehicle efficiency, zero-emission technologies, lower carbon fuels, and improvement of existing transportation systems all will serve to reduce the project's emissions level.
- Water Sector: The project's emissions level will be reduced as a result of further utilization of water conservation technologies.
- Waste Management Sector: Plans to further improve recycling, reuse and reduction of solid waste will beneficially reduce the project's emissions level.

In his January 2015 inaugural address, Governor Brown expressed a commitment to achieve “three ambitious goals” that he wanted to see accomplished by 2030 to reduce the State's GHG emissions:

- Increasing the State's Renewable Portfolio Standard from 33 percent in 2020 to 50 percent in 2030;
- Cutting the petroleum use in cars and trucks in half; and
- Doubling the efficiency of existing buildings and making heating fuels cleaner.

These expressions of executive branch policy may be manifested in adopted legislative or regulatory action through the State agencies and departments responsible for achieving the State's environmental policy objectives, particularly those relating to global climate change.⁵

Further, studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050. Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the Statewide emissions level to remain very low through 2050, suggesting that the combination of new technologies and other regulations not analyzed in the studies could allow the State to meet the 2050 target.⁶

Given the proportional contribution of mobile source-related GHG emissions to the State's inventory, recent studies also show that relatively new trends—such as the increasing importance of web-based shopping, the emergence of different driving patterns, and the increasing effect of web-based applications on transportation choices—are beginning to substantially influence transportation choices and the energy used by transportation modes. These factors have changed the direction of transportation trends in recent years and will require the creation of new models to effectively analyze future transportation patterns and the corresponding effect on GHG emissions.

⁵ Brown, Edmund G. Jr. 2015. Press Release: California Establishes Most Ambitious Greenhouse Gas Goal in North America. April 29.

Website: <https://www.gov.ca.gov/news.php?id=18938>. Accessed February 2, 2021.

⁶ Energy and Environmental Economics, 2015. Pathways to Deep Carbonization in the United States.

Website: http://deepdecarbonization.org/wp-content/uploads/2015/11/US_Deep_Decarbonization_Technical_Report_Exec_Summary.pdf. Accessed June 8, 2022.

For the reasons described above, the proposed project's post-2020 emissions trajectory is expected to follow a declining trend, consistent with the 2030 and 2050 targets.

CONCLUSION

The proposed Project would be consistent with relevant plans, policies, and regulations associated with GHGs, notably the most recent version of the CARB's Scoping Plan, and the SJCOG's 2022 RTP/SCS. This would ensure that the proposed Project would be consistent with, and would not impair, the State's carbon neutrality standard by year 2045 as established under AB 1279. The State is making progress toward reducing GHG emissions in key sectors such as transportation, industry, and electricity. Since the Project would be consistent with State GHG Plans, it would not impede the State's goals of reducing GHG emissions 40 percent below 1990 levels by 2030, and of achieving carbon neutrality by 2045. The proposed Project would make a reasonable fair share contribution to the State's GHG reduction goals, by implementing a wide array of Project features that would reduce GHG emissions (see the list of Project features listed within the *Project Sustainability Features* discussion, above) and therefore, the proposed Project's GHG emissions would be considered to have a *less than significant* impact.

THRESHOLDS OF SIGNIFICANCE (ENERGY CONSERVATION)

Consistent with Appendices F and G of the CEQA Guidelines, energy-related impacts are considered significant if implementation of the proposed Project would do the following:

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

In order to determine whether or not the proposed Project would result in a significant impact on energy use, this EIR includes an analysis of proposed Project energy use, as provided under *Impacts and Mitigation Measures* below.

IMPACTS AND MITIGATION MEASURES

Impact 3.7-2: Project implementation would not result in the inefficient, wasteful, or unnecessary use of energy resources, and would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency (Less than Significant)

According to the CEQA Guidelines, the means to achieve the goal of conserving energy include decreasing overall energy consumption, decreasing reliance on natural gas and oil, and increasing reliance on renewable energy sources. In particular, the proposed Project would be considered "wasteful, inefficient, and unnecessary" if it were to violate State and federal energy standards and/or result in significant adverse impacts related to Project energy requirements, energy inefficiencies, energy intensiveness of materials, effects on local and regional energy supplies or on requirements for additional capacity, compliance with existing energy standards, effects on energy resources, or transportation energy use requirements. In addition, the Project could have a

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significant energy impact if it would conflict or create an inconsistency with an applicable plan, policy, or regulation for renewable energy or energy efficiency.

The proposed Project includes various characteristics that reduce the inefficient, wasteful, or unnecessary use of energy. For example, the proposed Project would comply with the latest version of the California Title 24 Energy Efficiency Standards.

Moreover, it should be noted that, over time, electrification of the vehicles will increase due to state requirements, and state and national trends. Electric charging infrastructure would be installed on the property to facilitate the conversion of the truck fleet to zero-emission electric trucks as they become available in the market and used for truck deliveries to and from the facility.

The amount of energy used by the proposed Project during operation would include the amount of energy used by Project buildings and outdoor lighting, and the fuel used by vehicle trips generated during Project construction and operation, fuel used by off-road construction vehicles during construction activities, and fuel used by Project maintenance activities during Project operation. The following discussion provides a detailed calculation of energy usage expected for the proposed Project, as provided by applicable modelling software (i.e. CalEEMod v2022.1) and the CARB EMFAC2021). Additional assumptions and calculations are provided within Appendix B.2 of this EIR.

ELECTRICITY AND NATURAL GAS

Electricity and natural gas used by the proposed Project would be used primarily to generate energy for Project buildings, as well as for outdoor parking lot lighting. As shown in further detail in the CalEEMod modeling outputs provided in Appendix B, “Energy” is one of the categories that was modeled for GHG emissions. As also shown in the CalEEMod modeling outputs as provided in Appendix B, the proposed Project is anticipated to consume approximately 323,414 kWh of electricity per year and approximately 858,442 kBTU per of natural gas per year. Moreover, this is likely a conservative estimate, given that the CalEEMod model does not account for the latest version of Title 24. Furthermore, this also does not account for the vast majority of the Project’s energy efficiency commitments, which would likely drive down the energy usage much further than identified herein.

ON-ROAD VEHICLES (OPERATION)

The proposed Project would generate vehicle trips (i.e., passenger vehicles and heavy-duty trucks) during its operational phase. Compliance with applicable State laws and regulations would limit idling and a part of a comprehensive regulatory framework that is implemented by the CARB. A description of Project operational on-road mobile energy usage is provided below.

According to the Traffic Analysis prepared for the proposed Project (Fehr & Peers, 2023), and as described in more detail in Section 3.13 of this EIR, the proposed Project would increase total vehicle trips by approximately 3,490 new daily trips. In order to calculate operational on-road vehicle energy usage, De Novo Planning Group used fleet mix data from the CalEEMod (v.2022.1) output for the proposed Project, and Year 2025 gasoline and diesel MPG (miles per gallon) factors for individual vehicle classes as provided by EMFAC2021, to derive weighted average gasoline and diesel MPG

factors for the vehicle fleet as a whole. Based on these calculations, as provided in Appendix B, upon full buildout, the proposed Project would generate operational vehicle trips that would use a total of approximately 560 gallons of gasoline and 675 gallons of diesel per day, or 204,560 gallons of gasoline and 246,503 gallons of diesel per year.

The proposed Project's buildings would be designed and constructed in accordance with the City's latest adopted energy efficiency standards, which are based on the State's Title 24 Energy Efficiency Standards for Nonresidential Buildings and Green Building Code Standards. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., heating, ventilation, and air conditioning [HVAC] and water heating systems), and indoor and outdoor lighting, are widely regarded as the some of the most advanced and stringent building energy efficiency standards in the country. As such, the design of the proposed project would facilitate the future commitment to renewable energy resources. Therefore, building energy consumption would not be considered wasteful, inefficient, or unnecessary.

ON-ROAD VEHICLES (CONSTRUCTION)

The proposed Project would also generate on-road vehicle trips during Project construction (from construction workers and vendors travelling to and from the Project site). De Novo Planning Group estimated the vehicle fuel consumed during these trips based on the assumed construction schedule, vehicle trip lengths and number of workers per construction phase as provided by CalEEMod, and Year 2023 gasoline and diesel MPG factors provided by EMFAC2021 (year 2023 factors were used to represent a conservative analysis, as the energy efficiency of construction activities is anticipated to improve over time). For the sake of simplicity and to be conservative, it was assumed that all construction worker light duty passenger cars and truck trips use gasoline as a fuel source, and all medium and heavy-duty vendor trucks use diesel fuel. Table 3.7-6, below, describes gasoline and diesel fuel consumed during each construction phase (in aggregate). As shown, the vast majority of on-road mobile vehicle fuel used during the construction of the proposed Project would occur during the building construction phase. See Appendix B.2 of this EIR for a detailed accounting of construction on-road vehicle fuel usage estimates.

TABLE 3.7-6: ON-ROAD MOBILE FUEL USAGE BY PROJECT CONSTRUCTION ACTIVITIES – BY PHASE

<i>CONSTRUCTION PHASE</i>	<i>TOTAL GALLONS OF GASOLINE FUEL(B)</i>	<i>TOTAL GALLONS OF DIESEL FUEL(B)</i>
Site Preparation	80	-
Grading	276	-
Building Construction	1,498	1,769
Paving	137	-
Architectural Coating	20	-
Total	2,011	1,769

NOTE: ^(A) PROVIDED BY CALEEMOD OUTPUT. ^(B) SEE APPENDIX B.3 OF THIS EIR FOR FURTHER DETAIL

SOURCE: CALEEMOD (v.2022.1); EMFAC2021.

OFF-ROAD EQUIPMENT (CONSTRUCTION)

Off-road construction equipment would use diesel fuel during the construction phase of the proposed Project. A non-exhaustive list of off-road constructive equipment expected to be used during the construction phase of the proposed Project includes: forklifts, generator sets, tractors, excavators, and dozers. Based on the total amount of CO₂ emissions expected to be generated by the proposed Project (as provided by the CalEEMod output), and standard conversion factors (as provided by the U.S. Energy Information Administration), the proposed Project would use a total of approximately 279,432 gallons of diesel fuel for off-road construction equipment. Detailed calculations are provided in Appendix B.2 of this EIR.

State laws and regulations would limit idling from both on-road and off-road diesel-powered equipment and are part of a comprehensive regulatory framework that is implemented by the CARB. Additionally, as a practical matter, it is reasonable to assume that the overall construction schedule and process would be designed to be as efficient as feasible in order to avoid excess monetary costs. For example, equipment and fuel are not typically used wastefully due to the added expense associated with renting the equipment, maintaining it, and fueling it. Therefore, the opportunities for further future efficiency gains during construction are limited. For the foregoing reasons, it is anticipated that the construction phase of the project would not result in wasteful, inefficient, and unnecessary consumption of energy.

CONCLUSION

The proposed Project would use energy resources for the operation of Project buildings (natural gas and electricity), outdoor lighting (electricity), on-road vehicle trips (e.g. gasoline and diesel fuel) generated by the proposed Project, and off-road and on-road construction activities associated with the proposed Project (e.g. diesel fuel). Each of these activities would require the use of energy resources. The proposed Project would be responsible for conserving energy, including through Project sustainability features, the mitigation measures provided throughout this EIR, as well as through the implementation of statewide and local measures.

The proposed Project would comply with all applicable federal, State, and local regulations regulating energy usage. Statewide measures, including those intended to improve the energy efficiency of the statewide passenger and heavy-duty truck vehicle fleet (e.g. the Pavley Bill and the Low Carbon Fuel Standard), would improve vehicle fuel economies, thereby conserving gasoline and diesel fuel. These energy savings would continue to accrue over time.

The proposed Project would comply with all existing energy standards and would not be expected to result in significant adverse impacts on energy resources. For these reasons, the proposed Project would not cause an inefficient, wasteful, or unnecessary use of energy resources nor cause a significant impact on any of the energy-related thresholds as described by the *CEQA Guidelines*. This is a ***less than significant*** impact.

The purpose of this section is to disclose and analyze the potential impacts associated with hazards and hazardous materials related to the Project area and general vicinity, and to analyze the potential for exposure of people to hazards and hazardous materials as the Project is built and operated in the future. This section is based in part on the *Draft Environmental Impact Report for the Lathrop General Plan Update* (City of Lathrop, 2022), the *City of Lathrop General Plan* (City of Lathrop, 2022), and the *Phase I Environmental Site Assessment* (ESA) prepared for the Project (AdvancedGeo, 2023) (Appendix E of this Draft EIR).

No comments were received during the NOP comment period regarding hazards and hazardous materials.

As discussed in the Initial Study prepared for the proposed Project, the Project site and surrounding area are not located within an area identified as a fire hazard severity zone by the Fire Hazard Severity Zones Maps prepared by Cal Fire.¹ This is a less than significant impact, and no additional analysis of this CEQA topic is warranted. Similarly, the Project site and surrounding area are not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. Therefore, this CEQA topic is not relevant to the proposed Project and does not require further analysis. For these reasons, the impacts related to wildfire would be less than significant and no additional analysis of this CEQA topic is warranted. These topics will not be further discussed.

3.8.1 ENVIRONMENTAL SETTING

PHYSICAL SETTING

Project Location

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

- Project Site (or Annexation Area) – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- Development Area – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road.

¹ Cal Fire, *Fire Hazard Severity Zone Maps*, <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>, accessed September 24, 2020.

Figures 2.0-1 and 2.0-2 in Chapter 2.0, Project Description, show the Project's regional location and vicinity. Figure 2.0-3 provides the APN map.

Existing Site Uses

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), a foundation of a previously demolished abandoned structure, and impervious area. The footprint the impervious area is approximately 2,500 sf.

Existing Surrounding Uses

The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. An aerial view of the Project site and its surrounding uses is provided in Figure 2.0-4 in Chapter 2.0.

Site Topography

The Project Area topography ranges greatly in elevation from approximately 8 to 21 feet above sea level. The high area is located in the eastern portion of the site while the low area is located in the western portion of the site. The majority of the Project Area is generally characterized as flat.

HAZARDS ASSESSMENT

For the purposes of this EIR, "hazardous material" is defined as provided in California Health & Safety Code, Section 25501:

- Any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment.

"Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material that a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous waste" is a subset of hazardous materials. For the purposes of this EIR, the definition of hazardous waste is essentially the same as that in the California Health & Safety Code, Section 25517, and in the California Code of Regulations (CCR), Title 22, Section 66261.2:

- Hazardous wastes are wastes that, because of their quantity, concentration, physical, chemical, or infectious characteristics, may either cause, or significantly contribute to, an increase in mortality or an increase in serious illness, or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

CCR Title 22 categorizes hazardous waste into hazard classes according to specific characteristics of ignitibility, corrosivity, reactivity, or toxicity. Hazardous waste with any of these characteristics is also known as a Resource Conservation and Recovery Act (RCRA) waste.

Hazardous materials can be categorized as hazardous non-radioactive chemical materials, radioactive materials, toxic materials, and biohazardous materials. The previous definitions are adequate for non-radioactive hazardous chemicals. Radioactive and biohazardous materials are further defined as follows:

- Radioactive materials contain atoms with unstable nuclei that spontaneously emit ionizing radiation to increase their stability.
- Radioactive wastes are radioactive materials that are discarded (including wastes in storage) or abandoned.
- Toxic wastes are harmful or fatal when ingested or absorbed (e.g., containing mercury, lead). When toxic wastes are land disposed, contaminated liquid may leach from the waste and pollute groundwater.
- Biohazardous materials include materials containing certain infectious agents (microorganisms, bacteria, molds, parasites, and viruses) that cause or significantly contribute to increased human mortality or organisms capable of being communicated by invading and multiplying in body tissues.
- Medical wastes include both biohazardous wastes (byproducts of biohazardous materials) and sharps (devices capable of cutting or piercing, such as hypodermic needles, razor blades, and broken glass) resulting from the diagnosis, treatment, or immunization of human beings, or research pertaining to these activities.

There are countless categories of hazardous materials and hazardous wastes that could be found on any given property based on past uses. Some common examples include agrichemicals (chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as Mecoprop (MCP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE)), petroleum based products (oil, gasoline, diesel fuel), a variety of chemicals including paints, cleaners, and solvents, and asbestos-containing or lead-containing materials (e.g., paint, sealants, pipe solder).

A Phase I ESA was completed for the Project site by AdvancedGeo, Inc. (AGI) in April 2023 (see Appendix E). The purpose of the Phase I ESA was to identify evidence or indications of “recognized environmental conditions” (REC) as defined by the American Society for Testing and Materials (ASTM) *Designation E 1527-13 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The ASTM defines an REC as “the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property: (1) due to any release to the environment; (2) under conditions indicative of a release to the environment; or (3) under conditions that pose a material threat of a future release to the environment.

The ASTM also defines “Historical” and “Controlled” RECs (HRECs and CRECs, respectively). An HREC is defined as “a past release of any hazardous substance or petroleum products that has

occurred in connection with the property and has been addressed to the satisfaction of the applicable regulatory authority or meeting unrestricted use criteria established by a regulatory authority, without subjecting the property to any required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls).” A CREC is defined as “a recognized environmental condition resulting from a past release of hazardous substances or petroleum products that has been addressed to the satisfaction of the applicable regulatory authority (for example, as evidenced by the issuance of a no further action letter or equivalent, or meeting risk-based criteria established by regulatory authority), with hazardous substances or petroleum products allowed to remain in place subject to the implementation or required controls (for example, property use restrictions, activity and use limitations, institutional controls, or engineering controls.” An HREC is not an REC if a property meets current standards for unrestricted residential use. A CREC remains an REC by definition when the property does not meet the unrestricted residential use requirement unconditionally.

Site Reconnaissance

As part of the Phase I ESA, site reconnaissance was conducted on March 15, 2023 and April 5, 2023. At the time of the visit, the weather was clear and cold. The property was fully accessible during the reconnaissance and no limited conditions were noted.

At the time of the site reconnaissance, the property was vacant, except for the remnants of a demolished single-family dwelling and an abandoned well. Additionally, several stockpiles of aggregate and road base were stored throughout the property.

During the initial inspection on March 15, 2023, AGI noted an apparent illegal dump site with petroleum containing waste located in the driveway entrance for the former residence on the eastern portion of the property. The dump site encompassed an area of approximately 25-square feet, with numerous 55-gallon drums and several smaller containers filled with petroleum products, paints, and coolants. Several of the containers were open, and leaking contents onto bare soil. Oil-stained soil, concrete, and waste construction materials were also noted near the apparent dump site.

It is AGI’s understanding that the property owner contracted with Clean Harbors to remove the waste materials and cleanup the petroleum impacted soil. Cleanup activities included the removal of all waste materials and contaminated construction waste. Additionally, approximately 5.1 cubic yards of impacted soil were excavated and placed in covered bins for disposal. Representatives for Clean Harbors reportedly utilized visual observations to determine that all impacted soil was removed.

On April 5, 2023, AGI conducted a follow-up inspection of the Project site. No obvious petroleum staining or odors were observed in soils remaining within the excavation area (former apparent dump area). At least three 55-gallon drums and several smaller containers filled with petroleum products were observed in an illegal dump site located on the eastern portion of the Project site. Subsequent clean-up activities have since removed all petroleum products from the Project site.

No other current or historic containers, storage vessels, and containment systems (e.g., clarifiers, oil/water separators, vaults, frac ponds, tanks, drums, storage lockers, silos) of 55 gallons or more for individual containers, or 100 gallons in aggregate for smaller containers, were observed on the Project site or have been historically utilized on the site.

The following is a description of the property improvements:

- **Structures:** Building footprint and subfloor of a single-family residence was observed on the eastern subject parcel (APN 191-250-140).
- **Adjoining / Access / Egress Roads:** The property is accessible via Manthey Road. A portion of an asphalt driveway is located west of Manthey Road.
- **Surface Types:** The property is covered with grass and bare soil. A portion of an asphalt driveway is located west of Manthey Road.
- **Additional Features:** Large amounts of road base aggregate were stockpiled for planned development of the property. An abandoned irrigation well was observed northwest of the former residence.
- **Surface Water:** None.

Various exterior and interior observations were made at the time of the property reconnaissance, as noted in the following table:

TABLE 3.8-1: EXTERIOR AND INTERIOR OBSERVATIONS

YES	NO	CONDITION OBSERVED ON/AT PROJECT SITE
	X	Pits, ponds or lagoons with respect to waste treatment or disposal
X		Stained soil or pavement, patched pavement: Approximately 30 square feet of petroleum-stained soil and concrete was observed at an apparent illegal dump site on the eastern portion of the Project site. Subsequent clean-up activities performed after initial AGI's inspection included excavation and removal of approximately 5.1 cubic yards of petroleum impacted soil and concrete. During a follow-up inspection conducted in April 2023, AGI did not observe any obvious petroleum staining or odors in the soils remaining within the excavation area.
	X	Stressed vegetation (from causes other than insufficient water)
	X	Fill dirt from unknown source, or contaminated source
	X	Solid waste (mounds or depressions suggesting waste disposal)
	X	Wastewater / storm water discharged into a drain, ditch or stream
X		Wells (abandoned, irrigation, domestic, monitoring or oil and gas): An abandoned irrigation well was observed on the central portion of the Project site, northeast of the former dwelling.
	X	Dry wells
	X	Septic systems or cesspools
	X	Movement of hazardous materials to adjacent properties
X		Hazardous substances and/or petroleum products: Numerous petroleum containing products were observed on the Project site at an apparent illegal dump site on the eastern portion of the Project site. Substances include discarded used oil filters and other small containers of used motor oil. Subsequent clean-up activities performed after AGI's initial inspection have since removed and disposed of the waste petroleum products.
	X	Above-ground storage tanks (ASTs) for storage of petroleum products and/or hazardous substances

3.8 HAZARDS AND HAZARDOUS MATERIALS

YES	NO	CONDITION OBSERVED ON/AT PROJECT SITE
	X	Underground storage tanks (USTs) for storage of petroleum products and/or hazardous substances
	X	Strong, pungent or noxious odors
X		Pools of liquid (other than water): An apparent illegal dump site with several open containers of various waste automotive fluids and petroleum products was noted in the driveway area for the former dwelling on the eastern portion of the Project site. Pooled oil and coolant was observed on the bare soil in the immediate vicinity of the apparent dump site. Subsequent clean-up activities performed after AGI's initial inspection included removal of all waste materials and excavation of approximately 5.1 cubic yards of impacted soil. During a follow-up inspection conducted in April 2023, AGI did not observe any obvious petroleum staining or pooled liquids within the excavation area.
X		55-gallon drum or large sack storage: An apparent illegal dump site was noted in the driveway entrance for the former dwelling on the eastern portion of the Project site. Three 55-gallon drums containing petroleum products and waste were noted within the dump area. Subsequent clean-up activities performed after AGI's initial inspection included removal of all drums and waste materials. During a follow-up inspection conducted in April 2023, AGI did not observe any drums or containers on the Project site.
	X	Unidentified substance containers
	X	Stains and/or corrosion on floors, walls or ceiling (except water)
	X	Drains and sumps
	X	Oil-water separator/clarifier
	X	Electrical or hydraulic equipment known to contain PCBs
	X	Obvious signs of possible ACMs
	X	Obvious signs of mold
	X	Other areas of environmental concern

SOURCE: ADVANCEDGEO (2023).

Interviews

As part of the Phase I ESA, interviews were conducted with various persons with knowledge of the current and past site uses.

- **Property Owner:** Mr. Gurbinder Singh, current property owner, was interviewed by AGI personnel on March 15, 2023. The following information was obtained from Mr. Singh:
 - Mr. Singh purchased the Project site initially in May of 2019 from the Kelley Family.
 - The Project site property has been used exclusively for agriculture and residential.
 - A decommissioned septic system is located on the Project site.
 - Mr. Singh states that trash and debris have been illegally dumped on the Project site, including petroleum products (used automotive oil filters). Clean-up action is underway according to Mr. Singh.
 - No underground storage tanks, clarifiers, subsurface hoists, discarded automobile batteries, stained soil, etc. are present on the Project site.
 - No environmental liens, violations or lawsuits have been filed against the Project site.
 - Mr. Singh is unaware of any other potential environmental issues.
- **Site Manager:** The Project site manager was not interviewed during the course of the Phase I.

- **Property Occupant(s):** Property occupants were not interviewed during the course of the Phase I.
- **Local Government Officials:** With the exception of file review requests, no local government officials were interviewed during the course of the Phase I.
- **Others:** No additional interviews were performed during the course of the Phase I.

Historical Use Information

Historical use of immediately adjoining properties has been agricultural land and homesteads since the late-1930s. I-5 was developed to the west in the early-1970s. Between the late 1960s to mid-1970s, Manthey Road was developed through the eastern portion of the Project site. Historical uses of adjoining properties do not appear to be of environmental concern to the Project site.

Aerial Photographs

AGI reviewed aerial photographs of the Project site and surrounding area that were provided by Environmental Data Resources (EDR) as well reviewed online (Google Earth) for the years 1937, 1940, 1957, 1963, 1968, 1975, 1982, 1993, 2006, 2009, 2012, 2016 and 2022. The following is a summary of the review of the aerial photographs:

TABLE 3.8-2: AERIAL PHOTOGRAPHS

<i>YEAR(S)</i>	<i>PROJECT SITE</i>	<i>SURROUNDING AREA</i>
1937, 1940	The Project site is an agricultural field.	The adjacent properties to the north, south, east, and west are utilized for agriculture. Rural residences are visible to the adjacent northeast and east. California I-5 is visible to the east as a one-lane highway. Residential development is visible along I-5 to the east and southeast. Manila Road is visible to the south.
1957, 1963	A single residence is visible on the southwestern corner of the Project site while the remainder of the property is an agricultural field.	Unchanged except for a large residence located adjacent to the east of the Project site along I-5.
1968	A residence is located in the center portion of the Project site consistent with the current building footprint. The remainder of the property is an agricultural field.	Unchanged with the exception of residential development present immediately south of the Project site.
1975	Unchanged from previous images.	The current extent and layout of I-5 is visible with on-off ramps to the east of the Project site. Manthey Road is visible bisecting the Project site from north to south.
1982, 1993, 2006, 2009, 2012, 2016	The residence previously located in the southwestern corner of the Project site has been removed. By 2006, the agricultural field appears to be fallow.	Commercial and residential development is visible to the east following California I-5. By 2006, a large warehouse is visible to the southeast along South Harlan Road.

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YEAR(S)	PROJECT SITE	SURROUNDING AREA
2022	The residence located on the center portion of the Project site along Manthey Road has been removed. The foundations of the structure and driveway are visible. Numerous piles of soil can be observed on the central portion of the Project site near the former residence.	Unchanged from previous images.

SOURCE: ADVANCEDGEO (2023).

A review of historical aerial photographs did not reveal any items of environmental concern in connection with the Project site.

Previous Phase I and II ESAs

AGI reviewed the following previous ESAs:

- Advanced GeoEnvironmental, Inc (AGE)-prepared Phase I ESA, March 26, 2019: In March 2019, AGE (predecessor to AGI) completed a Phase I for the property identified by address 11293 South Manthey Road (APN 191-250-140). The subject property comprised a single 11.4-acre parcel, located south of Roth Road. Manthey Road crossed through the eastern portion of the property parcel. At the time of the 2019 Phase I, the property was largely undeveloped land, with several remnants of a former residence remaining, including a well pump and electric meter. AGE did not identify any HRECs, CRECs or RECs in regard to the subject property.
- AGI-prepared Phase I ESA, April 26, 2021: In April 2021, AGI completed a Phase I for the property identified by address 169 Manilla Road (APN 191-250-060). The subject property comprised a single 10.3-acre parcel, located to the north of Manila Road. At the time of the 2021 Phase I, the property was undeveloped, vacant rural grassland with no improvements or structures, except for an abandoned water well. AGE did not identify any HRECs, CRECs or RECs in regard to the subject property.

Copies of the previous ESAs are included in Appendix B of Appendix E.

Project Site Database Search

The property address 11293 South Manthey Road, Lathrop, California is listed on the following governmental databases in the EDR Report under the name "GURDIP KELLY".

TABLE 3.8-3: SUBJECT PROPERTY DATABASE SEARCH

DATABASE	SUMMARY
HAZNET	A single hazardous waste manifest on file from 2015. The waste manifest depicts approximately 0.46-tons of asbestos containing waste removed from the subject property.
HWTS	Listed with an EPA ID of CAC002806664 with a creation date of 03/10/2015 and an inactive date of 06/09/2015. The facility is depicted as an inactive and temporary state facility with no other information on file.

SOURCE: ADVANCEDGEO (2023).

Site Vicinity Database Search

Sites with recognized environmental conditions surrounding the Project site are typically of concern to the site when they are located in an up-gradient direction from the property with respect to the ground water flow direction. Typically, groundwater would represent the migration medium for contaminants over significant distances. Sites located in equi-gradient or down-gradient directions from the subject property are less likely to impact the subject property.

AGI retained EDR to provide current regulatory database information compiled by a variety of federal and state regulatory agencies. A copy of the complete database is included in Appendix C of Appendix E. The following information was obtained:

TABLE 3.8-4: SITE VICINITY DATABASE SEARCH

TYPE	REGULATORY AGENCY DATABASE	AMSD	NUMBER OF SITES WITHIN THE AMSD
Federal	National Priority List Sites: NPL, Proposed NPL, NPL LIENS	1mile	1
Federal	Delisted National Priority List Sites: Delisted NPL	½-mile	0
Federal	Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Sites: FEDERAL FACILITY, SEMS	½-mile	1
Federal	CERCLIS No Further Remediation Action Planned (NFRAP) Sites: SEMS-ARCHIVE	½-mile	0
Federal	Resource Conservation and Recovery Act (RCRA) Corrective Action Report Sites: CORRACTS	1 mile	1
Federal	RCRA Non-CORRACTS Treatment, Storage, or Disposal (TSD) Sites: RCRA-TSDF	½- mile	1
Federal	RCRA Generator Sites: RCRA-LQG, RCRA-SQG, RCRA – CESQG, RCRA NonGen/NLR	¼-mile	2
Federal	Institutional Control/Engineering Control Registry Sites: LUCIS, US ENG CONTROLS, US INST CONTROL	½-mile	0
Federal	Environmental Response and Notification System Sites: ERNS	<1/8-mile	0
State & Tribal	Solid Waste Disposal Facilities and/or Landfill Sites: SHWF	½-mile	0
State & Tribal	Leaking Storage Tank Sites: LTANKS, LUST, LUST TRUST	½-mile	2
State & Tribal	Registered Storage Tank Sites: UST, AST	¼-mile	13
State & Tribal	Voluntary Cleanup Sites: INDIAN VCP, VCP	½-mile	0
State, Tribal & Local	Brownfield Sites: BROWNFIELDS, US BROWNFIELDS	½-mile	0
Local	Dry Cleaning Facility Sites: DRYCLEANERS	¼-mile	0
Either	Unmappable Database Listings: orphan sites	Database dependent	6

NOTE: AMSD: APPROPRIATE MINIMUM SEARCH DISTANCE.

SOURCE: ADVANCEDGEO (2023).

AGI's review of the referenced databases also considered the potential or likelihood of contamination from adjoining and nearby sites. To evaluate which of the adjoining and nearby

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sites identified in the regulatory database report present an environmental risk to the subject property, AGI considered the following:

- The type of database on which the site is identified;
- The topographic position of the identified site relative to the subject property;
- The direction and distance of the identified site from the subject property;
- Local soil conditions in the subject property area;
- The known or inferred groundwater flow direction in the subject property area;
- The status of the respective regulatory agency-required investigation(s) of the identified site (if any); and
- Surface and subsurface obstructions and diversions (e.g., buildings, roads, sewer systems, utility service lines, rivers, lakes and ditches located between the identified site and the subject property).

Only those sites that are judged to present a potential environmental risk to the subject property and/or warrant additional clarification are further evaluated. Using the referenced criteria and based on a review of readily available information contained within the regulatory database report, AGI did not identify adjacent or nearby sites (e.g., within ¼-mile radius) listed on the regulatory database report that were judged to present a potential environmental risk to the subject property with the exception of the following:

TABLE 3.8-5: SITE VICINITY DATABASE SEARCH

<i>SITE</i>	<i>DISTANCE AND DIRECTION¹</i>	<i>DATABASE(S) AND SUMMARY</i>	<i>ENVIRONMENTAL CONCERN²</i>
MOORMAN MFG 250 E Roth Dr	830 feet E Equi-gradient	RCRA NON-GEN, SWEEPS UST, HIST UST, CERS HAZ WASTE, CERS, UST, EMI: Verified as a current non-generator and chemical storage facility with handler activities. No violations or evaluations on file. A total of two underground storage tanks on file containing 10,000-gallons each of gasoline and diesel fuel.	No indication - based on the non-generator status and distance to the Project site.
BENETO TANK LINE 10998 S Harlan Rd	872 feet ENE Equi-gradient	LUST, CORTESE, CERS: Leaking underground storage tank with diesel. Case closed in 2007 and issued a closure no further action letter.	No indication - based on the regulatory status and distance to the Project site.
SHARPE ARMY DEPOT 700 E Roth Rd	1,916 feet E Equi-gradient	NPL, SEMS, CORRACTS, RCRA, US ENG CONTROLS, US INST CONTOLS, HIST UST, RCRA NON-GEN, ROD: The site operated as an Army Depot in the 1980's. US Army maintenance facility produced waste products that affected groundwater conditions.	No indication - based on the regulatory status and distance to the Project site.

NOTES: N: NORTH; S: SOUTH; E: EAST; W: WEST; NE: NORTHEAST; SE: SOUTHEAST; NW: NORTHWEST; SW: SOUTHWEST.

1: DISTANCE AND DIRECTION FROM SUBJECT PROPERTY

2: ENVIRONMENTAL CONCERN BASED ON THE EDR REPORT

SOURCE: ADVANCEDGEO (2023).

Additional Project Site Property Records

The Project site address was searched on the following record sources:

TABLE 3.8-6: SITE VICINITY DATABASE SEARCH

<i>SOURCE</i>	<i>SUMMARY</i>
Regional Board & GeoTracker database	The Project site is not listed on the GeoTracker database, and the Regional Board does not have any records on-file.
DTSC & ENVIROSTOR database	The Project site is not listed on the ENVIROSTOR database and the DTSC does not have any records on-file.
USEPA ENVIROFACTS	The Project site is not listed on the ENVIROFACTS database.
SJVAPCD	The SJVAPCD does not have records on-file for the Project site.
SJCEHD	SCCEHD records for the Project site pertain to the construction of a 150-foot-deep irrigation well and installation of a 10hp well pump.
CalGEM	According to the CalGEM Well Finder, no oil and/or gas wells are located in the vicinity of the Project site.

SOURCE: ADVANCEDGEO (2023).

Findings

The Phase I ESA has revealed no evidence of potential Business Environmental Risks in connection with the Project site with the exception of the abandoned water well. If the well will not be rehabilitated for future use, the well should be destroyed under permit. Additionally, the Phase I ESA assessment revealed no evidence of potential or de minimis conditions, HRECs, CRECs, or RECs in connection with the Project site.

Further, the Phase I ESA has revealed no evidence of other non-ASTM-defined environmental issues in connection with the Project site except for the petroleum-containing waste observed on the eastern portion of the site during the initial property inspection on March 15, 2023. Several drums and other containers containing waste oil, oil, used oil filters, paint and other wastes were illegally dumped near the former driveway entrance onto the eastern subject parcel. Several of the drums and containers were open and spilling petroleum contents onto bare soil.

In March 2023, the property owner contracted with Clean Harbors to remove the waste materials and cleanup the petroleum-impacted soils. Response activities began on March 18, 2023. Clean-up activities included the removal of all waste materials and contaminated construction waste. Additionally, approximately 5.1 cubic yards of impacted soil were excavated and placed in covered bins for disposal. Representatives for Clean Harbors reportedly utilized visual observations to determine that all impacted soil was removed.

On April 5, 2023, AGI conducted a follow-up inspection of the Project site. No obvious petroleum staining or odors were observed in soils remaining within the excavation area. Any residual petroleum contamination (if any) will likely be minimal and not of significant concern to the Project site. Confirmation soil-sampling was not conducted by Clean Harbors during the March 2023 clean-up.

Transportation of Hazardous Materials

The transportation of hazardous materials within the City of Lathrop Planning Area is subject to various federal, state, and local regulations. The following provisions are included in the California Vehicle Code (CVC) and pertain to the transportation of hazardous related materials.

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- The Highway Patrol designates the routes in California which are to be used for the transportation of explosives. (Section 31616)
- The CVC applies when the explosives are transported as a delivery service for hire or in quantities in excess of 1,000 pounds. The transportation of explosives in quantities of 1,000 pounds or less, or other than on a public highway, is subject to the California Health and Safety Code. (Section 31601(a))
- It is illegal to transport explosives or inhalation hazards on any public highway not designated for that purpose, unless the use of the highway is required to permit delivery of, or the loading of, such materials. (Section 31602(b) and Section 32104(a))
- When transporting explosives through or into a city for which a route has not been designated by the Highway Patrol, drivers must follow routes as may be prescribed or established by local authorities. (Section 31614(a))
- Inhalation hazards and poison gases are subject to additional safeguards. These materials are highly toxic, spread rapidly, and require rapid and widespread evacuation if there is loss of containment or a fire. The Highway Patrol designates through routes to be used for the transportation of inhalation hazards. It may also designate separate through routes for the transportation of inhalation hazards composed of any chemical rocket propellant. (Section 32100 and Section 32102(b))

In addition to area roadways, hazardous materials are routinely transported on Union Pacific Railroad lines that are roughly one-quarter mile north and east of the Project Area boundary. Hazardous materials are transported on these lines. The risk of accidents, and more specifically accidents involving hazardous materials, is relatively low. The U.S. Department of Transportation Federal Railroad Administration found the Union Pacific Railroad Company train accident rate to be 4.18 train accidents per one million train miles traveled, resulting in a less than 0.001% chance of an accident. Risk of a railroad accident containing hazardous materials is considered much lower, as only an average of eight accidents involving hazardous material spills occur annually in California.

The Union Pacific Railroad Company does implement a security plan in compliance with the Department of Transportation Final Rule 49 CFR Part 172 Hazardous Materials (HM 232): Security Requirements for Offerors and Transporters of Hazardous Materials. The plan includes requirements to enhance the security of transported hazardous materials and ensures proper cleanup procedures in the instance of an accidental release.

3.8.2 REGULATORY SETTING

FEDERAL

Aviation Act of 1958

The Federal Aviation Act resulted in the creation of the Federal Aviation Administration (FAA). The FAA is charged with the creation and maintenance of a National Airspace System.

Federal Aviation Regulations (CFR, Title 14)

The Federal Aviation Regulation (FAR) establishes regulations related to aircraft, aeronautics, and inspection and permitting.

Clean Air Act

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

Clean Water Act

The Clean Water Act (CWA), which amended the Water Pollution Control Act (WPCA) of 1972, sets forth the §404 program to regulate the discharge of dredged and fill material into Waters of the U.S. and the §402 National Pollutant Discharge Elimination System (NPDES) to regulate the discharge of pollutants into Waters of the U.S. The §401 Water Quality Certification program establishes a framework of water quality protection for activities requiring a variety of Federal permits and approvals (including CWA §404, CWA §402, FERC Hydropower and §10 Rivers and Harbors).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) introduced active Federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The Act was intended to be comprehensive in encompassing both the prevention of, and response to, uncontrolled hazardous material releases. CERCLA deals with environmental response, providing mechanisms for reacting to emergencies and to chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

Environmental Protection Agency

The primary regulator of hazards and hazardous materials is the EPA, whose mission is to protect human health and the environment. The City of Lathrop is located within EPA Region 9, which includes Arizona, California, Hawaii, Nevada, the Pacific Islands, and 148 Tribes.

FY 2001 Appropriations Act

Title IV of the Appropriations Act required the identification of “Urban Wildland Interface Communities in the Vicinity of Federal Lands that are at High Risk from Wildfire” by the U.S. Departments of the Interior and Agriculture.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act, as amended, is the statute regulating hazardous materials transportation in the United States. The purpose of the law is to provide adequate protection against the risks to life and property inherent in transporting hazardous materials in interstate commerce. This law gives the U.S. Department of Transportation (USDOT) and other agencies the authority to issue and enforce rules and regulations governing the safe transportation of hazardous materials (DOE 2002).

Natural Gas Pipeline Safety Act

The Natural Gas Pipeline Safety Act authorizes the U.S. Department of Transportation Office of Pipeline Safety to regulate pipeline transportation of natural (flammable, toxic, or corrosive) gas and other gases as well as the transportation and storage of liquefied natural gas. The Office of Pipeline Safety regulates the design, construction, inspection, testing, operation, and maintenance of pipeline facilities. While the Federal government is primarily responsible for developing, issuing, and enforcing pipeline safety regulations, the pipeline safety statutes provide for State assumption of the intrastate regulatory, inspection, and enforcement responsibilities under an annual certification. To qualify for certification, a state must adopt the minimum Federal regulations and may adopt additional or more stringent regulations as long as they are not incompatible.

Resource Conservation and Recovery Act

The Resources Conservation and Recovery Act (RCRA) established EPA's "cradle to grave" control (generation, transportation, treatment, storage and disposal) over hazardous materials and wastes. In California, the DTSC has RCRA authorization.

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program established tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. The RCRA was further amended in 1988 to set additional standards for USTs.

In July 2015, the EPA revised the federal UST regulation, which strengthened the 1988 federal UST regulations by increasing emphasis on properly operating and maintaining UST equipment. The revision added new operation and maintenance requirements and addressed UST systems deferred in the 1988 UST regulation. The purpose of the revision was to help prevent and detect UST releases, which are a leading source of groundwater contamination. To ensure compliance performance measures reflect the 2015 UST regulation, the Environmental Protection Agency (EPA) and the Association of State and Territorial Solid Waste Management Officials coordinated to update existing compliance performance measures and add new measures. The measures

required states to switch from tracking compliance against significant operational compliance measures to the more stringent technical compliance rate (TCR) measures. As of October 2019, only 43.7 percent of USTs were in compliance with all TCR categories.

STATE

Aeronautics Act (Public Utilities Code §21001)

The Caltrans Division of Aeronautics bases the majority of its aviation policies on the Aeronautics Act. Policies include permits and annual inspections for public airports and hospital heliports and recommendations for schools proposed within two miles of airport runways.

Airport Land Use Commission Law (Public Utilities Code §21670 et seq.)

The law, passed in 1967, authorized the creation of Airport Land Use Commissions (ALUC) in California. Per the Public Utilities Code, the purpose of an ALUC is to protect *public health, safety, and welfare by encouraging orderly expansion of airports and the adoption of land use measures that minimizes exposure to excessive noise and safety hazards within areas around public airports to the extent that these areas are not already devoted to incompatible uses* (Pub. Util. Code §21670). Furthermore, each ALUC must prepare an Airport Land Use Compatibility Plan (ALUCP). Each ALUCP, which must be based on a twenty-year planning horizon, should focus on broadly defined noise and safety impacts.

Assembly Bill 337

Per AB 337, local fire prevention authorities and CalFire are required to identify Very High Fire Hazard Severity Zones (VHFHSZ) in LRAs. Standards related to brush clearance and the use of fire-resistant materials in fire hazard severity zones are also established.

California Code of Regulations

Title 3 of the California Code of Regulations (CCR) pertains to the application of pesticides and related chemicals. Parties applying regulated substances must continuously evaluate application equipment, the weather, the treated lands, and all surrounding properties. Title 3 prohibits any application that would:

- Contaminate persons not involved in the application;
- Damage non-target crops or animals or any other public or private property; and
- Contaminate public or private property or create health hazards on said property.

Title 8 of the CCR establishes California Occupational Safety and Health Administration (Cal OSHA) requirements related to public and worker protection. Topics addressed in Title 8 include materials exposure limits, equipment requirements, protective clothing, hazardous materials, and accident prevention. Construction safety and exposure standards for lead and asbestos are set forth in Title 8.

Title 14 of the CCR establishes minimum standards for solid waste handling and disposal.

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Title 17 of the CCR establishes regulations relating to the use and disturbance of materials containing naturally occurring asbestos.

Title 19 of the CCR establishes a variety of emergency fire response, fire prevention, and construction and construction materials standards.

Title 22 of the CCR sets forth definitions of hazardous waste and special waste. The section also identifies hazardous waste criteria and establishes regulations pertaining to the storage, transport, and disposal of hazardous waste.

Title 26 of the CCR is a medley of State regulations pertaining to hazardous materials and waste that are presented in other regulatory sections. Title 26 mandates specific management criteria related to hazardous materials identification, packaging, and disposal. In addition, Title 26 establishes requirements for hazardous materials transport, containment, treatment, and disposal. Finally, staff training standards are set forth in Title 26.

Title 27 of the CCR sets forth a variety of regulations relating to the construction, operation, and maintenance of the state's landfills. The title establishes a landfill classification system and categories of waste. Each class of landfill is constructed to contain specific types of waste (household, inert, special, and hazardous).

California Government Code Section 65302

This section, which establishes standards for developing and updating General Plans, includes fire hazard assessment and Safety Element content requirements.

California Health and Safety Code

Division 11 of the Health and Safety Code establishes regulations related to a variety of explosive substances and devices, including high explosives and fireworks. Section 12000 et seq. establishes regulations related to explosives and explosive devices, including permitting, handling, storage, and transport (in quantities greater than 1,000 pounds).

Division 12 establishes requirements for buildings used by the public, including essential services buildings, earthquake hazard mitigation technologies, school buildings, and postsecondary buildings.

Division 20 establishes DTSC authority and sets forth hazardous waste and underground storage tank regulations. In addition, the division creates a State superfund framework that mirrors the Federal program.

Division 26 establishes California Air Resources Board (CARB) authority. The division designates CARB as the air pollution control agency per Federal regulations and charges the Board with meeting Clean Air Act requirements.

California Health and Safety Code and Uniform Building Code Section 13000 et seq.

State fire regulations are set forth in §13000 *et seq.* of the California Health and Safety Code, which is divided into “Fires and Fire Protection” and “Buildings Used by the Public.” The regulations provide for the enforcement of the Uniform Building Code and mandate the abatement of fire hazards.

The code establishes broadly applicable regulations, such as standards for buildings and fire protection devices, in addition to regulations for specific land uses, such as childcare facilities and high-rise structures.

California Vehicle Code §31600 (Transportation of Explosives)

This code establishes requirements related to the transportation of explosives in quantities greater than 1,000 pounds, including licensing and route identification.

California Public Resources Code

The State’s Fire Safety Regulations are set forth in Public Resources Code §4290, which include the establishment of State Responsibility Areas (SRAs).

Public Resources Code §4291 sets forth defensible space requirements, which are applicable to anyone who “...owns, leases, controls, operates, or maintains a building or structure in, upon, or adjoining a mountainous area, forest-covered lands, brush-covered lands, grass-covered lands, or land that is covered with flammable material” (§4291(a)).

Food and Agriculture Code

Division 6 of the California Food and Agriculture Code (FAC) establishes pesticide application regulations. The division establishes training standards for pilots conducting aerial applications as well as permitting and certification requirements.

State Oversight of Hazards and Hazardous Materials

The DTSC is chiefly responsible for regulating the handling, use, and disposal of toxic materials. The State Water Resources Control Board (SWRCB) regulates discharge of potentially hazardous materials to waterways and aquifers and administers the basin plans for groundwater resources in the various regions of the state. The Regional Water Quality Control Board (RWQCB) oversees surface and groundwater. Programs intended to protect workers from exposure to hazardous materials and from accidental upset are covered under OSHA at the Federal and California Division of Occupational Safety and Health (Cal/OSHA) and the California Department of Health Services (DHS) at the state level. Air quality is regulated through the CARB and San Joaquin Valley Air Pollution Control District. The State Fire Marshal is responsible for the protection of life and property through the development and application of fire prevention engineering, education, and enforcement; CalFire provides fire protection services for State and privately-owned wildlands.

Water Code

Division 7 of the California Water Code, commonly referred to as the Porter-Cologne Water Quality Control Act, created the SWRCB and the RWQCB. In addition, water quality responsibilities are established for the SWRCB and RWQCBs.

LOCAL

Certified Unified Program Agencies

Senate Bill 1082 (1993) required the establishment of a unified hazardous waste and hazardous materials management program. The result was Cal EPA's United Program, which consolidates the actions of DTSC, the SWRCB, the RWQCB's, OES, and the State Fire Marshall. DTSC oversees the implementation of the hazardous waste generator and onsite treatment program, one of six environmental programs at the local level, through Certified Unified Program Agencies (CUPAs). CUPAs have authority to enforce regulations, conduct inspections, administer penalties, and hold hearings. San Joaquin County implements the CUPA that has enforcement authority over the City of Lathrop.

San Joaquin Valley Air Pollution Control District

San Joaquin Valley Air Pollution Control District (SJVAPCD) has jurisdiction over the City of Lathrop and deals with pollutants that get into the air from stationary (including fumes, dust and smoke, some asbestos) and mobile sources. SJVAPCD's mission is to improve the health and quality of life for all Valley residents through efficient, effective and entrepreneurial air quality management strategies. SJVAPCD responds to complaints about smells, answers questions about air quality management permits, and reviews development projects for compliance with air quality and greenhouse gas significance thresholds. The SJVAPCD and air quality are addressed in detail in Section 3.3, Air Quality, of this EIR.

San Joaquin County

Hazardous waste programs are managed and implemented locally through the County of San Joaquin CUPA. The County hosts a variety of hazardous waste collection events throughout the County in an effort to deter improper disposal of hazardous wastes.

Household Hazardous Waste (HHW) Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators. Household wastes include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill.

San Joaquin County Public Health Services monitors the possible groundwater and soil contamination from underground tanks. Its funding mechanism is a billing contract with the State Water Quality Control Board. Public Health Services clean-up enforcement falls under Title 23, California Code of Regulations. Case workers monitor site-specific development and must be contacted prior to development.

The City of Lathrop and San Joaquin County Public Works Department deal with illegal discharges to sanitary or industrial sewers, and sometimes collect household hazardous waste. They also help to guard against illegal discharges to storm sewers (releases to the street, etc.).

Households Hazardous Waste

HHWs include pesticides, batteries, old paint, solvents, used oil, antifreeze, and other chemicals that should not go into a regular municipal landfill. HHW programs focus on removing dangerous substances from homes and preventing their release into the environment through landfills, sewer systems and illegal dumping. The San Joaquin County Public Works Solid Waste Division collaborates with various cities in the county on a variety of hazardous waste collection opportunities to assist in the elimination of household hazardous waste. The City of Lathrop contracts with Republic Services for hazardous waste collection opportunities. HHW Collection Facilities receive hazardous waste that comes from homes and, in some cases, from small business hazardous waste generators.

City of Lathrop General Plan

The City's General Plan includes the following policies and actions applicable to the Project:

POLICIES: PUBLIC SAFETY ELEMENT

- PS-2.1: Building Fire Codes. Require that all buildings and facilities within the city comply with local, state, and federal regulatory standards such as the California Building and Fire Codes, as well as other applicable fire safety standards, to minimize the risk of fire in the city.
- PS-2.5: Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.
- PS-2.6: Water Supply. Ensure that new development is served with adequate water volumes and water pressure to support fire protection, including minimum required fire flow standards for commercial, industrial and residential areas.
- PS-4.2: Reduction. Encourage producers and users of hazardous materials to reduce the amount of hazardous materials produced and used.
- PS-4.3: Storage. Require the storage of hazardous materials in safe manner.
- PS-4.4: Regulations. Ensure that the LMFDD continues to enforce the Uniform Fire Code relating to the use of hazardous material and require the appropriate regulations to be followed and precautions taken for the type and amount of hazard being created, used, stored, and/or disposed.
- PS-4.5: Hazardous Materials Business Plan. Coordinate with the LMFDD to ensure that businesses in the city which handle hazardous materials prepare and file a Hazardous Materials Business Plan (HMBP). The HMBP shall consist of general business information, basic information on the location, type, quantity, and health risks of hazardous materials, and emergency response and training plans.
- PS-4.6: Cleanup Sites. Require that the hazardous material transporter and/or the party responsible for the release, coordinates with the San Joaquin County Environmental

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Health Department, LMFD, and other agencies as needed, to confirm that hazardous waste cleanup sites located within the city are remediated with the property owner in a manner that keeps the public safe.

- PS-4.7: Emergency Response. Work with the LMFD and other responding agencies to ensure that emergency personnel respond safely and effectively to a hazardous materials incident in the city.

ACTIONS: PUBLIC SAFETY ELEMENT

- PS-2a: Continue to enforce the California Building Code and the California Fire Code to ensure that all construction implements fire-safe techniques, including fire resistant materials, where required.
- PS-4a: As part of the development review process, require projects that result in significant risks associated with hazardous materials to include measures to address the risks and reduce the risks to an acceptable level.
- PS-4b: Review development proposals to address proximity of users and transporters of significant amounts of hazardous materials relative to sensitive uses, such as schools and residential neighborhoods.
- PS-4c: Continue to maintain and update emergency service plans, including plans for the handling of hazardous materials and rapid cleanup of hazardous materials spills.
- PS-4d: Continue to require the submittal of information regarding hazardous materials manufacturing, storage, use, transport, and/or disposal by existing and proposed businesses and developments to the LMFD.
- PS-4e: Coordinate with the LMFD and 911 dispatch center to ensure that the City maintains a current database of hazardous materials.
- PS-4f: Educate current and future property owners about contamination from previous uses. The City shall coordinate with property owners in the cleanup of these sites, particularly in areas with redevelopment potential.
- PS-4g: Coordinate with the LMFD, other local agencies, Union Pacific Railroad, and other transporters to strictly regulate and enforce the use, storage, transport, and/or disposal of hazardous materials under California Administrative Code Title 19 requirements.
- PS-4j: Cooperate fully with Union Pacific Railroad, LMFD, and other agencies, such as the California Highway Patrol, in the event of a hazardous material emergency.
- PS-5a: Regularly practice implementation of the City's Emergency Regularly review County and State emergency response procedures that must be coordinated with City procedures.
- PS-5b: Cooperate with San Joaquin County OES, LMFD, Lathrop Police Services, San Joaquin County Sheriff, the reclamation districts, and other agencies with responsibility for emergency management in emergency response planning, training and provision of logistical support.
- PFS-7b: The LMFD and the Public Works Department will review proposed development projects and street networks to evaluate the accessibility for fire engines and other emergency response functions.

POLICIES: LAND USE ELEMENT

- LU-3.5: Ensure that development within the Stockton Metropolitan Airport Influence Area (Figure 4.2-1 of the General Plan Existing Conditions Report) is consistent with the compatible uses identified in the Project Review Guidelines for the Airport Land Use Commission.

ACTIONS: LAND USE ELEMENT

- LU-3f: Refer all applications for development within the Stockton Metro Airport Area of Influence to the Airport Land Use Commission and the Stockton Metro Airport for comment.

3.8.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact from hazards and hazardous materials if it will:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- 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;
- 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;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (Less than Significant with Mitigation)

CONSTRUCTION PHASE IMPACTS

Construction activities would occur in phases through the development of the proposed Project. Construction equipment and materials would likely require the use of petroleum-based products (oil, gasoline, diesel fuel), and a variety of chemicals including paints, cleaners, and solvents. The use of these materials at a construction site will pose a reasonable risk of release into the environment if not properly handled, stored, and transported. A release into the environment could pose significant impacts to the health and welfare of people and/or wildlife, and could result in contamination of water, habitat, and countless important resources. The RWQCB requires a project specific Storm Water Pollution Prevention Plan (SWPPP) to be prepared for each project that disturbs an area one acre or larger. The SWPPP is required to include project specific best management measures that are designed to control drainage and erosion. The Project would be statutorily required to submit and comply with the SWPPP.

Like most agricultural and farming operations in the Central Valley, agricultural practices in the area have used agricultural chemicals including pesticides and herbicides as a standard practice. Although no contaminated soils have been identified in the Project area or the vicinity above applicable levels, residual concentrations of pesticides may be present in soil as a result of historic agricultural application and storage. Continuous spraying of crops over many years can potentially result in a residual buildup of pesticides, in farm soils. Of highest concern relative to agrichemicals are chlorinated herbicides, organophosphate pesticides, and organochlorine pesticides, such as such as Mecoprop (MCP), Dinoseb, chlordane, dichloro-diphenyltrichloroethane (DDT), and dichloro-diphenyl-dichloroethylene (DDE). Soil testing was not completed as part of the Phase I ESA.

Environmental concerns identified in the Phase I ESA for the Project site did not qualify as RECs, HRECs, or CRECs; however, these environmental issues warrant further discussion. The following was identified during the course of the Phase I ESA:

- Several drums of waste oil, oil, oil filters, and paint were dumped and impacted the soil on the eastern portion of the Project site in early March 2023. In mid-March 2023, 5.1 cubic yards of soil were excavated for disposal. Only visual observations were utilized to determine the extent of the excavation. On April 5, 2023, a follow-up inspection of the Project site was conducted. No obvious petroleum staining or odors were observed in soils remaining within the excavation area. Any residual petroleum contamination (if any) will likely be minimal and not of significant concern to the Project site. Confirmation soil-

sampling was not conducted during the March 2023 clean-up. While the soil visually appears clean, confirmation soil samples should be considered to validate the successful removal of the impacted soil. This is a potentially significant impact.

- The Project site is currently and has historically been used for agricultural purposes since the late 1930s. As such, agricultural-related chemicals such as pesticides, herbicides, insecticides, and fertilizers have been used and stored onsite. This is a potentially significant impact.
- An abandoned water well is centrally located on the west boundary of the Project site. If the well will not be rehabilitated for future use, the well should be destroyed under permit. This is a potentially significant impact.

OPERATIONAL PHASE IMPACTS

Implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators. The proposed Project includes the following amenities:

- Fueling facilities offering 8 truck fuel islands and 8 car fuel islands (12 dispensers);
 - Fuel tanks for both trucks and auto will be above ground with chain link fencing with privacy slats around the tanks.
- Various parking areas during Phases I and II, including:
 - 148 truck/trailer spaces, 163 passenger vehicle spaces (including 128 regular spaces, 28 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase I; and
 - 98 truck/trailer spaces, 203 passenger vehicle spaces (including 176 regular space, 20 compact spaces, and 7 ADA spaces), 2 fueling and gas/diesel spaces, 10 electric vehicle spaces for Phase II;
- A 13,846-sf full service 4-bay truck and automobile repair shop;
- A 16,668-sf building that will include the following:
 - Office space;
 - Restroom facilities, 8 showers;
 - Laundry facility with 12 sets of washer/dryer;
 - Retail convenience store that will offer everyday products from truck accessories, toiletry supplies and a number of products for quick shopping needs for traveling and commuter customer base;
 - Two quick service restaurants, one with a drive-thru option;
 - Seating area for patrons to dine;
- Two dog run areas enclosed with metal fences.

The operational phase of the Project will occur after construction is completed and business operators/employees move in to occupy the structures and facilities on a day-to-day basis. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of

release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by the San Joaquin County Environmental Health Department and the Lathrop-Manteca Fire Protection District (LMFD). The uses in the 16,668-sf building are not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste beyond the common materials described above. However, the proposed fueling facility and truck and automobile repair shop would require the use of hazardous and flammable materials. Through compliance with the local policies and implementation of mitigation measures provided in this EIR, the proposed Project would have a **less than significant** impact with regards to this environmental issue.

CONCLUSIONS

The Phase I ESA for the Project site has revealed no evidence of a RECs, HRECs, or CRECs in connection with the Project site. Nevertheless, the Phase I ESA has identified potential environmental concerns that should be evaluated further prior to ground disturbance. Based on the conclusions of the Phase I ESA, areas where agricultural activities occurred historically and areas where the petroleum-containing waste were located would require soil sampling to assess the soils in these areas. Additionally, according to the Phase I ESA, an abandoned water well is located onsite and the proper well abandonment permit would be obtained.

Implementation of the following mitigation measures will be required to ensure these impacts are **less than significant**.

MITIGATION MEASURE(S)

Mitigation Measure 3.8-1: *Prior to issuance of a building permit for the Project site, the Project applicant shall hire a qualified consultant to perform additional soil and site testing. The following areas of the Project site have already been deemed to have potentially hazardous conditions present:*

- *Petroleum: The eastern portion of the Project site where several drums of waste oil, oil, oil filters and paint were previously dumped and impacted the soil.*
- *Agrichemicals: The portions of the Project site which were previously used for agricultural uses.*

The intent of the additional testing is to investigate whether soils contain hazardous materials, including petroleum products or agrichemicals (including pesticides, herbicides, diesel, petrochemicals, etc.).

A soil sampling and analysis workplan shall be submitted for approval the San Joaquin County Environmental Health Department prior to the work. The sampling and analysis plan shall meet the requirements of the Department of Toxic Substances Control Interim Guidance for Sampling Agricultural Properties (2008), and the County Department of Environmental Resources Recommended Soil and Groundwater Sampling for Underground Tank Investigations (2013).

If the sampling results indicate the presence of agrichemicals that exceed commercial screening levels, a removal action workplan shall be prepared in coordination with San Joaquin County Environmental Health Department. The removal action workplan shall include a detailed engineering plan for conducting the removal action, a description of the onsite contamination, the goals to be achieved by the removal action, and any alternative removal options that were considered and rejected and the basis for that rejection. A no further action letter shall be issued by San Joaquin County Environmental Health Department upon completion of the removal action. The removal action shall be deemed complete when the confirmation samples exhibit concentrations below the commercial screening levels, which will be established by the agencies.

Mitigation Measure 3.8-2: *Prior to bringing hazardous materials onsite, the applicant shall submit a Hazardous Materials Business Plan (HMBP) to the San Joaquin County Environmental Health Department (CUPA) for review and approval. If during the construction process the applicant or any subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).*

Mitigation Measure 3.8-3: *Prior to initiation of any ground disturbance activities within 50 feet of a well, the applicant shall hire a licensed well contractor to obtain a well destruction permit from San Joaquin County Environmental Health Department, and properly abandon and destruct the onsite wells, pursuant to review and approval of the City Engineer and the San Joaquin County Environmental Health Department.*

Impact 3.8-2: Potential to 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)

As noted above, implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators. The Phase I site plan for the proposed Project is shown in Figure 2.0-7 (in Chapter 2.0, Project Description) and the Phase II site plan for the proposed Project is shown in Figure 2.0-8 (in Chapter 2.0, Project Description).

The majority of the types of businesses proposed by the Project are not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. However, the fueling facilities would emit gasoline vapors. Gasoline vapors contain a number of toxic chemicals, notably benzene, a carcinogen.

There are no schools located within ¼-mile of the Project site. The nearest school, Discovery Challenge Academy, is located approximately 0.79 miles east of the eastern Project site boundary. Therefore, the proposed Project would have a **less than significant** impact with regards to this environmental issue.

Impact 3.8-3: Potential to result in impacts from being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Less than Significant)

The Phase I ESA on the Project Area included a site reconnaissance, interviews, historical land use research, and database research. The Project Area is not on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Implementation of the proposed Project would have a *less than significant* impact with regards to this environmental issue.

Impact 3.8-4: Potential for the Project to result in a safety hazard or excessive noise an airport for people residing or working in the Project area. (Less than Significant)

There are no documented public airports or public use airports within close proximity to the Project Area. The nearest airport, the Stockton Metropolitan Airport, is located approximately 3.48 miles northeast of the Project site. The Project site is not located within the Safety Zones or Noise Exposure Contours for this airport. Implementation of the proposed Project would have a *less than significant* impact with regards to this environmental issue.

Impact 3.8-5: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)

The San Joaquin County Office of Emergency Services (OES) maintains an Emergency Operations Plan (EOP) that serves as the official Emergency Plan for San Joaquin County. The EOP is based on the National Incident Management System and its component parts, along with the California Standardized Emergency Management System (SEMS), including the five functional areas of incident or event management, operational coordination, planning, logistical support, and finance/administration support. The EOP serves as the basis for response as well as recovery efforts and activities within the County.

The EOP also identifies Emergency Support Functions (ESFs) that represent core emergency response categories performed by agencies and jurisdictions with primary and supporting responsibilities within San Joaquin County. These may include public and non-government organizations. These Emergency Support Functions are based on the State of California's Emergency Function Annexes (EFs) and the Federal Emergency Support Function Annexes (ESFs).

The County OES also prepared a Hazardous Materials Area Plan (Chapter 4 of Division 2, Title 19, Article 3, §2720-2728 of the California Code of Regulations) and (California Health and Safety Code, Division 20, Chapter 6.95, Section 25503.5) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is implemented by the San Joaquin County Environmental Health Department.

The San Joaquin County Environmental Health Department also maintains a Hazardous Materials Business Plan (HMBP). The HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials.

In San Joaquin County, all major roads are available for evacuation, depending on the location and type of emergency that arises. Interstate 5, 205, 580 and Highways 99, 12, 88, 4, 120, 132, and 26 are the major transportation routes through the County. Interstate 5 and Highway 99 run north and south, while Highways 4, 12, 26, 88, 120, 132, and Interstates 205 and 580 are east and west. These major highway/freeway routes would be highly utilized by both County residents and tourists as possible evacuation routes in the event of an emergency. The proposed Project does not include any actions that would impair or physically interfere with any of San Joaquin County's emergency plans or evacuation routes. Future Project uses will have access to the County resources that establish protocols for safe use, handling and transport of hazardous materials. Construction activities are not expected to result in any unknown significant road closures, traffic detours, or congestion that could hinder the emergency vehicle access or evacuation in the event of an emergency. Implementation of the proposed Project would have a *less than significant* impact with regards to this environmental issue.

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This section describes the regulatory setting, regional hydrology and water quality, impacts that are likely to result from project implementation, and measures to reduce potential impacts to water quality. This section is based in part on the following documents, reports and studies: *City of Lathrop General Plan* (City of Lathrop, 2022), *Draft Environmental Impact Report for the Lathrop General Plan Update* (City of Lathrop, 2022), *Tracy Subbasin Groundwater Sustainability Plan* (2021), *2020 Urban Water Management Plan* (2021), *Water System Master Plan* (2018), *California's Groundwater Bulletin 118, San Joaquin Valley Groundwater Basin, Eastern San Joaquin Subbasin* (DWR, 2006), *California's Groundwater* (DWR, 2003), and *Web Soil Survey* (NRCS, 2023).

Comments were received during the public review period or scoping meeting for the Notice of Preparation regarding this topic from the Central Valley Regional Water Quality Control Board (RWQCB) (January 20, 2023) and the California Department of Transportation (Caltrans) (January 19, 2023). Each of the comments related to this topic are addressed within this section. Full comments received are included in Appendix A.

3.9.1 ENVIRONMENTAL SETTING

REGIONAL HYDROLOGY

Lathrop is located in the San Joaquin River watershed. The San Joaquin River is about 300 miles long. It begins in the Sierra Nevada mountain range on California's eastern border. The river runs down the western slope of the Sierra and flows roughly northwest through the Central Valley, to where it meets the Sacramento River at the Sacramento-San Joaquin Delta, a 1,000-square-mile maze of channels and islands that drains more than 40 percent of the state's lands (SJRG 2013).

Because the Central Valley receives relatively little rainfall (12 to 17 inches a year, falling mostly October through March), snowmelt runoff from the mountains is the main source of fresh water in the San Joaquin River. Over its 300-mile length, the San Joaquin River is fed by many other streams and rivers, most notably the Stanislaus, Tuolumne, and Merced Rivers.

Most of the surface water in the upper San Joaquin River is stored and diverted at Millerton Lakes' Friant Dam, near Fresno. From Friant Dam, water is pumped north through the Madera Canal and south through the Friant-Kern canal to irrigation districts and other water retailers, which then deliver the water directly to the end users in the southern portion of the watershed.

In the central and northern portions of the watershed, many agricultural and municipal users receive water from irrigation districts, such as the Modesto, Merced, Oakdale, South San Joaquin and Turlock Irrigation Districts. That water is provided through diversions from rivers that are tributary to the San Joaquin, such as the Mokelumne, Stanislaus, Tuolumne and Merced Rivers.

In an average year, about 1.5 million acre-feet of water is diverted from the San Joaquin River at Friant Dam, leaving little flow in the river until the Merced River joins the San Joaquin northwest of the City of Merced. Additional water also reaches the river via flows returning to the river from municipal wastewater treatment plants, as well as urban and agricultural runoff. The rest of the

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area's water supply needs are met by importing water from northern California (via the Central Valley Project) and by pumping water from the groundwater basin (SJRG 2013).

CLIMATE

Lathrop has an inland Mediterranean climate with warm, dry summers and cooler winters. The average daily maximum temperature in the Basin is 65 degrees Fahrenheit (°F), with average temperature highs of 95 °F in July. Average daily minimum temperature is 48 °F, with average temperature lows of 45 °F in January. Normal rainfall level is approximately 9 inches per year, and occurs mainly in the winter months from November to April. Thunderstorms occur on approximately three to four days in the spring, on average.

Lathrop has warm, dry days and relatively cool nights, with clear skies and limited rainfall. Winters are mild with light rains and frequent heavy fog from December to January. In summer, high temperatures often exceed 100 degrees, with averages in the low 90's in the northern valley and the high 90's in the southern valley. Summer low temperatures average in the high 50's in the northern valley and the upper 60's in the southern valley. Lathrop receives approximately 20 inches of rain per year.

WATERSHEDS

A watershed is a region that is bound by a divide that drains to a common watercourse or body of water. Watersheds serve an important biological function, oftentimes supporting an abundance of aquatic and terrestrial wildlife including special status species and anadromous and native local fisheries. Watersheds provide conditions necessary for riparian habitat.

The State uses a hierarchical naming and numbering convention to define watershed areas for management purposes. This means that boundaries are defined according to size and topography, with multiple sub-watersheds within larger watersheds. Table 3.9-1 shows the primary watershed classification levels used by the State of California. The second column indicates the approximate size that a watershed area may be within a particular classification level, although variation in size is common.

TABLE 3.9-1: STATE OF CALIFORNIA WATERSHED HIERARCHY NAMING CONVENTION

<i>WATERSHED LEVEL</i>	<i>APPROXIMATE SQUARE MILES (ACRES)</i>	<i>DESCRIPTION</i>
Hydrologic Region (HR)	12,735 (8,150,000)	Defined by large-scale topographic and geologic considerations. The State of California is divided into ten HRs.
Hydrologic Unit (HU)	672 (430,000)	Defined by surface drainage; may include a major river watershed, groundwater basin, or closed drainage, among others.
Hydrologic Area (HA)	244 (156,000)	Major subdivisions of hydrologic units, such as by major tributaries, groundwater attributes, or stream components.
Hydrologic Sub-Area (HSA)	195 (125,000)	A major segment of an HA with significant geographical characteristics or hydrological homogeneity.

SOURCE: CALWATER, CALIFORNIA INTERAGENCY WATERSHED MAPPING COMMITTEE, 2008.

Hydrologic Region

San Joaquin County is located in the San Joaquin River Hydrological Region. The San Joaquin River is the principal river of the region, and all other streams of the region are tributary to it. The Mokelumne River and its tributary the Cosumnes River originate in the central Sierra Nevada, along with the more southerly Stanislaus and Tuolumne rivers. The Merced River flows from the south-central Sierra Nevada and enters the San Joaquin near the City of Newman. The Chowchilla and Fresno rivers also originate in the Sierra south of the Merced River and trend westward toward the San Joaquin River. Creeks originating in the Coast Range and draining eastward into the San Joaquin River include Del Puerto Creek, Orestimba Creek, and Panoche Creek. Del Puerto Creek enters the San Joaquin near the City of Patterson, and Orestimba Creek enters north of the City of Newman. During flood years, Panoche Creek may enter the San Joaquin River or the Fresno Slough near the town of Mendota. The King's River is a stream of the Tulare Lake Hydrologic Region, but in flood years it may contribute to the San Joaquin River, flowing northward through the James Bypass and Fresno Slough to enter near the City of Mendota. The Mud, Salt, Berrenda, and Ash Sloughs also add to the San Joaquin River, and numerous lesser streams and creeks also enter the system, originating in both the Sierra Nevada and the Coast Range. The entire San Joaquin River system drains northwesterly through the Delta to Suisun Bay (DWR 2013, pg. SJR-5).

Local Watersheds (Hydrologic Sub-Areas)

Within the San Joaquin River Hydrological Region, the Planning Area is located in the Upper Old River, Oakwood Lake-San Joaquin River, and Town of French Camp-San Joaquin River watersheds as shown on Figure 3.9-1.

LOCAL DRAINAGE

The City provides and maintains a system of storm drains, detention basins, and pumping facilities as well as monitoring and control of the operations of the storm drain system. Additionally, the City enforces storm drain regulations established by the US EPA and the State of California.

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain (J.B. Anderson, 2016).

STORMWATER QUALITY

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

3.9 HYDROLOGY AND WATER QUALITY

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

303(d) Impaired Water Bodies

Water quality in Lathrop is governed by the CVRWQCB, which set water quality standards in their Water Quality Control Plan for the respective basins (Basin Plans). The Basin Plans identify beneficial uses for surface water and groundwater and establish water quality objectives to attain those beneficial uses.

Section 303(d) of the federal CWA requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the city and in the regional vicinity of the Planning Area that are impaired are referred to as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A

Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers and builders in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ).

Storm water runoff may play a role in the water quality impairments described above. Runoff that occurs as overland flow across yards, driveways, and public streets is intercepted by the storm water drainage system and conveyed to local drainages before eventually being routed to the Pacific. This storm water can carry pollutants that can enter the local waterways and result in the types of water quality impairments described above. Common sources of storm water pollution in the city include litter, trash, pet waste, paint residue, organic material (yard waste), fertilizers, pesticides, sediments, construction debris, metals from automobile brake pad dust, air pollutants that settle on the ground or attach to rainwater, cooking grease, illegally dumped motor oil, and other harmful fluids.

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to NPDES permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity

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of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

GROUNDWATER

In February, 2019 DWR approved a Basin Boundary Modification Request that incorporates all of the City of Lathrop in the Tracy Subbasin and removes the City from the Eastern San Joaquin Subbasin. The City has coordinated with the Tracy Subbasin Groundwater Sustainability Agencies (GSA) to develop a Groundwater Sustainability Plan (GSP) that needs to be adopted and submitted to DWR by January 31, 2022. The GSP was adopted by the City of Lathrop GSA on December 13, 2021. The Tracy Subbasin is not adjudicated, nor are any of the neighboring subbasins.

The Tracy Subbasin encompasses an area of about 238,429 acres (370 square miles) in San Joaquin and Alameda counties, primarily between the eastern extent of the Coast Ranges on the south and the San Joaquin River on the east. The Subbasin is bounded on the north and east by the San Joaquin River, on the south by the San Joaquin-Stanislaus counties border, and on the west by the aerial extent of sedimentary deposits bounded by the Coastal Ranges. The San Joaquin, Old, and Middle rivers are the principal rivers within or bordering the subbasin.

Most of the groundwater pumping occurs in the area south of Old River and east of the San Joaquin River within Lathrop. North of the Old River, surface water from the Sacramento-San Joaquin Delta, is used to meet most of the water demand. The bottom of the Subbasin is the base of fresh water which is positioned at the top of the marine sediments that contain saline water. In the Tracy Subbasin, the base of the freshwater ranges from about 400 feet to 2,000 feet beneath the Subbasin. Two principal aquifers are located with the Subbasin, an Upper confined to semi-confined aquifer and a Lower confined aquifer that are separated by a layer of clay. The Upper and Lower aquifers merge where there is an absence of the clay layer, near the southwestern portion of the Subbasin. These layers also merge north of the Old River in the northern portion of the Subbasin.

The City of Lathrop encompasses approximately 14,400 (22 square miles) of the Tracy Subbasin. Municipal water sources include groundwater pumped by five wells and treated surface water purchased from the Southern San Joaquin Irrigation District (SSJID). The surface water supplies from SSJID helps the City reduce its use of groundwater. The average water demand of the City is about 9,000 acre-feet per year (AFY) and the future buildout demand for the City is estimated at 20,000 AFY. The City's total projected groundwater supply was approximately 44 percent or 6,253 AFY in 2020. This projection is expected to increase to 7,060 AFY (47 percent) in 2028 in which the supply stays constant as the City anticipates to increase its surface water supply through buildout.

LOCAL SETTING

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

- **Project Site (or Annexation Area)** – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. Figures 2.0-1 and 2.0-2 in Chapter 2.0 show the Project's regional location and vicinity.

The Project Area topography ranges greatly in elevation from approximately 8 to 21 feet above sea level. The high area is located in the eastern portion of the site while the low area is located in the western portion of the site. The majority of the Project Area is generally characterized as flat.

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), a foundation from a previously demolished abandoned structure, and impervious area. The footprint of the abandoned structure was approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf.

The Project site is bordered by San Joaquin County land to the north, west, and south, while the Project site borders land located within the current boundaries of the City of Lathrop to the east. The City of Stockton city limits are located approximately 1,000 feet to the northeast of the Project site. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and residential land to the north. An aerial view of the Project site and its surrounding uses is provided in Figure 2.0-4.

FLOODPLAIN MAPPING

FEMA Flood Zones

Federal Emergency Management Agency (FEMA) mapping provides important guidance for the City in planning for flooding events and regulating development within identified flood hazard areas. FEMA's National Flood Insurance Program (NFIP) is intended to encourage State and local governments to adopt responsible floodplain management programs and flood measures. As part of the program, the NFIP defines floodplain and floodway boundaries that are shown on Flood Insurance Rate Maps (FIRMs). The FEMA FIRM for the Project site is shown on Figure 3.9-2.

Areas that are subject to flooding are indicated by a series of alphabetical symbols, indicating anticipated exposure to flood events:

- **Zone A:** Subject to 100-year flooding with no base flood elevation determined. Identified as an area that has a one percent chance of being flooded in any given year.
- **Zone AE:** Subject to 100-year flooding with base flood elevations determined.

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- **Zone AH:** Subject to 100-year flooding with flood depths between one- and three-feet being areas of ponding with base flood elevations determined.
- **500-year Flood Zone:** Subject to 500-year flooding. Identified as an area that has a 0.2 percent chance of being flooded in a given year.
- **Zone X, Area with Reduced Risk Due to Levee:** This zone includes areas that would be flooded if a 500-year flood occurred but has a reduced risk of flooding due to levee protection.

The Project site is not located in the 500-year or 100-year flood zones. As shown in Figure 3.9-2, the Project site is located in an area with reduced flood risk due to levee (Zone X).

SB 5 Flood Zones

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB5) requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year Urban Level of flood protection (or a finding of adequate progress toward 200-year flood protection) in order to approve development. The 200-year floodplain for the Project site, as mapped for the City of Lathrop and San Joaquin County, is also shown on Figure 3.9-2. As shown in the figure, the entire Project site is located in the 200-year floodplain.

RD 17 created a Joint Powers Authority (JPA) that includes San Joaquin County, Stockton, Manteca, and Lathrop to issue bonds to fund the local share of Phase 1 through 3 Improvements to the RD 17 levees. Lathrop is working with RD 17 to update that JPA to fund the local share of the needed Urban Level of Protection (ULOP) improvements to the RD 17 levees, to adopt fee programs and/or exactions paid and advanced from property owners in areas of entitled and planned development within RD17, and a new Enhanced Infrastructure Financing District. As of February 2016, Lathrop and Manteca have funded the required Urban Levee Design Criteria analysis of the RD 17 levees, identified the 200-year floodplain, calculated an estimated cost to provide the ULOP improvements, and requested State funds for the State share of this work. Lathrop will continue to work with all public agencies within RD 17 to provide for final design and construction of ULOP improvements that will allow findings of Adequate Progress toward providing ULOP as the improvements are constructed.

The San Joaquin Area Flood Control Agency (SJAFCA) is a Joint Powers Authority that was created in May 1995 for the purpose of addressing flood protection for the City of Stockton and surrounding County. On November, 16, 2017, the Joint Exercise of Powers Agreement was expanded to include the Cities of Lathrop and Manteca. SJAFCA coordinates and partners with State and Federal agencies to address FEMA's Flood Insurance Rate Maps, levee standards, and flood protection issues.

Dam Failure

The Project Area is located within the dam failure inundation area for the New Melones Dam, Don Pedro Dam, SanLuis Reservoir Dam, and New Exchequer Dam. Potential inundation from the these dams are shown in Figure 3.9-3. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. Larger dams that are higher than 25 feet or with storage capacities over 50 AF of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, Division of Safety of Dams (DSD). The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing, maintaining, and implementing the Local Hazard Mitigation Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Stormwater Quality

Potential hazards to surface water quality include the following nonpoint pollution problems: high turbidity from sediment resulting from erosion of improperly graded construction projects, concentration of nitrates and dissolved solids from agriculture or surfacing septic tank failures, contaminated street and lawn run-off from urban areas, and warm water drainage discharges into cold water streams.

The most critical period for surface water quality is following a rainstorm which produces significant amounts of drainage runoff into streams at low flow, resulting in poor dilution of contaminants in the low flowing stream. Such conditions are most frequent during the fall at the beginning of the rainy season when stream flows are near their lowest annual levels. Besides the greases, oils, pesticides, litter, and organic matter associated with such runoff, heavy metals such as copper, zinc, and cadmium can cause considerable harm to aquatic organisms when introduced to streams in low flow conditions.

Urban stormwater runoff was managed as a non-point discharge (a source not readily identifiable) under the Federal Water Pollution Control Amendments of 1972 (PL 92-500, Section 208) until the mid-1980's. However, since then, the Federal Environmental Protection Agency has continued to develop implementing rules which categorize urban runoff as a point source (an identifiable source) subject to National Pollution Discharge Elimination System (NPDES) permits. Rules now affect medium and large urban areas, and further rulemaking is expected as programs are developed to meet requirements of Federal water pollution control laws.

Surface water pollution is also caused by erosion. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

3.9 HYDROLOGY AND WATER QUALITY

303(D) IMPAIRED WATER BODIES

Section 303(d) of the federal Clean Water Act requires States to identify waters that do not meet water quality standards or objectives and thus, are considered "impaired." Once listed, Section 303(d) mandates prioritization and development of a Total Maximum Daily Load (TMDL). The TMDL is a tool that establishes the allowable loadings or other quantifiable parameters for a waterbody and thereby the basis for the States to establish water quality-based controls. The purpose of TMDLs is to ensure that beneficial uses are restored and that water quality objectives are achieved.

According to the California Water Quality Control Monitoring Council, which is part of California Environmental Protection Agency, Natural Resources, there are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the city and in the regional vicinity of the Planning Area that are impaired are referred as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

3.9.2 REGULATORY SETTING

There are a number of regulatory agencies whose responsibility includes the oversight of the water resources of the state and nation including the Federal Emergency Management Agency, the US Environmental Protection Agency, the State Water Resources Board, and the Regional Water Quality Control Board. The following is an overview of the federal, state and local regulations that are applicable to the proposed Project.

FEDERAL

Clean Water Act

The CWA, initially passed in 1972, regulates the discharge of pollutants into watersheds throughout the nation. Section 402(p) of the act establishes a framework for regulating municipal and industrial stormwater discharges under the National Pollutant Discharge Elimination System (NPDES) Program. Section 402(p) requires that stormwater associated with industrial activity that discharges either directly to surface waters or indirectly through municipal separate storm sewers must be regulated by an NPDES permit.

The CWA establishes the basic structure for regulating the discharges of pollutants into the waters of the United States and gives the US Environmental Protection Agency (EPA) the authority to implement pollution control programs. The statute's goal is to regulate all discharges into the nation's waters and to restore, maintain, and preserve the integrity of those waters. The CWA sets water quality standards for all contaminants in surface waters and mandates permits for wastewater and stormwater discharges.

The CWA also requires states to establish site-specific water quality standards for navigable bodies of water and regulates other activities that affect water quality, such as dredging and the filling of wetlands. The following CWA sections assist in ensuring water quality for the water of the United States:

CWA Section 208 requires the use of best management practices (BMPs) to control the discharge of pollutants in stormwater during construction CWA Section 303(d) requires the creation of a list of impaired water bodies by states, territories, and authorized tribes; evaluation of lawful activities that may impact impaired water bodies, and preparation of plans to improve the quality of these water bodies. CWA Section 303(d) also establishes TMDLs, which is the maximum amount of a pollutant that a water body can receive and still safely meet water quality standards CWA Section 404 authorizes the US Army Corps of Engineers to require permits that will discharge dredge or fill materials into waters in the US, including wetlands.

In California, the EPA has designated the SWRCB and its nine RWQCBs with the authority to identify beneficial uses and adopt applicable water quality objectives.

The SWRCB is responsible for implementing the CWA and does so through issuing NPDES permits to cities and counties through regional water quality control boards. Federal regulations allow two permitting options for storm water discharges (individual permits and general permits).

Federal Emergency Management Agency

FEMA operates the NFIP. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the California Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

Flood Control Act

The Flood Control Act (1917) established survey and cost estimate requirements for flood hazards in the Sacramento Valley. All levees and structures constructed per the Act were to be maintained locally but controlled federally. All rights of way necessary for the construction of flood control infrastructure were to be provided to the Federal government at no cost.

Federal involvement in the construction of flood control infrastructure, primarily dams and levees, became more pronounced upon passage of the Flood Control Act of 1936.

Flood Disaster Protection Act (FDPA)

The FDPA of 1973 was a response to the shortcomings of the NFIP, which were experienced during the flood season of 1972. The FDPA prohibited Federal assistance, including acquisition, construction, and financial assistance, within delineated floodplains in non-participating NFIP

3.9 HYDROLOGY AND WATER QUALITY

communities. Furthermore, all Federal agencies and/or federally insured and federally regulated lenders must require flood insurance for all acquisitions or developments in designated Special Flood Hazard Areas (SFHAs) in communities that participate in the NFIP.

Improvements, construction, and developments within SFHAs are generally subject to the following standards:

- All new construction and substantial improvements of residential buildings must have the lowest floor (including basement) elevated to or above the base flood elevation (BFE).
- All new construction and substantial improvements of non-residential buildings must either have the lowest floor (including basement) elevated to or above the BFE or dry-floodproofed to the BFE.
- Buildings can be elevated to or above the BFE using fill, or they can be elevated on extended foundation walls or other enclosure walls, on piles, or on columns.
- Extended foundation or other enclosure walls must be designed and constructed to withstand hydrostatic pressure and be constructed with flood-resistant materials and contain openings that will permit the automatic entry and exit of floodwaters. Any enclosed area below the BFE can only be used for the parking of vehicles, building access, or storage.

National Flood Insurance Program (NFIP)

Per the National Flood Insurance Act of 1968, the NFIP has three fundamental purposes: *Better indemnify individuals for flood losses through insurance; Reduce future flood damages through State and community floodplain management regulations; and Reduce Federal expenditures for disaster assistance and flood control.*

While the Act provided for subsidized flood insurance for existing structures, the provision of flood insurance by FEMA became contingent on the adoption of floodplain regulations at the local level.

National Pollutant Discharge Elimination System

NPDES permits are required for discharges to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, oceans, dry stream beds, wetlands, and storm sewers that are tributary to any surface water body. NPDES permits are issued under the Federal CWA, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the EPA Regional Administrator (EPA Region 9). The terms of these NPDES permits implement pertinent provisions of the Federal CWA and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti-degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the CWA's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

Individual projects in the City that disturb more than one acre would be required to obtain NPDES coverage under the California General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Construction General Permit). The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP) describing Best Management Practices (BMP) the discharger would use to prevent and retain storm water runoff. The SWPPP must contain a visual monitoring program; a chemical monitoring program for “non-visible” pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Rivers and Harbors Appropriation Act of 1899

One of the country’s first environmental laws, this Act established a regulatory program to address activities that could affect navigation in Waters of the United States.

Water Pollution Control Act of 1972

The Water Pollution Control Act (WPCA) established a program to regulate activities that result in the discharge of pollutants to waters of the United States

STATE

California Fish and Wildlife Code

The California Department of Fish and Wildlife (CDFW) protects streams, water bodies, and riparian corridors through the streambed alteration agreement process under Section 1600 to 1616 of the California Fish and Game Code. The California Fish and Game Code establishes that “an entity may not substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river stream, or lake” (Fish and Game Code Section 1602(a)) without notifying the CDFW, incorporating necessary mitigation and obtaining a streambed alteration agreement. The CDFW’s jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

California Code of Regulations

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Government Code

Relevant sections of the California Government Code are identified below.

SECTION 65302

Revised safety elements must include maps of any 200-year flood plains and levee protection zones within the Planning Area.

SECTION 65584.04

Any land having inadequate flood protection, as determined by FEMA or DWR, must be excluded from land identified as suitable for urban development within the planning area.

SECTION 8589.4

California Government Code §8589.4, commonly referred to as the Potential Flooding-Dam Inundation Act, requires owners of dams to prepare maps showing potential inundation areas in the event of dam failure. A dam failure inundation zone is different from a flood hazard zone under the National Flood Insurance Program (NFIP). NFIP flood zones are areas along streams or coasts where storm flooding is possible from a “100-year flood.” In contrast, a dam failure inundation zone is the area downstream from a dam that could be flooded in the event of dam failure due to an earthquake or other catastrophe. Dam failure inundation maps are reviewed and approved by the California Office of Emergency Services (OES). Sellers of real estate within inundation zones are required to disclose this information to prospective buyers.

California Department of Health Services

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

Consumer Confidence Report Requirements

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

California Water Code

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the SWRCB and each of the RWQCBs power to protect water quality and is the primary vehicle for implementation of California's responsibilities under the Federal CWA. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites, and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a Water Quality Control Plan (Basin Plan) for its region. The regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

Assembly Bill 162

Assembly Bill (AB) 162 requires a general plan's land use element to identify and annually review those areas covered by the general plan that are subject to flooding as identified by flood plain mapping prepared by FEMA or DWR. The bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the conservation element of the general plan to identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management. By imposing new duties on local public officials, the bill creates a State-mandated local program.

This bill also requires, upon the next revision of the housing element, on or after January 1, 2009, the safety element to identify, among other things, information regarding flood hazards and to establish a set of comprehensive goals, policies, and objectives, based on specified information for the protection of the community from, among other things, the unreasonable risks of flooding.

Assembly Bill 70

AB 70 provides that a city or county may be required to contribute its fair and reasonable share of the property damage caused by a flood to the extent that it has increased the State's exposure to liability for property damage by unreasonably approving, as defined, new development in a previously undeveloped area, as defined, that is protected by a State flood control project, unless the city or county meets specified requirements.

Senate Bill 610 and Assembly Bill 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

Senate Bill 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a "sufficient water supply" exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

State Updated Model Landscape Ordinance

Under AB 1881, the updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Ordinance.

Water Quality Control Basin Plan

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins (Basin Plan), amended by the CVRWQCB in 2018, identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and SJR basins, including the Delta.

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

State Water Resources Control Board Storm Water Strategy

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board’s role in storm water resources management and evolve the Storm Water Program by a) developing guiding principles to serve as the foundation of the storm water program, b) identifying issues that support or inhibit the program from aligning with the guiding principles, and c) proposing and prioritizing projects that the Water Boards could implement to address those issues.

The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board’s Storm Water Program.

REGIONAL

Tracy Subbasin Groundwater Sustainability Plan

The Sustainable Groundwater Management Act (SGMA) requires local GSAs in high- and medium-priority basins to develop and implement GSPs or to develop Alternatives to GSPs. GSPs provide a roadmap for how groundwater basins will reach long-term sustainability.

The City is located within the Tracy Subbasin as of February 2019 and has been in coordination with the GSA to develop a Groundwater Sustainability Plan (GSP). The GSP must be adopted and submitted to the DWR by January 31, 2022. The City’s GSP was adopted by the City of Lathrop GSA in December 2021.

The GSP covers the entire Subbasin. The Subbasin encompasses an area of about 238,429 acres (370 square miles) in San Joaquin and Alameda counties, primarily between the eastern extent of the

3.9 HYDROLOGY AND WATER QUALITY

Coast Ranges on the south and the San Joaquin River on the east. The Subbasin is bounded on the north and the east by the San Joaquin River, on the south by the San Joaquin-Stanislaus counties border, and on the west by the aerial extent of sedimentary deposits bounded by the Coastal Ranges. Six agencies filed with DWR to become GSAs to cover the entire Subbasin. DWR designated them as exclusive in 2016 and 2017. In 2018, the Subbasin boundaries were modified which resulted in the formation of the East Contra Costa Subbasin and inclusion of the City of Lathrop areas into the Tracy Subbasin. The six GSAs in the Subbasin are: Banta-Carbona Irrigation District; Byron-Bethany Irrigation District; City of Lathrop; City of Tracy; County of San Joaquin; and Stewart Tract.

Projects and management actions were selected by the GSAs for implementation to meet measurable objectives by 2042 and to maintain groundwater levels above minimum thresholds. The Subbasin Non-Delta Management Area is projected to have a deficit of about 700 AFY based on projected changes in the Subbasin including climate change forecasted for 2065. Assessing the deficit by principal aquifer has shown the Upper aquifer has a deficit of about 800 AFY while the Lower aquifer is in surplus by 100 AFY. Because the aquifers are so close to being in balance and within the uncertainty of the model, projects are proposed for both aquifers. The project selected is to augment water supplies to resolve chronic lowering of groundwater levels and change in storage in the Upper aquifer. Management actions have been selected to limit the potential to increase surface water depletion with additional benefits towards GDEs.

LOCAL

City of Lathrop General Plan

POLICIES: PUBLIC SAFETY ELEMENT

- PS-3.4: Evaluate Hazards. Require evaluation of potential flood hazards prior to approval of development projects to determine whether the proposed development is reasonably safe from flooding and consistent with California Department of Water Resources Urban Level of Flood Protection Criteria (ULOP). The City shall not approve the execution of a development agreement, a tentative map, or a parcel map for which a tentative map is not required, or a discretionary permit or other discretionary entitlement that would result in the construction of a new building, or construction that would result in an increase in allowed occupancy for an existing building, or issuance of a ministerial permit that would result in the construction of a new residence for property that is located within a 200-year flood hazard zone, unless the adequacy of flood protection as described in Government Code §65865.5(a), 65962(a), or 66474.5(a), has been demonstrated.
- PS-3.7: Mitigation. Require all development projects to demonstrate how storm water runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for offsite flooding.

- PS-3.8: Construction Activities. Ensure that construction activities will not result in adverse impacts to existing flood control and drainage facilities, and adequate drainage and erosion control measures are provided during construction of new development.
- PS-3.9: Adequate Infrastructure. Maintain and regularly assess the status of local storm drainage infrastructure to ensure that the system is functioning properly.

POLICIES: PUBLIC FACILITIES AND SERVICES ELEMENT

- PFS-4.1: Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.
- PFS-4.2: Regional Partnerships. Continue to work cooperatively with the San Joaquin Area Flood Control Agency and other outside agencies to meet SB-5 requirements to provide a 200-year Urban Level of Protection and other needs and priorities relative to storm drainage issues. Also, continue to participate with the San Joaquin Valley Stormwater Quality Partnership to meet objectives related to compliance with the City's Small MS4 Phase 2 permit.
- PFS-4.3: Maintenance Districts. Continue to fund the operation and maintenance of stormwater facilities and regulatory compliance through the creation of maintenance districts and/or other appropriate mechanisms that avoid burdening the City's finances.
- PFS-4.4: National Programs. Cooperate in regional programs to implement the National Pollutant Discharge Elimination System program.
- PFS-4.5: Development Review. Continue to require all development projects to:
 - A. Demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process and as required by the City's Small MS4 Phase 2 permit; and
 - B. Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.
- PFS-4.6: Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.
- PFS-4.7: Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rainwater for non-potable uses in compliance with applicable State regulations.
- PFS-4.8: Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.
- PFS-4.9: Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.

3.9 HYDROLOGY AND WATER QUALITY

- PFS-4.10: Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.

POLICIES: RECREATION AND RESOURCES ELEMENT

- RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.
- RR-8.7: Groundwater Recharge. Promote the use of permeable surface materials and provide for ample areas of open space, including parks and greenways, and naturalized land, in order to decrease surface runoff and promote groundwater recharge.

ACTIONS: PUBLIC SAFETY ELEMENT

- PS-3g: Continue to review development projects to identify potential stormwater and drainage impacts and require new, unentitled development to include measures to ensure that off-site runoff is not increased during rain and flood events. As part of the development review process, require developers to prepare hydrological studies as necessary. Studies shall encompass the project site as well as the entire drainage area.

ACTIONS: PUBLIC FACILITIES AND SERVICES ELEMENT

- PFS-4d: Continue to review development projects to identify potential stormwater and drainage impacts and require development to include measures to ensure that off-site runoff is not increased beyond pre-development levels during rain and flood events.
- PFS-4e: Project designs should minimize drainage concentrations, minimize impervious coverage, utilize pervious paving materials, utilize low impact development (LID) strategies, and utilize Best Management Practices (BMPs) to reduce stormwater runoff.
- PFS-4f: Promote the use of LID strategies in new development and redevelopment projects, including but not limited to the use of canopy trees and shrubs, vegetated swales, and permeable paving.
- PFS-4g: Require new development to mitigate increases in stormwater peak flows and/or volume. Mitigation measures, such as LID strategies, should take into consideration impacts on adjoining lands in the City.

ACTIONS: RECREATION AND RESOURCES ELEMENT

- RR-4c: Require new development which has the potential to result in water quality impacts to the City's waterways and the local groundwater basin to implement all feasible mitigation measures to reduce impacts.

City of Lathrop Municipal Code

CHAPTER 12.28: PROTECTION OF WATER COURSES

Section 12.28.020: Rules and regulations.

- A. It shall be unlawful for any person to interfere with, destroy or use in any manner whatsoever any levee, embankment, channel, dam, reservoir, rain or stream gauges, telephone line, piling; or other stream protection work constructed by the city or by any drainage district organized under the laws of the state, without having received a written permit therefor from the public works director, which permit shall be revocable whenever, in the opinion of the public works director the public interest and welfare require the revocation thereof. Application for the use of any levee, embankment, channel, dam or reservoir shall be made to the public works director, setting forth the particular use desired, and the purpose and duration thereof. The public works director shall investigate such applications and may impose such terms and conditions as may be necessary to insure the proper maintenance of the property for flood control and drainage purposes.
- B. It shall be unlawful for any person to place on or cause to be placed in any drainage ditch, water course, channel or conduit, or upon any property over which the city or any drainage district has an easement for flood control or drainage purposes duly recorded in the office of the city clerk, any wires, fence, building or other structure, or any refuse, rubbish, tin cans or other matter that may impede, retard or change the direction of the flow of water in such drainage ditch, water course, channel or conduit, or that will catch or collect debris carried by such water, or is placed where the natural flow of the storm and flood waters would carry the same downstream to the damage and detriment of either private or public property adjacent to said drainage ditch, water course, channel or conduit.
- C. It shall be unlawful for any person to change the drainage on his or her property so as to divert the drainage to the nearest public road, without first obtaining a permit to do so from the public works director.
- D. It shall be unlawful for any person to fill or obstruct or maintain any fill or obstruction in any drainage ditch, water course, channel or conduit carrying storm or drainage water unless a permit to do so has been obtained from the public works director.
- E. It shall be unlawful for any person to do anything to any drainage ditch, water course, channel or conduit carrying storm or drainage water that will in any manner obstruct or interfere with the flow of water through such ditches, water courses, channels or conduits unless a permit to do so has been obtained from the public works director.
- F. It shall be unlawful for any person to level land in a manner which would flood adjacent properties or public roadways.
- G. Every property owner, whether it be a person or his lessee or tenant, through whose property a drainage ditch, water course, channel or conduit carrying storm or drainage water passes, shall keep and maintain the same free from obstacles that will prevent or retard the flow of water through such ditch, water course, channel or conduit except that same may be filled or altered if a permit to do so has been first obtained pursuant to this chapter. (Prior code § 158.02)

CHAPTER 13.28 – STORMWATER MANAGEMENT AND DISCHARGE CONTROL

Section 13.28.020: Purpose and intent.

The purpose of this chapter is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the city of Lathrop, pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. Section 1251 et seq.) and the Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.). This chapter seeks to meet that purpose through the following objectives:

- A. To comply with all federal and state laws, lawful standards and orders applicable to stormwater and urban runoff pollution control;
- B. To prohibit any discharge which may interfere with the operation of, or cause any damage to the storm drain system or impair the beneficial use of the receiving waters;
- C. To prohibit illicit discharges into the storm drain system;
- D. To reduce non-stormwater discharge to the storm drain system to the maximum extent practicable;
- E. Minimize increases in stormwater and runoff from any development in order to reduce flooding, siltation, and streambank erosion and maintain the integrity of drainage channels;
- F. Minimize nonpoint source pollution caused by stormwater runoff from development that would otherwise degrade local water quality; and
- G. Minimize the total annual volume of surface water runoff that flows from any specific site during and following development. (Ord. 07-265 § 1)

Section 13.28.130: Requirement to prevent, control and reduce stormwater pollutants.

- A. Authorization to Adopt and Impose Best Management Practices (BMPs). The city may adopt requirements identifying best management practices for any activity, operation, or facility which may cause or contribute to pollution or contamination of stormwater, the storm drain system, or waters of the United States. Where best management practice requirements are promulgated by the city or any federal, state of California, or regional agency for any activity, operation, or facility which would otherwise cause the discharge of pollutants to the storm drain system or a waters of the United States, every person undertaking such activity or operation, or owning or operating such facility shall comply with such requirements.
- B. New Development and Redevelopment. The city may adopt requirements identifying appropriate design standards and best management practices to control the volume, rate, and potential pollutant load of stormwater runoff from new development and redevelopment projects as may be appropriate to minimize the generation, transport and discharge of pollutants. The city shall incorporate such requirements in any land use entitlement and construction or building-related permit to be issued relative to such development or redevelopment. The owner and developer shall comply with the terms, provisions, and conditions of such land use entitlements and building permits as required in this chapter.

- C. Responsibility to Implement Best Management Practices. Notwithstanding the presence or absence of requirements promulgated pursuant to subsections A and B of this section, any person engaged in activities or operations, or owning facilities or property which will or may result in pollutants entering stormwater, the storm drain system, or waters of the United States shall implement best management practices to the extent they are technologically achievable to prevent and reduce such pollutants. The owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense.
- D. Maintenance Agreements. All structural and nonstructural permanent stormwater BMPs not in the control of the city of Lathrop shall have an enforceable maintenance agreement to ensure the system functions as designed. The agreement shall include any and all maintenance easements required to access and inspect the stormwater BMPs, and to perform routine maintenance as required. Such agreements shall specify the parties responsible for the proper maintenance of all stormwater BMPs.

CHAPTER 17.17 – 200-YEAR FLOOD PROTECTION

Section 17.17.010 Intent.

This chapter implements the requirements of Senate Bill 5 (2007) and related legislation that prohibit approval of urban development in urban and urbanizing areas that are exposed to 200-year flooding risk unless certain findings are made. These requirements are established in the California Government Code at Sections 65865.5, 65962 and 66474.5, as amended. (Ord. 16-361 § 1)

Section 17.17.030: 200-year flood protection requirements for new development.

After July 2, 2016, unless that date is amended by the State Legislature, new development shall not be approved where 200-year flooding, as shown on a 200-year floodplain map, will exceed three feet in depth, or in flood hazard zones where 200-year floodplain maps have not been approved by the city engineer, unless the approval authority determines based on substantial evidence in the record that:

- A. The facilities of the State Plan of Flood Control or other flood management facilities protect the new development site to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in non-urbanized areas; or
- B. Conditions imposed on the new development will protect the property to the urban level of flood protection in urban and urbanizing areas or the national Federal Emergency Management Agency standard of flood protection in non-urbanized areas; or
- C. The local flood management agency has made adequate progress on the construction of a flood protection system that will result in flood protection equal to or greater than the urban level of flood protection in urban or urbanizing areas, or the national Federal Emergency

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Management Agency standard of flood protection in non-urbanized areas, for a new development site located within a flood hazard zone intended to be protected by the system. For urban and urbanizing areas protected by project levees, the urban level of flood protection shall be achieved by 2025; or

- D. The new development site located in an undetermined risk area has met the urban level of flood protection based on substantial evidence in the record. (Ord. 16-361 § 1)

City of Lathrop Stormwater Management Program

The City has an adopted a stormwater management program (SWMP) for compliance with requirements of the Phase 2 NPDES municipal stormwater permit. The SWMP is composed of six program elements developed to reduce contaminants discharged into receiving water bodies. The six Minimum Control Measure (MCM) elements of the SWMP are public education and outreach, public involvement/participation, illicit discharge detection and elimination, construction site runoff control, post construction runoff control in new development and redevelopment, and pollution prevention/good housekeeping for municipal operations. For each MCM, the City has selected a suite of BMPs and measurable goals to address the specific stormwater problems identified within the city limits.

In association with the SWMP, the City adopted a Storm Water Ordinance, construction standards, and design review guidelines to reduce contaminants in stormwater runoff. Of particular relevance to the proposed project is the City's coordination of BMP review and implementation under the construction site runoff control program. New development and redevelopment control measures include development of structural controls, development of nonstructural controls, development of ordinances or regulatory mechanisms, and development of long-term operation and maintenance (O&M) practices.

Pollution prevention/good housekeeping for municipal operations addresses routine O&M activities for drainage systems, roadways, parks and open spaces, and other municipal operations to help ensure a reduction in pollutants entering the storm sewer system. The pollution prevention/good housekeeping program also includes a training component to prevent and reduce stormwater pollution from municipal operations. The pollution prevention/good housekeeping BMPs can be separated into two broad categories: source controls and materials management.

Source controls are BMPs designed to prevent or reduce pollutants at the source and include BMPs such as storm drainage system maintenance, structural floatable controls, street maintenance staff training, flood control projects, and litter ordinances. Materials management BMPs are designed to reduce pollutants with nonstructural controls such as pesticide education and spill prevention control.

3.9.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

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

- Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would:
 - Result in substantial erosion or siltation on- or off-site;
 - Substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site;
 - Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
 - Impede or redirect flood flows;
- In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation; and/or
- Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

IMPACTS AND MITIGATION

Impact 3.9-1: The proposed Project has the potential to violate water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Less than Significant)

According to the United States Environmental Protection Agency, polluted stormwater runoff is a leading cause of impairment to the nearly 40 percent of surveyed U.S. water bodies which do not meet water quality standards. Over land or via storm sewer systems, polluted runoff is discharged, often untreated, directly into local water bodies. Soil erosion is one of the most common sources of polluted stormwater runoff during construction activities. When left uncontrolled, storm water runoff can erode soil and cause sedimentation in waterways, which collectively result in the destruction of fish, wildlife, and aquatic life habitats; a loss in aesthetic value; and threats to public health due to contaminated food, drinking water supplies, and recreational waterways.

Mandated by Congress under the Clean Water Act, the NPDES Stormwater Program is a comprehensive two-phased national program for addressing the non-agricultural sources of

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stormwater discharges which adversely affect the quality of our nation's waters. The program uses the National Pollutant Discharge Elimination System (NPDES) permitting mechanism to require the implementation of controls designed to prevent harmful pollutants, including soil erosion, from being washed by stormwater runoff into local water bodies. The construction activities for the proposed project would be governed by the General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), which states:

“...Particular attention must be paid to large, mass graded sites where the potential for soil exposure to the erosive effects of rainfall and wind is great and where there is potential for significant sediment discharge from the site to surface waters. Until permanent vegetation is established, soil cover is the most cost-effective and expeditious method to protect soil particles from detachment and transport by rainfall. Temporary soil stabilization can be the single most important factor in reducing erosion at construction sites. The discharger is required to consider measures such as: covering disturbed areas with mulch, temporary seeding, soil stabilizers, binders, fiber rolls or blankets, temporary vegetation, and permanent seeding. These erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. Erosion control BMPs should be the primary means of preventing storm water contamination, and sediment control techniques should be used to capture any soil that becomes eroded....”

General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ) further states that:

“Sediment control BMPs should be the secondary means of preventing storm water contamination. When erosion control techniques are ineffective, sediment control techniques should be used to capture any soil that becomes eroded. The discharger is required to consider perimeter control measures such as: installing silt fences or placing straw wattles below slopes. These sediment control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed.... Inappropriate management of run-on and runoff can result in excessive physical impacts to receiving waters from sediment and increased flows. The discharger is required to manage all run-on and runoff from a Specific Plan Area. Examples include: installing berms and other temporary run-on and runoff diversions.... All measures must be periodically inspected, maintained and repaired to ensure that receiving water quality is protected. Frequent inspections coupled with thorough documentation and timely repair is necessary to ensure that all measures are functioning as intended....”

CONSTRUCTION PHASE

Grading, excavation, removal of vegetation cover, and loading activities associated with construction activities could temporarily increase runoff, erosion, and sedimentation. Construction

activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at construction sites and staging areas.

To ensure that construction activities are covered under General Permit 2009-0009-DWQ (amended by 2010-0014-DWQ & 2012-0006-DWQ), projects in California with land disturbance of one-acre or more must prepare a SWPPP containing BMPs to reduce erosion and sediments to meet water quality standards. Such BMPs may include: temporary erosion control measures such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, and temporary revegetation or other ground cover. The BMPs and overall SWPPP is submitted to the Regional Water Quality Control Board and the City as part of the permitting process. Once submitted, the SWPPP is kept on site and implemented during construction activities and must be made available upon request to representatives of the RWQCB and/or the City.

In accordance with the NPDES Stormwater Program, the Project would be subject to the existing regulatory requirements to prepare a SWPPP designed to control erosion and the loss of topsoil to the extent practicable using BMPs that the RWQCB has deemed effective in controlling erosion, sedimentation, runoff during construction activities. The RWQCB has stated that these erosion control measures are only examples of what should be considered and should not preclude new or innovative approaches currently available or being developed. The specific controls are subject to the review and approval by the RWQCB and are an existing regulatory requirement. Implementation of the proposed Project would have a *less than significant* impact relative to this topic.

OPERATIONAL PHASE

The long-term operations of the proposed Project (all phases) could result in long-term impacts to surface water quality from urban stormwater runoff. The proposed Project would result in increased impervious area at the site as a result of the proposed development. Normal activities in these developed areas include the use of various automotive petroleum products (i.e., oil, grease, and fuel), common household hazardous materials, heavy metals, pesticides, herbicides, fertilizers, and sediment. Within urban areas, these pollutants are generally called nonpoint source pollutants. The pollutant levels vary based on factors such as time between storm events, volume of storm event, type of uses, and density of people.

As discussed in Chapter 2.0, development of the proposed Project would include construction of a new storm drainage system, including a drainage collection system, and a private storm water retention basin. A 7.5-foot-deep private storm water retention basin would be located in the southern portion of the Project site, and a landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. Typically, storm water is collected into detention basins and then pumped out within 24 to 48 hours following the storm. The final design of all onsite and offsite storm drain infrastructure improvements is subject to the review and approval of the City of Lathrop.

The ongoing operational phase of the proposed project requires discharge of stormwater into the retention basin. The water would percolate into the underlying groundwater. The discharge of

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stormwater must be treated through BMPs prior to its discharge. The Lathrop Municipal Code provides rules and regulations to manage and control stormwater and discharge (Chapter 13.28). Section 13.28.120 requires compliance with all applicable NPDES permits. Additionally, Section 13.28.130 specifically provides requirement to prevent, control, and reduce stormwater pollutants. This includes requirements to implement BMPs to the extent they are technologically achievable to prevent and reduce pollutants. Under this requirement, the owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense.

The ongoing operational phase of the proposed Project requires the final discharge of stormwater into the on-site detention basins. The discharge of stormwater must be treated through BMPs prior to its discharge. The City of Lathrop implements BMPs to the extent they are technologically achievable to prevent and reduce pollutants.

In accordance with the City's Storm Water Master Plan (SWMP) and NPDES Stormwater Program (General Industrial Stormwater Permit), BMPs would be implemented to reduce the amount of pollution in stormwater discharged from the project site. The management of water quality through the requirement to obtain a General Industrial Stormwater Permit and implement appropriate BMPs would ensure that water quality does not degrade to levels that would violate water quality standards. These are existing regulatory requirements. Implementation of the proposed project would have a *less than significant* impact relative to this topic.

Impact 3.9-2: Project implementation could deplete groundwater supplies or interfere substantially with groundwater recharge. (Less than Significant)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

Table 3.9-2 below identifies the soils in the Project site and the soils infiltration rate. The Project Area has soils with hydrologic ratings of "A" and "C". Group "A" soils have low runoff potential when thoroughly wet, and Group "C" soils have moderately high runoff potential when thoroughly wet.

TABLE 3.9-2: SOILS HYDROLOGIC RATING

<i>DESCRIPTION</i>	<i>SOURCE MATERIAL</i>	<i>RATING</i>
Manteca fine sandy loam	Alluvium derived from mixed rock sources	C
Veritas fine sandy loam	Alluvium derived from mixed rock sources	A

SOURCE: NCRS 2023.

Development of the Project Area with impervious surfaces could reduce rainwater infiltration and groundwater recharge further. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project's storm drainage system. Stormwater would be gravity fed and eventually flow to the proposed retention basin. Once at the retention basis, water would percolate to underground groundwater stores.

As detailed in the City's 2020 UWMP and mentioned previously in this section, the City's groundwater wells are located in the Tracy Subbasin and the City is part of Tracy Subbasin GSA. The City was a part of the development of the GSP for the Tracy Subbasin in 2021. Based on the GSP for the Tracy Subbasin, and statements in the 2020 UWMP, the City's groundwater supplies are expected to be highly reliable.

As discussed in Section 3.15, Utilities and Service Systems, of the City's General Plan Draft EIR, the City's 2020 UWMP documents current and projects future water demands and supplies through 2040. Water supplies to meet future demands include surface water purchased from SSJID, City produced groundwater and recycled water. The City's water supply is projected to increase by about 54 percent from 2020 to 2040, primarily due to implementation of the City's UMWP. Future City groundwater pumping is estimated based on the safe yield for all groundwater pumping within the City's planning area which is not predicted to experience any additional restrictions as a result of the City's GSP.

The City plans to utilize its existing groundwater wells to supply water in the future. As discussed in the City's UWMP the current estimated annual groundwater yield is 4,720 AFY and the City currently has no plans to install additional groundwater wells or expand its groundwater production. Additionally, as described in the UWMP the City's ability to utilize groundwater wells will not be impacted by groundwater levels within the Tracy groundwater basin, and would not require the City to limit groundwater production to maintain a sustainable groundwater budget. Based on the available information, it is anticipated that 100% the City's current estimated groundwater yield is available for the planning horizon.

Additionally, as noted in the GSP, each member City, including Lathrop, includes policies within the General Plan to further encourage water conservation and overall water system efficiency.

The proposed Project would not be required to build new municipal water wells to increase capacity of available water.

While the Project area's soils have low and high infiltration rates, much of the groundwater recharge in the basin occurs from irrigation followed by precipitation. Precipitation in the region is 12.2 inches, most of which falls between late October and early May. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into irrigation canals and the San Joaquin River.

Much of the Project area would be maintained as pervious surface. According to the landscaping plan for the Project, approximately 6.05 acres (approximately 27 percent of the site) of landscaping would be provided on-site. These landscaped areas could maintain groundwater recharge areas.

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While the proposed Project would reduce the amount of pervious surfaces within the Project area, much of the site would be converted to impervious surface. This would result in opportunities for groundwater recharge after the Project area is fully developed.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. As such, implementation of the proposed Project would have a *less than significant* impact relative to this topic.

Impact 3.9-3: The proposed Project would not alter the existing drainage pattern of the site or area, including the alteration of the course of a river or through the addition of impervious surfaces, in a manner which would result in substantial erosion, siltation, surface runoff, flooding, or polluted runoff. (Less than Significant)

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. Currently, runoff from within the Project site is either maintained onsite, or collected in a system of agricultural ditches and roadside ditches. Public storm drain facilities are currently installed along Manthey Road. Planned urbanization of the Project site would result in changes to land use, natural vegetation, and infiltration characteristics, and would introduce new sources of water pollutants, producing “urban runoff.” Pollutants contained within urban runoff may include, but are not limited to, sediment, oxygen-demanding substances (e.g., organic matter), nutrients (primarily nitrogen and phosphorus), heavy metals, bacteria, oil and grease, and toxic chemicals that can degrade receiving waters. Urban runoff pollutants may stem from erosion of disturbed areas, deposition of atmospheric particles derived from automobile or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, decomposing plant materials, animal excrement, and spills of toxic materials on surfaces which receive rainfall and generate runoff. New retail and commercial uses within the Project Area may also generate urban runoff from streets, driveways and parking areas. Yard areas may produce fertilizer wastes and/or bacterial contamination from animal excrement. New industrial development can generate urban runoff from parking areas, as well as any areas of hazardous materials storage exposed to rainfall.

The ongoing operational phase of the proposed project requires discharge of stormwater into the retention basin. As noted previously, a 7.5-foot-deep private storm water retention basin would be located in the southern portion of the Project site, as shown in Figure 2.0-7. A landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. The water would percolate into the underlying groundwater.

The discharge of stormwater must be treated through BMPs prior to its discharge. The Lathrop Municipal Code provides rules and regulations to manage and control stormwater and discharge (Chapter 13.28). Section 13.28.120 requires compliance with all applicable NPDES permits. Additionally, Section 13.28.130 specifically provides requirement to prevent, control, and reduce

stormwater pollutants. This includes requirements to implement BMPs to the extent they are technologically achievable to prevent and reduce pollutants. Under this requirement, the owner or operator of a commercial or industrial establishment shall provide reasonable protection from accidental discharge of prohibited materials or other wastes into the municipal storm drain system or watercourses. Facilities to prevent accidental discharge of prohibited materials or other wastes shall be provided and maintained at the owner or operator's expense.

All stormwater would be pre-treated in accordance with current NPDES requirements, and would be retained on-site. Pond volume calculations were completed for the Project to show the designed pond calculations for a 100-year, 24-hour storm event. The pond is designed to take 200% of the required volume. Per our design and the Geotechnical report, we have determined that 100% of the volume would percolate within 25 hours and 39 hours which meets the requirement of maximum detention of 48 hours.

With the design and construction of the improvements included in the proposed storm drainage system, the proposed Project would have a *less than significant* impact relative to this topic.

Impact 3.9-4 The proposed Project has the potential to, in a flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. (Less than Significant)

100-YEAR AND 500-YEAR FLOOD HAZARD ZONES

Flooding events can result in damage to structures, injury or loss of human and animal life, exposure of waterborne diseases, and damage to infrastructure. In addition, standing floodwater can destroy agricultural crops, undermine infrastructure and structural foundations, and contaminate groundwater.

As shown on Figure 3.9-2, the Project site is not within the 100- or 500-year flood hazard zones. As noted previously, the Project site is within Zone X, Area with Reduced Risk Due to Levee. As such, impacts related to these FEMA flood hazard zones would be *less than significant*.

SB 5 FLOOD ZONES

As noted previously, both State policy and 2007 State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. SB 5 requires that the 200-year protection be consistent with criteria used or developed by the Department of Water Resources. SB 5 requires all urban and urbanizing areas in the Sacramento and San Joaquin Valleys to achieve 200-year flood protection in order to approve development.

To account for new requirements imposed by SB-5, San Joaquin County and the City of Lathrop have developed flood mapping that delineates 200-year flood extents. Based on SB-5 requirements, the City of Lathrop Public Safety Element incorporates goals, policies, and implementation measures

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related to 200-year flood risk and flood protection. The City has completed Zoning Code Amendments to reflect SB-5 requirements.

As shown in Figure 3.9-2, the entire Project site is within the 200-year flood zone. However, pursuant to the City Municipal Code, the proposed Project would be required to comply with regulations contained in Chapter 17.17 (200-Year Flood Protection) of the City Municipal Code. Through compliance with these existing regulations, impacts would be *less than significant*.

TSUNAMIS AND SEICHES

A tsunami is a sea wave caused by a submarine earthquake, landslide, or volcanic eruption. A tsunami can cause catastrophic damage to shallow or exposed shorelines. The Project Area is approximately 56 miles from San Francisco Bay and 70 miles from the coast, which is sufficiently distant to preclude effects from a tsunami.

Seiches are changes or oscillations of water levels within a confined water body. Seiches are caused by fluctuation in the atmosphere, tidal currents or earthquakes. The effect of this phenomenon is a standing wave that would occur when influenced by external causes. The Project Area is not adjacent to any lakes that pose a significant risk from a seiche event. Therefore, implementation of the proposed Project would have a *less than significant* impact relative to this topic.

DAM INUNDATION

The Project Area is subject to flood inundation as a result of dam failure at the New Melones Dam, San Luis Reservoir Dam, Don Pedro Dam, and New Exchequer Dam. Figure 3.9-3 shows areas that are susceptible to dam inundation. Dam failure is generally a result of structural instability caused by improper design or construction, instability resulting from seismic shaking, or overtopping and erosion of the dam. As discussed previously, larger dams that are higher than 25 feet or with storage capacities over 50 AF of water are regulated by the California Dam Safety Act, which is implemented by the California Department of Water Resources, DSD. The DSD is responsible for inspecting and monitoring these dams. The Act also requires that dam owners submit to the California Office of Emergency Services inundation maps for dams that would cause significant loss of life or personal injury as a result of dam failure. The County Office of Emergency Services is responsible for developing and implementing a Dam Failure Plan that designates evacuation plans, the direction of floodwaters, and provides emergency information.

Regular inspection by DSD and maintenance by the dam owners ensure that the dams are kept in safe operating condition. As such, failure of these dams is considered to have an extremely low probability of occurring and is not considered to be a reasonably foreseeable event.

While the Project Area is within the dam inundation areas for the New Melones Dam, San Luis Reservoir Dam, Don Pedro Dam, and New Exchequer Dam, the proposed Project is not anticipated to result in the exposure of people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, seiche, tsunami, or mudflow.

The potential for dam failure is extremely low. Furthermore, the implementation of the proposed project does not exacerbate existing environmental hazards or, in other words, increase the likelihood of dam failure. Therefore, implementation of the proposed Project would have a *less than significant* impact relative to this topic.

Impact 3.9-5: The proposed Project has the potential to conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant)

WATER QUALITY CONTROL PLAN FOR THE SACRAMENTO-SAN JOAQUIN RIVER BASINS

The Water Quality Control Plan for the Sacramento-San Joaquin River Basins is the guiding documents for water quality in the City of Lathrop. This document includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The preparation and adoption of water quality control plans (Basin Plans) is required by the California Water Code (Section 13240) and supported by the Federal Clean Water Act. Section 303 of the Clean Water Act requires states to adopt water quality standards which "consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses." The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term "water quality standards," as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The overall design of the drainage infrastructure will be required to comply with the *Multi-Agency Post-Construction Stormwater Standards Manual (2015)*, which ensures development projects comply with the NPDES permit requirements, facilitates review of applications, and promotes integrated Low Impact Development (LID) design. The Manual also ensures proposed storm drains and infiltration/detention system have been designed to convey the required flow rates and will comply with the flood protection and storm water quality requirements of the City of Lathrop and San Joaquin County.

As discussed in Impacts 3.9-1, impacts related to water quality during construction and operation would be less than significant. The Project applicant would be required to prepare a SWPPP which would ensure that stormwater runoff does not adversely increase pollutant levels. Additionally, the Project would be required to implement a SWWP and comply with all requirements of the City's Stormwater Management and Discharge Control ordinance (Chapter 13.28 of the Code) and the City's SWMP. The SWMP was adopted to comply with requirements of the Phase 2 NPDES municipal stormwater permit and requires BMPs and O&M practices, among other requirements. The purpose of Chapter 13.28 of the Code is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public residing in watersheds within the city of Lathrop, pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. Section 1251 et seq.) and the Porter-Cologne Water Quality Act (California Water Code

3.9 HYDROLOGY AND WATER QUALITY

Section 13000 et seq.). Section 13.28.130 of the Code regulates stormwater and also requires BMPs for operation.

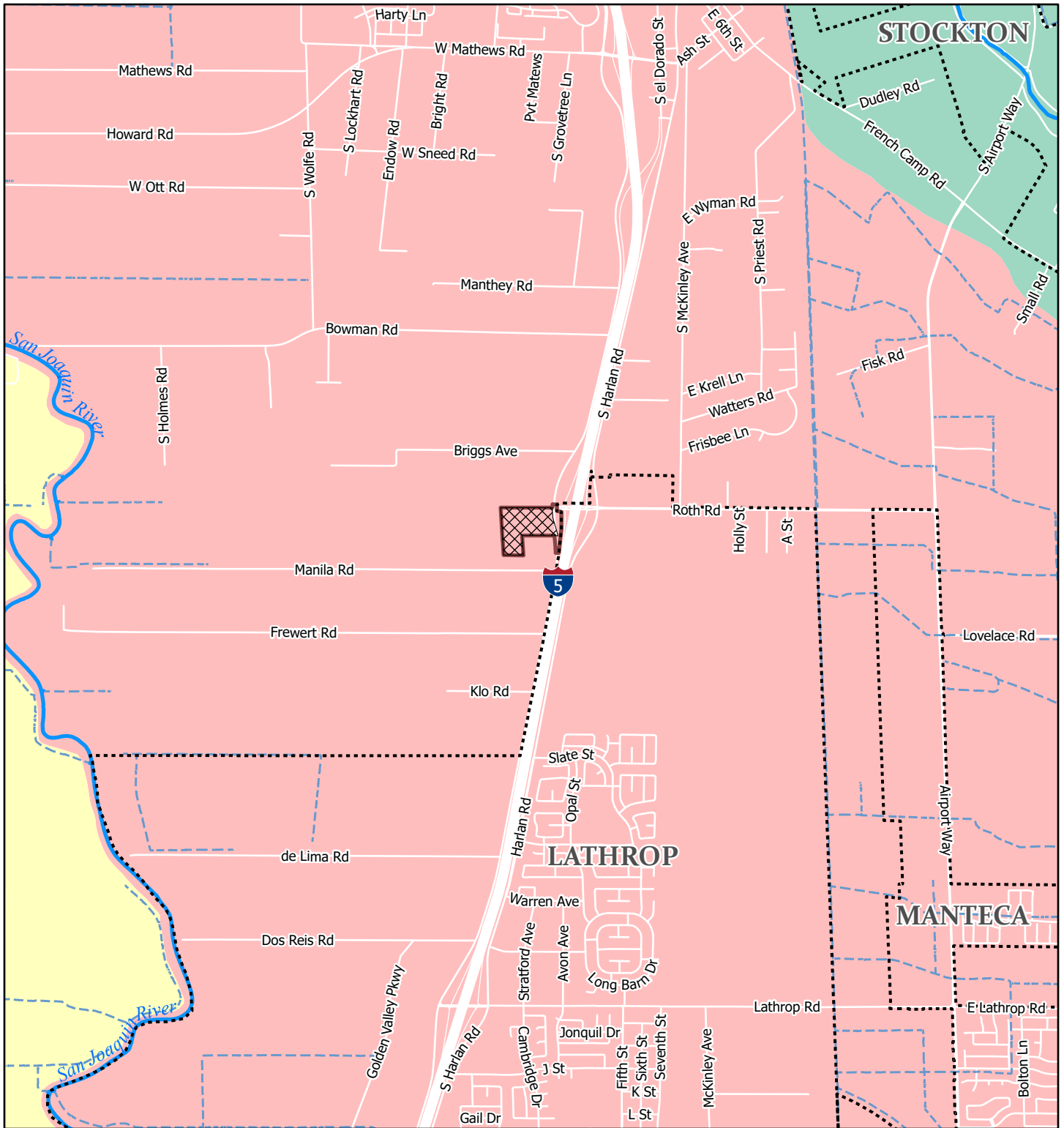
GROUNDWATER SUSTAINABILITY PLAN

As mentioned above, the City is located within the Tracy Subbasin and the entire Subbasin is covered by the Tracy Subbasin GSP (adopted by the City of Lathrop GSA in December 2021). Six agencies filed with DWR to become GSAs to cover the entire Subbasin. DWR designated them as exclusive in 2016 and 2017. In 2018, the Subbasin boundaries were modified which resulted in the formation of the East Contra Costa Subbasin and inclusion of the City of Lathrop areas into the Tracy Subbasin. The six GSAs in the Subbasin are: Banta-Carbona Irrigation District; Byron-Bethany Irrigation District; City of Lathrop; City of Tracy; County of San Joaquin; and Stewart Tract.









As discussed in Impact 3.9-2, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin. As discussed in Impact 3.14-4, the estimated water demand for the proposed Project would be approximately 16,881.8 gallons of water per day (or 18.9 AFY). The City is projected to have adequate supplies to meet projected demands in multiple dry years through 2040. Adequate supplies are anticipated to be available to meet Project demands during the first, second and fifth year of drought at buildout. During the third and fourth year at buildout, the City's total water demand is estimated to exceed total supply by 314 AFY (2%). The City's existing near-term and long-term reliable supplies of surface water supplies and groundwater supplies can deliver a sustainable reliable water supply to meet existing and foreseeable water demands without impacting environmental values and/or impacting the current stabilization of the groundwater basin.

CONCLUSION

Overall, implementation of the proposed Project would not conflict with the Basin Plan or the Tracy Subbasin GSP. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.



Legend

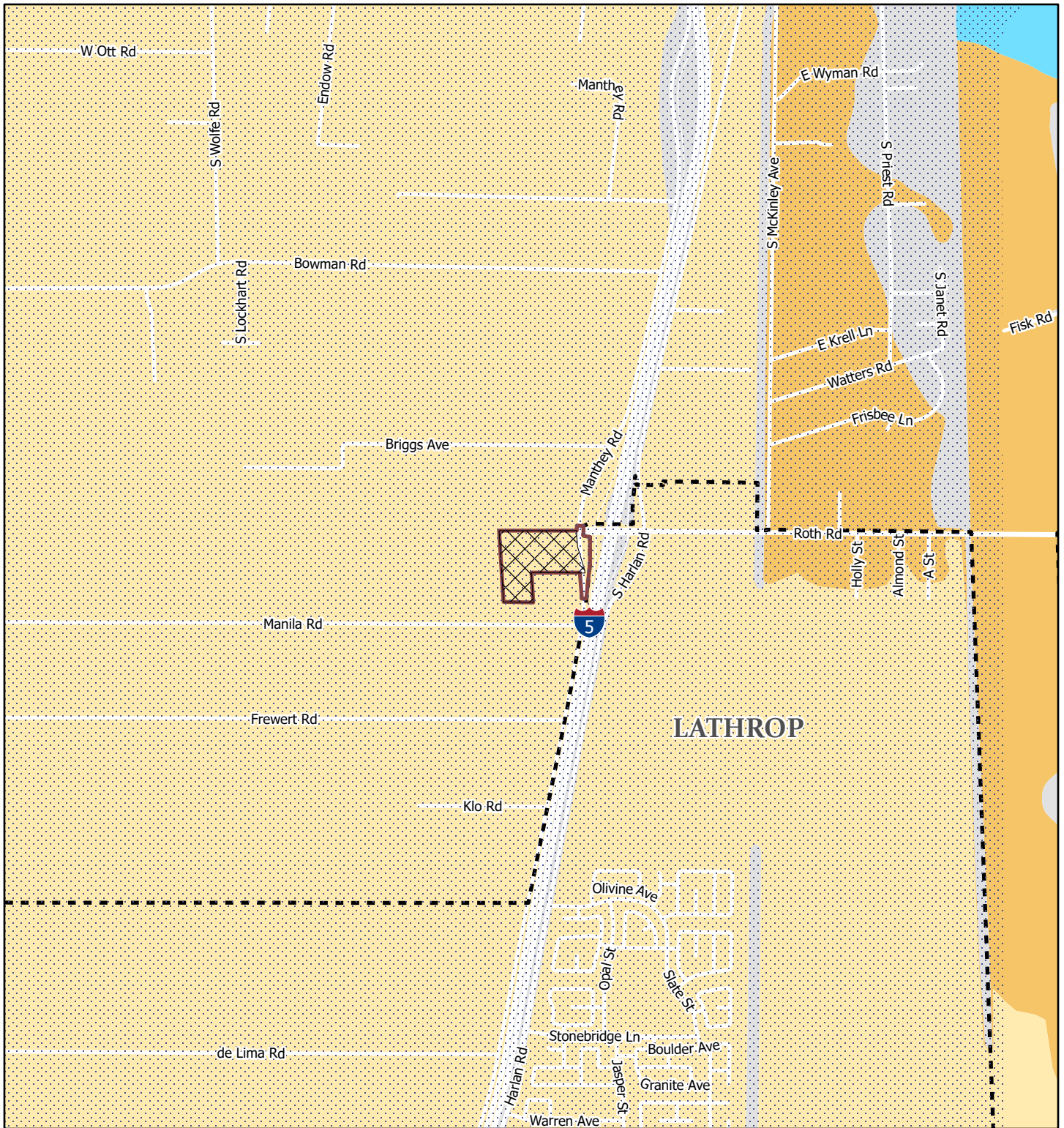
- | | |
|---|---|
|  Project Site / Annexation Area | Watershed |
|  Development Area |  Roberts Island-Trapper Slough |
|  City Boundary |  Town of French Camp-San Joaquin River |
|  Stream or River |  Walker Slough-French Camp Slough |
|  Canal or Ditch | |

SINGH PETROLEUM INVESTMENT PROJECT





Figure 3.9-1. Watersheds







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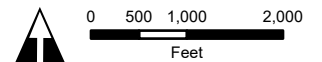
Legend

-  Project Site / Annexation Area
-  Development Area
-  Lathrop City Limits
- USACE Comprehensive Study**
-  200-year Flood Zone

- FEMA Designation**
-  100-year Flood Zone
-  500-year Flood Zone
-  Area of Minimal Flood Hazard
-  Area with Reduced Flood Risk due to Levee

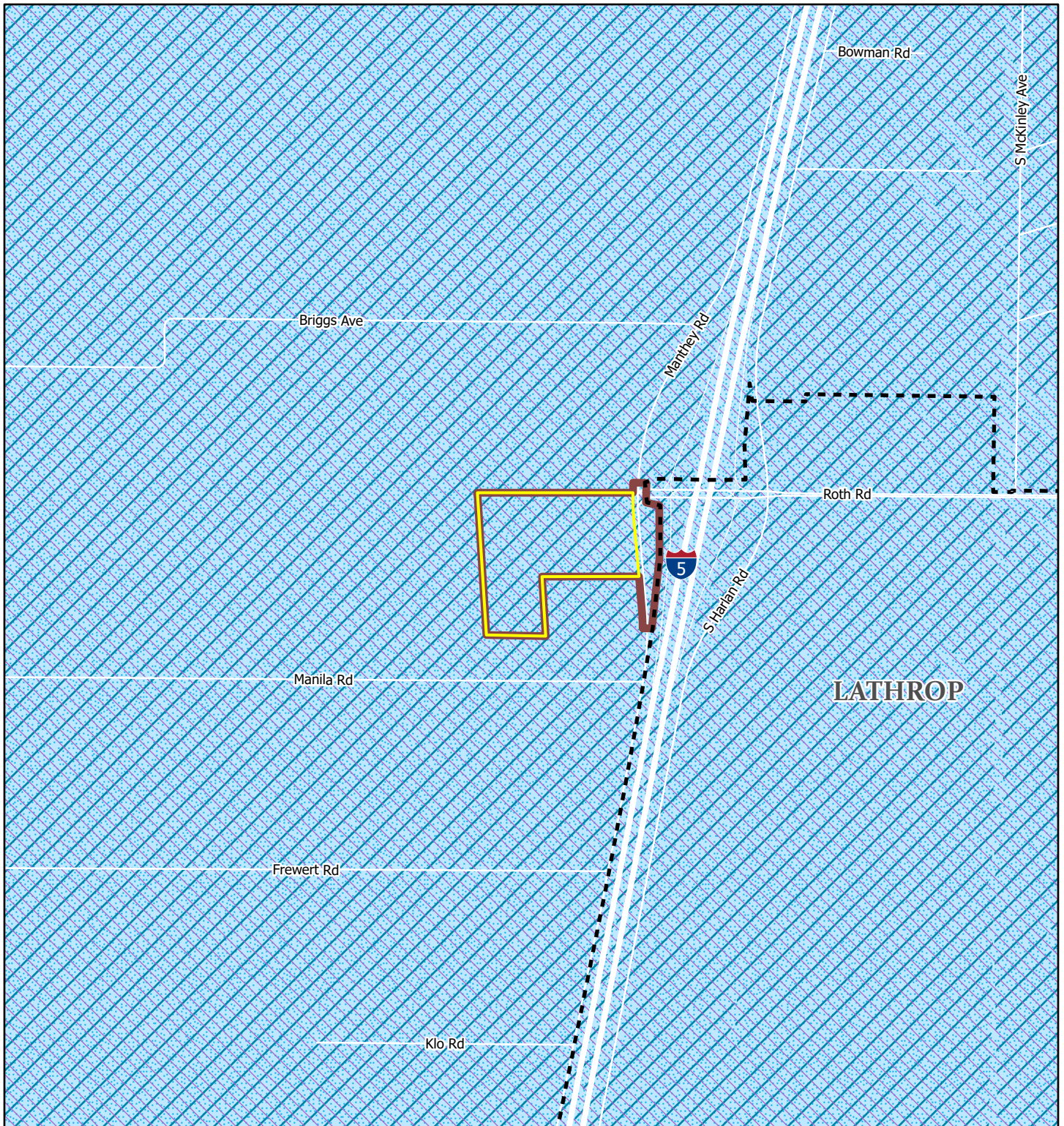
SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.9-2. Flood Hazard Map



Sources: San Joaquin County GIS; USGS Roads Database; FEMA; DWR.
Map date: December 13, 2022. Revised: March 29, 2023.








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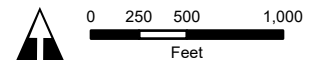


SINGH PETROLEUM INVESTMENT PROJECT

Figure 3.9-3. Dam Inundation Areas

Legend

-  Project Site / Annexation Area
-  Development Area
-  Lathrop City Limits
-  San Luis Reservoir Dam Inundation Area
-  New Melones Dam Inundation Area
-  Don Pedro Dam Inundation Area
-  New Exchequer Dam Inundation Area



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This section describes the existing land uses in the Project Area and in the surrounding area, describes the applicable land use regulations, and evaluates the environmental effects of implementation of the proposed Project related to land use, population, and housing. Information in this section is based on information provided in the Project materials, and the following reference documents: *City of Lathrop General Plan (City of Lathrop, 2022)*, *the City of Lathrop Draft Environmental Impact Report for the General Plan Update (City of Lathrop, 2022)*, *the City of Lathrop Municipal Code, Title 17 Zoning (City of Lathrop, 2022)*, *Municipal Service Review (City of Lathrop, 2022)*, and *the San Joaquin County General Plan (County of San Joaquin, 2025)*.

No comments received during the NOP scoping process related to this environmental topic. Full comments received during the NOP process are included within Appendix A.

As discussed in the Initial Study for the proposed Project (see Appendix A), the Project site is currently undeveloped and does not contain any existing housing that would be displaced. Development of the site, as proposed, would not displace substantial numbers of existing people or housing. Sewer and water infrastructure and services would be extended to the Project site, however no additional housing development is planned for the Project area. Therefore, the proposed Project would not induce substantial population growth to the area. For these reasons, the impacts related to population and housing would be less than significant and no additional analysis of this CEQA topic is warranted. This CEQA topic is not relevant to the proposed Project and does not require further analysis.

3.10.1 ENVIRONMENTAL SETTING

EXISTING PHYSICAL ENVIRONMENT

Project Area

The Project site is comprised of approximately 21.7 acres on two Assessor's Parcel Numbers (APN) 191-250-14 (Parcel 1 - 11.4 acres) and 191-250-06 (Parcel 2 - 10.3 acres). The Project site is located in unincorporated San Joaquin County, north of the City of Lathrop. Parcel 1 (191-250-14) and Parcel 2 (191-250-06) are located within the City's SOI. Both parcels are outside the city limits. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road. Figure 2.0-1 in Chapter 2.0, Project Description, shows the Project's regional location and vicinity.

The Project site is comprised of flat land with ruderal grasses, a few trees (located primarily along the northern and eastern boundary of the Project site), and impervious area of approximately 2,500 square feet. Fencing surrounds the Project site.

The Project Area is located within the northern boundary of the City of Lathrop Sphere of Influence (SOI), within the unincorporated area of Jan Joaquin County. The proposed Project is located west of I-5 and is bordered by Manthey Road and the future extension of Roth Road. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders

3.10 LAND USE AND PLANNING

land located within the City of Lathrop city limits to the east. The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and rural residential properties to the north. Figures 2.0-1 and 2.0-2 in Section 2.0, Project Description, illustrate the regional location and Project vicinity.

Surrounding Land Uses

The Project site is surrounded by San Joaquin County land to the north, west, and south, while the Project site borders land located within the City of Lathrop city limits to the east. The Project site is primarily bounded by undeveloped and residential land to the south, undeveloped land to the west, and agricultural and rural residential properties to the north. Lands to the north, west, and south of the Project site are designated as Area of Interest by the Lathrop General Plan. Lands to the east are designated Limited Industrial and Freeway Commercial under the Lathrop General Plan.

Under the San Joaquin County General Plan, lands to the west, south, and north of the Project site are designated Agriculture/General (A/G). Lands to the east are within the Lathrop city limits and do not have a County land use designation.

DEMOGRAPHICS

Population and Households

Table 3.10-1 summarizes the population and household data for Lathrop and San Joaquin County from 1990 through 2020.

TABLE 3.10-1: POPULATION AND HOUSEHOLD GROWTH

	1990	2000	2010	2020	1990-2000 % CHANGE	2000-2010 % CHANGE	2010-2020 % CHANGE
LATHROP							
Population	6,841	10,445	18,023	26,503	53%	72%	48%
Households	1,927	2,908	4,782	5,503	51%	64%	15%
Persons per household	3.55	3.59	3.77	3.88	1%	5%	3%
SAN JOAQUIN COUNTY							
Population	480,628	563,598	685,306	773,505	17%	22%	13%
Households	166,274	181,629	215,007	228,567	9%	18%	6%
Persons per household	2.94	3.00	3.12	3.22	2%	4%	3%

SOURCE: U.S. CENSUS, 1990, 2010; LATHROP HOUSING ELEMENT, 2016; CALIFORNIA DEPARTMENT OF FINANCE, 2021.

Lathrop incorporated in 1989 and by 1990, the US Census Bureau recorded the population at 6,841. From 1990 to 2000, the city's population increased by 51% from 6,841 to 10,445 persons. From 2000 to 2010 Lathrop experienced population growth increasing by approximately 72% from 10,445 to 18,023. San Joaquin County's total population increased by approximately 20% during the decades

of 1990-2000 and 2000-2010. As of 2020, Lathrop’s population was estimated to be 26,806, an increase of 49% from the 2010 population of 18,023.

Over the years, the average household size has fluctuated slightly with a high of 3.88 in 2020 and a low of 3.55 in 1990.

Housing Units

As shown in Table 3.10-2, the number of housing units in Lathrop has increased at rates similar to the population with significant increases since 1990. In 2020, there were 7,284 housing units in the city. From 2000 to 2010, housing units increased from 2,991 to 5,261, a 76% increase, while between 2010 and 2020 the city experienced a 38% increase.

TABLE 3.10-2: HOUSING UNITS

	1990	2000	2010	2020	1990-2000 % CHANGE	2000-2010 % CHANGE	2010-2020 % CHANGE
Lathrop	2,040	2,991	5,261	7,284	47%	76%	38%
San Joaquin County	158,659	189,160	233,755	249,058	19%	24%	6.6%

SOURCE: U.S. CENSUS, 2000, 2010; LATHROP HOUSING ELEMENT, 2016, 2010 CALIFORNIA DEPARTMENT OF FINANCE, 2020.

3.10.2 REGULATORY SETTING

STATE

Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Act) (Government Code §56000 et seq., identifies the responsibilities of LAFCOs. There is a LAFCO in each county, consistent with the requirements of Section 56001 of the Act. Each LAFCO is intended to encourage orderly growth and development essential to the social, fiscal, and economic well-being of the state. Specific elements established by the Act encourage orderly development patterns by discouraging urban sprawl and preserving open-space and prime agricultural lands.

In order to implement the requirements listed above, LAFCOs have the specific authority to review the following actions:

- Annexations to, or detachment from, cities or districts;
- Formations or dissolution of districts;
- Incorporation or dis-incorporation of cities;
- Consolidation or reorganization of cities and districts;
- Establishment of subsidiary districts; and
- Development of, and amendments to, spheres of influence.

The statutory objectives of a LAFCO are to encourage the orderly formation of local government agencies, preserve agricultural land, and discourage urban sprawl. LAFCOs review proposals for the formation of new local government agencies and regulate changes, such as boundary lines, of

3.10 LAND USE AND PLANNING

existing agencies. A LAFCO is the entity that evaluates proposals for the creation of cities or special districts, as well as proposals to annex additional land to local jurisdictions.

Government Code section 56300 provides that all LAFCOs must exercise their powers “in a manner that encourages and provides planned, well-ordered, efficient urban development patterns with appropriate consideration of preserving open space and agricultural lands within those patterns.” Section 56377 states that, in reviewing “proposals” that “could reasonably be expected to induce, facilitate, or lead to the conversion of existing open-space lands to uses other than open-space uses,” LAFCOs shall consider the following policies:

- “development or use of land for other than open space uses shall be guided away from existing prime agricultural lands, unless that action would not promote the planned, orderly, efficient development of an area”; and
- “development of existing vacant or nonprime agricultural lands for urban uses within the existing jurisdiction of a local agency or within the sphere of influence of a local agency should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non-open-space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency.”

Section 56668 provides that, in reviewing a “proposal,” a LAFCO shall consider all of the following:

- (a) Population and population density; land area and land use; assessed valuation; topography, natural boundaries, and drainage basins; proximity to other populated areas; and the likelihood of significant growth in the area, and in adjacent incorporated and unincorporated areas, during the next 10 years.
- (b) The need for organized community services; the present cost and adequacy of governmental services and controls in the area; probable future needs for those services and controls; and probable effect of the proposed incorporation, formation, annexation, or exclusion and of alternative courses of action on the cost and adequacy of services and controls in the area and adjacent areas.
- (c) The effect of the proposed action and of alternative actions, on adjacent areas, on mutual social and economic interests, and on the local governmental structure of the county.
- (d) The conformity of both the proposal and its anticipated effects with both the adopted LAFCO policies on providing planned, orderly, efficient patterns of urban development, and the policies and priorities in Government Code Section 56377.
- (e) The effect of the proposal on maintaining the physical and economic integrity of agricultural lands, as defined by Government Code Section 56016.
- (f) The definiteness and certainty of the boundaries of the territory, the nonconformance of proposed boundaries with lines of assessment or ownership, the creation of islands or

corridors of unincorporated territory, and other similar matters affecting the proposed boundaries.

- (g) A regional transportation plan adopted pursuant to Section 65080.
- (h) The proposal's consistency with city or county general and specific plans.
- (i) The sphere of influence of any local agency that may be applicable to the proposal being reviewed.
- (j) The comments of any affected local agency or other public agency.
- (k) The ability of the newly formed or receiving entity to provide the services that are the subject of the application to the area, including the sufficiency of revenues for those services following the proposed boundary change.
- (l) Timely availability of water supplies adequate for projected needs as specified in Government Code Section 65352.5.
- (m) The extent to which the proposal will affect a city or cities and the county in achieving their respective fair shares of the regional housing needs as determined by the appropriate council of governments consistent with Article 10.6 (commencing with Government Code Section 65580) of Chapter 3 of Division 1 of Title 7.
- (n) Any information or comments from the landowner or landowners, voters, or residents of the affected territory.
- (o) Any information relating to existing land use designations.
- (p) The extent to which the proposal will promote environmental justice. As used in this subdivision, "environmental justice" means the fair treatment and meaningful involvement of people of all races, cultures, incomes, and national origins, with respect to the location of public facilities and the provision of public services, to ensure a healthy environment for all people such that the effects of pollution are not disproportionately borne by any particular populations or communities.
- (q) Information contained in a local hazard mitigation plan, information contained in a safety element of a general plan, and any maps that identify land as a very high fire hazard zone pursuant to Government Code Section 51178 or maps that identify land determined to be in a state responsibility area pursuant to Section 4102 of the Public Resources Code, if it is determined that such information is relevant to the area that is the subject of the proposal.

This EIR will be used by San Joaquin LAFCO during its review of the proposed annexation. San Joaquin LAFCO has adopted a comprehensive list of guidelines and policies to implement the statutory directives. These are discussed below.

LOCAL

City of Lathrop General Plan

While the proposed annexation area is currently in an unincorporated area and under the jurisdiction of San Joaquin County, it is located within the Sphere of Influence of the City of Lathrop. The applicant has proposed that the proposed annexation area be annexed into the City of Lathrop.

General Plans are prepared under a mandate from the State of California, which requires each city and county to prepare and adopt a comprehensive, long-term general plan for its jurisdiction and any adjacent related lands. State law requires General Plans to address seven mandated components: circulation, conservation, housing, land use, noise, open space, and safety. In addition to those components required by State law, the Lathrop GP also contains an optional recreation element. The elements have been combined into three "Super Elements" called the Community Development Element, the Resource Management Element, and the Hazard Management Element. They represent a functional consolidation which simplifies the task of element description by combining those elements which are closely related to each another. Consolidation also makes it easier to achieve internal consistency among elements as required by State Law (Lathrop GP, p. 1-4).

The General Plan functions as a "constitution" for the City of Lathrop and reflects the long-range aspirations of physical form and amenity and provides guidance to the substance of developmental regulations and other programs of the City Council. The Lathrop GP is comprehensive, long-range and general (Lathrop GP, p. 1-2). The area covered by the General Plan has three significant geographic dimensions called Sub-Plan Areas (SPA). Each of the SPAs exhibits some differences in developmental policies and proposals.

General Plan Land Use Map: The Lathrop GP Land Use Map portrays the ultimate uses of land in the City of Lathrop through land use designations. Parcel 1 (191-250-14) is located inside the City's SOI and currently does not have a land use designation. Parcel 2 (191-250-06) is located within the City's SOI and is designated Freeway Commercial (FC).

Freeway Commercial: Freeway Commercial uses cater primarily to the needs of the highway traveler, and include but are not limited to hotels, motels, inns, restaurants and auto services, auto and truck sales and service, fuel stations, auto repair, sales and service. Appropriate zoning for this designation includes: Highway Commercial District, Highway Commercial – Mossdale Village.

City of Lathrop General Plan Policies: General Plan policies applicable to land use are summarized below. General Plan policies associated with specific environmental topics (aesthetics, air quality, agriculture, biological resources, cultural resources, geology/soils/mineral resources, hazards, hydrology/water quality, noise, public services/recreation, transportation, utilities, etc.) are discussed in the relevant chapters of this EIR.

Annexation through Phased Development:

The annexation of lands to the outer boundaries of urbanization depicted by the General Plan Diagram is to be pursued through development phasing which seeks to avoid a disjointed pattern of urbanization, to avoid creating unnecessary conflicts with continuing agricultural operations, and to avoid adverse impacts on the provision and maintenance of public services and facilities. Annexation is not intended as a means to foster the premature development of lands within the Lathrop Planning Area. However, annexation may be viewed as an opportunity to assure that land will ultimately be developed in accordance with policies of the Lathrop GP even though development soon after annexation may not be intended either by the landowner or the City (Lathrop GP, p.2-13).

Achieving Visual and Functional Quality in New Development:

Policy 1: Architectural design review should be required of all Planned Developments (PD's), and of all multi-family, office, commercial, institutional and industrial uses.

Commercial Development:

Policy 4: Proposals for the classifications of retail activity described in Part IV-A of the Plan are to be considered as offering flexibility for ingenuity and innovation in the selection, promotion, design and development of commercial centers and uses.

County of San Joaquin General Plan

The County GP has a policy of growth accommodation with the caveat that in order for the growth to occur, the property must be annexed and financial mechanisms in place to ensure adequate urban services are provided. The County GP has directed most of the anticipated development to designated urban communities. The City of Lathrop is a designated urban community in the County GP (County GP, p. IV-2).

The proposed annexation area is currently located in the planning jurisdiction of San Joaquin County, and is designated, and zoned for General Industrial (I/G) uses by the County of San Joaquin. This designation provides for a full range of industrial activities whose location and operation tend to have moderate to high nuisance characteristics and therefore require segregation from other land uses. Typical uses include manufacturing, distribution, storage, and wholesaling.

County of San Joaquin General Plan Land Use Map: The Land Use Map portrays the ultimate uses of land in San Joaquin County through land use designations. The project applicant will be requesting that the proposed annexation area be annexed to the City of Lathrop to eliminate the conflict with all County land use designations and to permit the area to be developed under city standards.

San Joaquin Local Agency Formation Commission (LAFCo)

The San Joaquin LAFCo is responsible for coordinating orderly reorganization to local jurisdictional boundaries, including annexations. Annexation of the Plan Area to the City of Lathrop is subject to LAFCo approval, and LAFCo will review the proposed annexation for consistency with LAFCo's

Annexation Policies and Procedures. An annexation can only be approved if the applicable Municipal Services Review (MSR) and Plan for Services demonstrate that adequate services can be provided to the annexed area. An MSR, produced as part of a LAFCo's regular review of municipal services, consists of a written statement of its determinations regarding infrastructure, growth and population projections, financing, cost avoidance, rate restructuring, shared facilities, government structure options, management efficiency, and local accountability and governance. An annexation proposal must include a Plan for Services consistent with the applicable MSR and must demonstrate that the City is capable of providing the required services. The City must pre-zone the lands to be annexed and subsequent changes to the General Plan land use designation and zoning are prohibited for two years.

San Joaquin LAFCo has adopted Policies and Procedures for Annexation and Detachment to and from all agencies within their jurisdiction. LAFCo has also adopted Procedures for the California Environmental Quality Act in accordance with the California Code of Regulations (Chapter 3, Title 14 Section 15022), which requires that each public agency adopt objectives, criteria, and specific procedures for administering its responsibilities under CEQA. Below is a brief discussion of San Joaquin LAFCo Policies and Procedures.

LAFCO CHANGE OF ORGANIZATION POLICIES AND PROCEDURES (INCLUDING ANNEXATIONS AND REORGANIZATIONS) (AS AMENDED 12/14/12)
General Standards for Annexation and Detachment

These standards govern San Joaquin LAFCo determinations regarding annexations and detachments to and from all agencies. The annexations or detachments must be consistent with the general policies set forth in these Policies and Procedures.

1. Spheres and Municipal Service Reviews

The annexation or detachment must be consistent with the internal planning horizon of the sphere of influence. The land subject to annexation shall normally lie within the first planning increment (5-10 year) boundary. The annexation must also consider the applicable Municipal Service Review. An annexation shall be approved only if the Municipal Services Review and the Sphere of Influence Plan demonstrates that adequate services can be provided with the timeframe needed by the inhabitants of the annexed area. If detachment occurs, the sphere will be modified. LAFCo generally will not allow spheres of influence to be amended concurrently with annexation proposals.

Proposed annexations of land that lie outside of the first planning horizon (5-10 year) are presumed to be inconsistent with the Sphere Plan. In such a case the agency must first request LAFCo to consider a sphere amendment pursuant to the above policies. If the amendment is approved, the agency may then proceed with the annexation proposal. A change of organization or reorganization will not be approved solely because an area falls within the SOI of any agency.

As an exception to the presumed inconsistency mentioned above, Master Plan and Specific Plan developments may span several planning horizons of the sphere of influence. Annexation of the entire project area may be desirable in order to comprehensively plan and finance infrastructure and provide for amenity-based improvements. In these cases, no amendment of the planning horizon is necessary provided project phasing is recognized in the Sphere of Influence Plan.

2. Plan for Services

Every proposal must include a Plan for Services that addresses the items identified in Section 56653 of the Government Code. The Plan for Services must be consistent with the Municipal Service Review of the Agency. Proponents must demonstrate that the city or special district is capable of meeting the need for services.

3. Contiguity

Territory proposed to be annexed to a city must be contiguous to the annexing city or district unless specifically allowed by statute. Territory is not contiguous if the only connection is a strip of land more than 300 feet long and less than 200 wide, that width to be exclusive of highways. The boundaries of a proposed annexation or reorganization must not create or result in areas that are difficult to serve.

4. Development within Jurisdiction

Development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction or within the sphere of influence should be encouraged before any proposal is approved which would allow for or lead to the development of existing open space lands for non-open space uses which are outside of the existing jurisdiction of the local agency or outside of the existing sphere of influence of the local agency. (Section 56377)

5. Progressive Urban Pattern

Annexations to agencies providing urban services shall be progressive steps toward filling in the territory designated by the affected agency's adopted sphere of influence. Proposed growth shall be from inner toward outer areas.

6. Piecemeal Annexation Prohibited

LAFCo requires annexations and detachments to be consistent with the schedule for annexation that is contained in the agency's Sphere of Influence Plan. LAFCo will modify small piece-meal or irregular annexations, to include additional territory in order to promote orderly annexation and logical boundaries, while maintaining a viable proposal. In such cases, detailed development plans may not be required for those additional areas but compliance with CEQA is required.

7. Annexations to Eliminate Islands

Proposals to annex islands or to otherwise correct illogical distortion of boundaries will normally be approved unless they would violate another provision of these standards. In order to avoid the creation of an island or to encourage the elimination an existing island, detailed development plans may not be required for the remnant areas.

8. Annexations that Create Islands

An annexation will not be approved if it will result in the creation of an island of unincorporated territory of otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

9. Substantially Surrounded

For the purpose of applying the provisions of the Cortese-Knox-Hertzberg Act regarding island annexation without protest hearings (Section 56375.5), the subject territory of an annexation proposal shall be deemed “substantially surrounded” if it is within the sphere of influence of the affected city and two-thirds (66-2/3%) of its boundary is surrounded by the affected city.

10. Definite and Certain Boundaries

All boundaries shall be definite and certain and conform to lines of assessment or ownership. The Commission’s approval of boundary change proposals containing split parcels will typically be subject to a condition requiring the recordation of a parcel map, lot line adjustment or other instrument to avoid creating remnants of legal lots.

11. Service Requirements

An annexation shall not be approved merely to facilitate the delivery of one or a few services to the detriment of the delivery of a larger number of services or service more basic to public health and welfare.

12. Adverse Impact of Annexation on the Other Agencies

LAFCo will consider any significant adverse effects upon other service recipients or other agencies serving the area and may condition any approval to mitigate such impacts. Significant adverse effects shall include the effect of proposals that negatively impact special districts’ budgets or services or require the continuation of services without the provision of adequate funding. LAFCo will not approve detachments from special districts or annexations that fail to provide adequate mitigation of the adverse impact on the district. LAFCo may determine an appropriate temporary mitigation, if any, and impose that temporary mitigation to the extent it is within its powers. If the needed mitigation is not

within LAFCo’s authority and approval would, in the opinion of the Commission, seriously impair the District’s operation, the Commission may choose to deny the application.

13. District’s Proposal to Provide new, different, or Divestiture of a Particular Function or Class of Services

In addition to the plan for services specified in Section 2 of these Policies and Procedures any application for a new, different, or divestiture of a service shall also include the requirements outlined in Section 56824.12 of the Government Code. Applications for such request will be considered a change of organization and shall follow the requirements of such an application as outlined in the Cortese-Knox-Hertzberg Act and within these policies and procedures. The factors enumerated in Sections 56668 and 56824.14 of the Government Code shall be considered by the Commission at the time of consideration of the application for such functions.

14. Disadvantaged Unincorporated Communities

Disadvantaged Unincorporated Communities (DUCs) are those territories shown in Exhibit A or as may be shown in a city municipal service review and sphere of influence plan.

The Commission shall not approve an annexation to a city or any territory greater than 10 acres where there exists a disadvantaged unincorporated community (DUC) that is contiguous to the area of proposed annexation, unless a concurrent application to annex all or a portion of the DUC to the subject city has been filed. An application to annex a DUC shall not be required if either of the following applies:

1. A prior application for annexation of the territory has been made in the preceding five years.
2. The Commission finds, based upon written evidence, that a majority of the registered voters within the DUC are opposed to annexation.

Written evidence can be a scientific survey conducted by an academic institution or professional polling company.

15. Protest Procedures

The Commission delegates the conducting authority functions and responsibilities to the LAFCo Executive Officer pursuant to Government Code Section 57000.

City Annexations

1. Annexation of Streets

Annexations shall reflect the logical allocation of streets and rights of way as follows:

- Territory should be included within the annexation to assure that the city reasonably assumes the burden of providing adequate roads to the property to be

annexed. LAFCo will require cities to annex streets where adjacent lands that are in the city will generate additional traffic or where the annexation will isolate sections of county road. Cities shall include all contiguous public roads that can be included without fragmenting governmental responsibility by alternating city and county road jurisdiction over short section of the same roadway.

- When a street is a boundary line between two cities the centerline of the street may be used as the boundary or may follow a boundary reached by agreement of the affected cities.

2. Pre-zoning Required

The Cortese-Knox-Hertzberg Act requires the city to pre-zone territory to be annexed, and prohibits subsequent changes to the General Plan and /or pre-zoning designations for a period of two years after completion of the annexation, unless the city council makes a finding at a public hearing consistent with the provisions of Governments Code Section 56375(e). In instances where LAFCo amends a proposal to include additional territory, the Commission's approval of the annexation will be conditioned upon the pre-zoning of the new territory.

LAFCo Procedures for the California Environmental Quality Act (Adopted June 20, 2007)

LAFCo AS RESPONSIBLE AGENCY

When LAFCo is a Responsible Agency, the Commission shall certify that it has reviewed the Lead Agency's environmental documents and, if required, adopt findings for approval and statements of overriding considerations in accordance with Sections 15091 and 15903 of the CEQA Guidelines.

1. Consultation: The Executive Officer shall respond to consultation by the Lead Agency to assure that the environmental document will be adequate for LAFCo's use. The Executive Officer shall reply certified mail within 30 days after receiving a Notice of Preparation from the Lead Agency.
2. Comments: The Executive Officer shall submit comments to the Lead Agency on draft EIRs and Negative Declarations concerning the adequacy or appropriateness of the document. The comments shall be limited to those project activities which are related to LAFCo's area of expertise or which will be required to be considered by LAFCo.
3. Adequacy of EIR or Negative Declaration: If the Executive Officer finds that the Negative Declaration or EIR prepared by the Lead Agency is not adequate for LAFCo use, the Executive Officer shall bring the matter to the Commission prior to 30 days after the Lead Agency files a Notice of Determination.
4. Final EIR or Negative Declaration: The Executive Officer shall provide the final EIR or Negative Declaration to Commissioners prior to, or along with, the Staff Report.

5. Findings and Statements: The Executive Officer shall prepare, or cause to be prepared, “draft” Findings and Statements, findings for approval, and statements of overriding considerations for Commission consideration.
6. Notice of Determination: The Executive Officer shall file a Notice of Determination within 5 working days after deciding to carry out or approve the project.

3.10.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on land use, population, or housing if it will:

- Physically divide an established community;
- Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;

IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: The proposed Project would not physically divide an established community (No Impact)

The Project site is located at the northern edge of the City of Lathrop city limits and is adjacent primarily to undeveloped agricultural land to the north, south, and west. The Project would provide roadways to connect the Project site to the existing circulation system and to allow access to and from the site. Development of the Project site would not result in physical barriers, such as a highway, wall, or other division, that would divide an existing community, but would serve as an orderly extension of existing and planned development. The Project would have *no impact* in regards to the physical division of an established community.

Impact 3.10-2: The proposed Project would not conflict with an applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project adopted to avoid or mitigate an environmental effect. (Less than Significant)

CONSISTENCY WITH SAN JOAQUIN COUNTY LAFCo

The project site is currently in an unincorporated portion of San Joaquin County adjacent to the City of Lathrop’s city limits and within the City’s Sphere of Influence (SOI). The proposed Project requires annexation of the project site into the city limits.

LAFCo is serving as a responsible agency for this EIR pursuant to their LAFCo Procedures for the California Environmental Quality Act (Adopted June 20, 2007). When LAFCo is a Responsible Agency under CEQA, in order to approve the annexation, the Commission will certify that it has reviewed the Lead Agency’s environmental documents and, if required, adopt findings for approval and

statements of overriding considerations in accordance with Sections 15091 and 15903 of the CEQA Guidelines. The City of Lathrop has consulted LAFCo. The consultation process included sending LAFCo a copy of the Notice of Preparation during the 30-day public review period. LAFCo will also be sent a copy of the Draft EIR during the 45-day public review period and the Final EIR for their use in the annexation process. If the Executive Officer determines that the Draft and Final EIR are adequate for their use, he/she will prepare, or cause to be prepared, “draft” Findings and Statements, findings for approval, and statements of overriding considerations for LAFCo Commission consideration. If the LAFCo Commission approves the annexation, the Executive Officer will file a Notice of Determination within five working days after deciding to approve the annexation.

The San Joaquin LAFCo will review the proposed annexation for consistency with the *LAFCo Change of Organization Policies and Procedures (Including Annexations and Reorganizations)*. These policies and procedures govern San Joaquin LAFCo determinations regarding annexations to all agencies. The following policies will be reviewed as part of the annexation process by the San Joaquin LAFCo.

GENERAL STANDARDS FOR ANNEXATION AND DETACHMENT

1. **Spheres and Municipal Service Reviews:** This policy requires an annexation to be consistent with the internal planning horizon of the SOI, which means that the land would normally lie within the first planning increment (5-10 year) boundary. The annexation must also only be approved if the Municipal Services Review and the SOI Plan demonstrates that adequate services can be provided with the timeframe needed by the annexed area. Proposed annexations that lie outside of the first planning increment (5-10 year) boundary are presumed to be inconsistent with the Sphere Plan and must first request a sphere amendment prior to proceeding with the annexation. The Lathrop Municipal Services Review and Sphere of Influence Plan identifies the Project Site within the first planning increment; therefore, a sphere amendment prior to proceeding with the annexation and an update to the Lathrop Municipal Service Review and Sphere of Influence Plan will not be required.
2. **Plan for Services:** This policy states that every proposal must include a Plan for Services that addresses the items identified in Section 56653 of the Government Code. The Plan for Services must be consistent with the Municipal Service Review of the Agency.

The Draft EIR assesses service capacity and demands for these services. There are not any service deficiencies noted by the City of Lathrop, or contained within this EIR that are anticipated to occur after installation of infrastructure. The proposed Project is within the Lathrop Water Service Area boundary, and the Wastewater Service Area boundary as defined by LAFCo.

3. **Contiguity:** This policy requires the land to be annexed to be contiguous to the city. Territory is not contiguous if the only connection is a strip of land more than 300 feet long and less than 200 wide, that width to be exclusive of highways. The boundaries of a proposed annexation or reorganization must not create or result in areas that are difficult to serve.

The proposed Project is contiguous to the Lathrop city limits along the eastern boundary of the Project Site.

4. Development within Jurisdiction: This policy encourages development of existing vacant or non-prime agricultural lands for urban uses within the existing jurisdiction or SOI before approval that would lead to the development of existing open space lands for non-open space uses.

The Project Site is located in vacant land with a portion designated for development under the General Plan. Additionally, there are agricultural resources located adjacent to the proposed Project Site. There are no Williamson Act contracts on, or adjacent to the project site, however, the Department of Conservation Farmland Mapping and Monitoring Program (FMMP) delineates Prime Farmland and Farmland of Local Importance adjacent to the project site. The proposed Project Site is not designated by the City of Lathrop for agricultural uses, however a portion of the proposed Project Site is designated by the San Joaquin County for agricultural uses.

5. Progressive Urban Pattern: This policy states that annexations shall be progressive steps toward filling in the territory designated by the SOI. Proposed growth shall be from inner toward outer areas.

The proposed Project would develop an area adjacent to the Lathrop city limits and continue the pattern of urbanization, including commercial highway uses, that occurs within the City limits to the east of the proposed Project Site.

6. Piecemeal Annexation Prohibited: This policy requires annexations to be consistent with the schedule for annexation that is contained in the agency's Sphere of Influence Plan. LAFCo will modify small piece-meal or irregular annexations, to include additional territory in order to promote orderly annexation and logical boundaries, while maintaining a viable proposal. In such cases, detailed development plans may not be required for those additional areas but compliance with CEQA is required.

As mentioned previously, annexation of the Project Site is contiguous with the city limits to provide for a logical and orderly development pattern.

7. Annexations to Eliminate Islands: This policy states that proposals to annex islands or to otherwise correct illogical distortion of boundaries will normally be approved unless they would violate another provision of these standards. In order to avoid the creation of an island or to encourage the elimination an existing island, detailed development plans may not be required for the remnant areas.

The proposed annexation includes lands contiguous with the current city limits and connected partials within the SOI. Parcels proposed for annexation do not involve the creation of or the elimination of islands.

8. Annexations that Create Islands: This policy states that an annexation will not be approved if it will result in the creation of an island of unincorporated territory of otherwise cause or further the distortion of existing boundaries. The Commission may nevertheless approve such an annexation where it finds that the application of this policy would be detrimental to the orderly development of the community and that a reasonable effort has been made to include the island in the annexation but that inclusion is not feasible at this time.

The proposed annexation includes lands contiguous with the current city limits and connected partials within the SOI. Parcels proposed for annexation do not involve the creation of islands.

9. Substantially Surrounded: This policy states that for the purpose of applying the provisions of the Cortese-Knox-Hertzberg Act regarding island annexation without protest hearings (Section 56375.5), the subject territory of an annexation proposal shall be deemed “substantially surrounded” if it is within the sphere of influence of the affected city and two-thirds (66-2/3%) of its boundary is surrounded by the affected city.

As previously stated, the proposed annexation does not involve island annexation. Therefore, this policy is not relevant to the proposed annexation.

10. Definite and Certain Boundaries: This policy states that all boundaries shall be definite and certain and conform to lines of assessment or ownership. The Commission’s approval of boundary change proposals containing split parcels will typically be subject to a condition requiring the recordation of a parcel map, lot line adjustment or other instrument to avoid creating remnants of legal lots.

The proposed annexation boundaries are definite and certain and conform to lines of ownership.

11. Service Requirements: This policy states that an annexation shall not be approved merely to facilitate the delivery of one or a few services to the detriment of the delivery of a larger number of services or service more basic to public health and welfare.

The proposed annexation is not merely to facilitate the delivery of one or a few services to the detriment of the delivery of a larger number of services or service more basic to public health and welfare. As stated further in the Public Services (Section 3.11) and Utilities (Section 3.13), the City had adequate service capacity to serve the proposed Project without reducing the adequacy of services elsewhere. Therefore, the proposed annexation is consistent with this policy.

12. Adverse Impact of Annexation on the Other Agencies: This policy states that LAFCo will consider any significant adverse effects upon other service recipients or other agencies serving the area and may condition any approval to mitigate such impacts. Significant adverse effects shall include the effect of proposals that negatively impact special districts’

budgets or services or require the continuation of services without the provision of adequate funding. LAFCo will not approve annexations that fail to provide adequate mitigation of the adverse impact on the district. LAFCo may determine an appropriate temporary mitigation, if any, and impose that temporary mitigation to the extent it is within its powers. If the needed mitigation is not within LAFCo's authority and approval would, in the opinion of the Commission, seriously impair the District's operation, the Commission may choose to deny the application.

This EIR includes an assessment of the impacts of the proposed Project and proposed annexation on service agencies. The development of the proposed Project and proposed annexation would not result in any significant, adverse impacts to any of the service agencies such that it would seriously impair operation.

13. District's Proposal to Provide new, different, or Divestiture of a Particular Function or Class of Services: This policy relates to proposals for new, different, or divestiture of services, which is not relevant to the proposed annexation.
14. Disadvantaged Unincorporated Communities: This policy prohibits an annexation where a Disadvantaged Unincorporated Community (DUC) is contiguous to the area of proposed annexation, unless a concurrent application to annex all or a portion of the DUC to the subject city has been filed. The Project Site is not within or contiguous to an area designated as a DUC. This policy is not relevant to the proposed annexation.

CITY ANNEXATIONS

1. Annexation of Streets: This policy states that annexations shall reflect the logical allocation of streets and rights of way to assure that the city reasonably assumes the burden of providing adequate roads to the property to be annexed. LAFCo will require cities to annex streets where adjacent lands that are in the city will generate additional traffic or where the annexation will isolate sections of county road. Cities shall include all contiguous public roads that can be included without fragmenting governmental responsibility by alternating city and county road jurisdiction over short section of the same roadway. When a street is a boundary line between two cities the centerline of the street may be used as the boundary or may follow a boundary reached by agreement of the affected cities.
2. Pre-zoning Required: This policy states that the Cortese-Knox-Hertzberg Act requires the city to pre-zone territory to be annexed, and prohibits subsequent changes to the General Plan and /or pre-zoning designations for a period of two years after completion of the annexation.

The proposed Project includes the adoption of pre-zoning for the proposed annexation area, which will serve to regulate the uses of land and structures within the project area. The area will be pre-zoned to the zoning district Highway Commercial and will be subject to the development standards as described in the Zoning Ordinance. The Zoning Ordinance is

3.10 LAND USE AND PLANNING

proposed to ensure consistency between land use and zoning designations. The proposed annexation is consistent with this policy.

The policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexations. Ultimately, LAFCo will determine whether the proposed annexation would first require an SOI amendment to address the timing of the annexation and also whether an update to the Lathrop Municipal Service Review and Sphere of Influence Plan is needed in order to approve the annexation. This LAFCo policy was not specifically adopted to avoid or mitigate an environmental effect, rather it is intended to ensure orderly and logical reorganization to local jurisdiction boundaries, including annexations. The proposed Project is consistent with LAFCo policies adopted to address environmental impacts, specifically impacts to agricultural lands and public services. As such, implementation of the proposed Project will have a **less than significant** impact relative to this topic.

CONSISTENCY WITH THE SAN JOAQUIN COUNTY GENERAL PLAN

The proposed Project would annex the proposed annexation area into the City of Lathrop. At such time, the County GP would no longer regulate development on the project site. Therefore, implementation of the proposed Project, including the annexation, would have a **less than significant** impact relative to the County GP.

CONSISTENCY WITH THE CITY OF LATHROP GENERAL PLAN

The proposed Project would result in the annexation of a total of two parcels totaling approximately 21.7 acres into the City of Lathrop. Parcel 1 is located inside the City’s SOI and currently does not have a land use designation. Parcel 2 is located within the City’s SOI and is designated Freeway Commercial (FC). Consistency with the General Plan’s land use and environmental requirements and policies are addressed in each individual section of this EIR.

Additionally, the Project is consistent with most of the applicable General Plan policies that aim to avoid or mitigate an environmental effect. As shown in Table 3.10-3, the Project is consistent with many of the City’s General Plan policies.

TABLE 3.10-3: GENERAL PLAN POLICY CONSISTENCY

<i>GENERAL PLAN POLICY</i>	<i>PROJECT CONSISTENCY</i>
LAND USE	
LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.	Consistent: The Project includes the development of commercial retail space which would support business development within the City of Lathrop by providing regional transportation facilities.
LU-1.9 Promote equitable land use patterns to provide all residents in all neighborhoods access to community amenities and transportation choices, and	Consistent: The Project provides amenities to residents which support all transportation choices, such as fuel and commercial service facilities. One of the Project objectives is to provide visitor-serving facilities that maximize the

<i>GENERAL PLAN POLICY</i>	<i>PROJECT CONSISTENCY</i>
<p>increase safety for walking and biking.</p>	<p>benefits of the Project site’s proximity to I-5 for all buildings and tenants and thereby minimize traffic generation on local streets by visitors exiting and reentering the freeway. By minimizing traffic generated on local streets, conflicts between truck and automobile traffic and walkers and bikers would reduce.</p>
<p>LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.</p>	<p>Does not conflict. The Project site is designated for freeway commercial uses in the City’s General Plan. The Project would result in development of freeway supporting uses (i.e., travel center and gasoline facilities) adjacent to I-5, which is a major travel facility. Impacts associated with VMT are discussed in Impact 3.13-2 in Section 3.13. As described in Section 3.13, Transportation and Circulation, the Project would generate an estimated average of 43.1 VMT per employee, which is 79.6% below the cumulative city-wide average. The proposed Project would generate VMT per employee that is less than existing city-wide VMT by employee or cumulative city-wide VMT by employee.</p>
<p>LU-3.4 Promote logical City boundaries and work with surrounding jurisdictions to encourage complementary uses. Specifically, work with the City of Manteca and San Joaquin County to ensure development of complementary and compatible uses adjacent to Lathrop.</p>	<p>Consistent: The Project site is located in the portion of the City adjacent to I-5. The site has been anticipated for development of freeway commercial as part of the City’s General Plan. The Project would result in development of freeway supporting uses (i.e., travel center and gasoline facilities) adjacent to I-5, which is a major travel facility.</p>
<p>LU-4.2 Emphasize efforts to reduce regional vehicle miles traveled (VMT) by supporting land use patterns and site designs that promote active modes of transportation, and public transit.</p>	<p>Does not conflict. The Project site is designated for freeway commercial uses in the City’s General Plan. Impacts associated with VMT are discussed in Impact 3.13-2 in Section 3.13. As described in Section 3.13, Transportation and Circulation, the Project would generate an estimated average of 43.1 VMT per employee, which is 79.6% below the cumulative city-wide average. The proposed Project would generate VMT per employee that is less than existing city-wide VMT by employee or cumulative city-wide VMT by employee.</p>
<p>LU-5.1 Require new development to be compatible and complementary to existing development. Where appropriate and feasible, promote connections between neighborhoods and services and facilities.</p>	<p>Consistent. The Project is a new development which is compatible with surrounding and adjacent buildings and public spaces. The existing land adjacent to the Project site includes mainly vacant land. Existing freeway commercial and industrial uses are located directly across interstate I-5 from the project site. The proposed industrial and commercial uses would be constructed in a similar form and scale as the existing freeway commercial, retail, and service uses within the City of Lathrop.</p>

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<i>GENERAL PLAN POLICY</i>	<i>PROJECT CONSISTENCY</i>
<p>LU-5.6 In considering land use change requests, consider factors such as compatibility with surrounding uses in terms of privacy, noise, and changes in traffic levels.</p>	<p>Consistent: The Project includes buffer areas and screening from adjacent uses along the perimeter of the Project site.</p>
<p>LU-6.1 Capitalize on Lathrop’s location within the Central Valley, proximity to major metropolitan areas, and regional transportation facilities.</p>	<p>Consistent. The proposed Project is considered small-scale and would provide jobs and local revenue for the city. The proposed Project would generate employment- and tax-generating businesses which would support the economic diversity of the city. Additionally, the Project area is located near existing I-5 for the transport of goods that support business development and serve regional transportation. The Project would result in development of freeway supporting uses (i.e., travel center and gasoline facilities) adjacent to I-5, which is a regional transportation facility.</p>
<p>LU-6.2 Support the reuse, renovation, or redevelopment of aging centers or commercial uses that are no longer viable due to changing market conditions, demographics, or retail trends into areas that support mixed use opportunities.</p>	<p>Does Not Conflict. The proposed Project site is considered to be vacant, undeveloped, and underutilized. The Project site is not located in an aging center or commercial use area. The Project site is designated for freeway commercial uses in the City’s General Plan. Additionally, the Project would not prevent the City from developing and/or redeveloping vacant, underutilized, or undeveloped areas of the City.</p>
<p>LU-7.1 Encourage San Joaquin County to retain existing agricultural land use designations in areas outside of the Lathrop SOI.</p>	<p>Does Not Conflict: The Project site is located within the Lathrop SOI.</p>
<p>LU-7.2 Support the continuation of agricultural operations and activities on lands adjacent to the SOI and within the City’s Area of Influence.</p>	<p>Does Not Conflict: The Project site is located within the Lathrop SOI. As discussed in Section 3.2, Agricultural Resources, the proposed project includes adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the proposed Project.</p>
<p>LU-7.3 Allow and support the continuation of agricultural operations on lands within the City limits which are designed for urban uses until such time as urban development is proposed for the land.</p>	<p>Consistent: The Project site is not located within the City limits. Nevertheless, the proposed Project provides a landscaping buffer between the southern and western portions of the Project site and existing agricultural operations located to the south and west. The retention pond along the western boundary measures approximately 60 ft. from the western boundary line and the retention pond to the southwestern corner measures approximately 266 ft. from the western boundary line and approximately 228 ft. from the southern boundary line. Together, the retention ponds provide sufficient buffer to protect the agriculture operations from the impacts of the development of the Project site, as buffers typically consist of a minimum of 5 to 10 ft., according to Chapter 17.92 Landscaping and Screening requirements of</p>

<i>GENERAL PLAN POLICY</i>	<i>PROJECT CONSISTENCY</i>
	<p>the City of Lathrop Municipal Code. Phase II of the Project provides landscaping buffers to the north from the Project site, along the northern project boundary. This includes a 10 ft. width landscaping strip along the northern Project boundary in order to provide buffering from agricultural operations in order to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses</p>
<p>LU-7.4 Ensure that new urban uses which are proposed adjacent to lands designated for agricultural uses include adequate buffers to reduce potential land use conflicts and nuisance impacts to sensitive receptors</p>	<p>Consistent: The Project site is not located within the City limits. Nevertheless, the proposed Project provides a landscaping buffer between the southern and western portions of the Project site and existing agricultural operations located to the south and west. The retention pond along the western boundary measures approximately 60 ft. from the western boundary line and the retention pond to the southwestern corner measures approximately 266 ft. from the western boundary line and approximately 228 ft. from the southern boundary line. Together, the retention ponds provide sufficient buffer to protect the agriculture operations from the impacts of the development of the Project site, as buffers typically consist of a minimum of 5 to 10 ft., according to Chapter 17.92 Landscaping and Screening requirements of the City of Lathrop Municipal Code. Phase II of the Project provides landscaping buffers to the north from the Project site, along the northern project boundary. This includes a 10 ft. width landscaping strip along the northern Project boundary in order to provide buffering from agricultural operations in order to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses.</p>
CIRCULATION	
<p>CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.</p>	<p>Consistent: The Project provides facilities and amenities which serve all modes of transportation. As discussed in Mitigation Measure 3.13-1, the Project is required to construct sidewalks and pedestrian facilities along Roth Road and Manthey Road. The design of the driveways will be reviewed and approved by the Director of Engineering/City Engineer.</p>
<p>CIR-2.2 Safety. Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians by providing shade trees and controlling traffic speeds by implementing narrow lanes or other traffic calming measures.</p>	<p>Consistent: As discussed above, sidewalks would be constructed along the project frontage on Roth Road and Manthey Road. Additionally, trees would be provided throughout the site, including existing and proposed roadways, along sidewalks, and within the parking areas. All intersections and street sections would be reviewed by the City of Lathrop and designed to comply with typical City standards. Furthermore, As discussed in Mitigation Measure 3.13-1, the Project is required to construct sidewalks along Roth Road and Manthey Road. The</p>

3.10 LAND USE AND PLANNING

<i>GENERAL PLAN POLICY</i>	<i>PROJECT CONSISTENCY</i>
	driveways on Manthey Road and Roth Road will be designed to provide visibility to eliminate potential hazards to pedestrians and adjacent parcels/homes. The design of the driveways will be reviewed and approved by the Director of Engineering/City Engineer. The Project also provides shade trees throughout the Project site and includes adequate parking space and circulation entering and exiting the Project site.
CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.	Does Not Conflict: The Project does not include transit service within the vicinity of the Project site.
CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.	Consistent: The Project provides landscaping, pedestrian-scale lighting, and shade trees throughout the Project site.
CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.	Does Not conflict: The Project is proposed to primarily serve highway commercial uses and travelers. As described in Section 3.13, Transportation and Circulation, the Project would generate an estimated average of 43.1 VMT per employee, which is 79.6% below the cumulative city-wide average. The proposed Project would generate VMT per employee that is less than existing city-wide VMT by employee or cumulative city-wide VMT by employee.
PUBLIC FACILITIES AND SERVICES	
PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based on an evaluation of long-term economic benefits and in a manner consistent with the City's cost recovery goals.	Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.
PSF-1.13 Demonstrate Capacity. Require new development to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.	Consistent. Impacts on utilities infrastructure, including wastewater, are discussed in Section 3.14, Utilities and Service Systems; impacts on public services are discussed in 3.12 Public Services and Recreation. The Project would provide all necessary infrastructure required to serve the Project site. The infrastructure improvements are consistent with City infrastructure plans and capacity requirements. Furthermore, the City collects impact fees from new development based upon projected impacts from each development. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and public service providers to finance public services.
PFS-1.14 Mitigate Impacts. Require new	Consistent. Impacts on utilities infrastructure, including wastewater, are discussed in Section 3.14, Utilities and

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<p>development to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not degraded or impaired by new development, to the satisfaction of the City.</p>	<p>Service Systems. The Project would provide all necessary infrastructure required to serve the Project site. The infrastructure improvements are consistent with City infrastructure plans and capacity requirements. Furthermore, the City collects impact fees from new development based upon projected impacts from each development. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and public service providers to finance public services.</p>
<p>PFS-2.6 Fair Share Cost. Ensure that all new development provides for and funds a fair share of the costs for adequate water source, distribution, including line extensions, easements, and water treatment plant expansions.</p>	<p>Consistent. As discussed above, the Project would provide all necessary infrastructure required to serve the Project site. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.</p>
<p>PFS-3.1 Wastewater Infrastructure. Ensure adequate wastewater collection and treatment infrastructure to serve existing and future development.</p>	<p>Consistent. Impacts on utilities infrastructure, including wastewater, are discussed in Section 3.14, Utilities and Service Systems. The Project would provide all necessary infrastructure required to serve the Project site. The infrastructure improvements are consistent with City infrastructure plans and capacity requirements.</p>
<p>PFS-3.5 Development Review. Review new development applications in order to ensure that new growth does not exceed the availability of adequate sewage treatment capacity or predate the presence of necessary infrastructure.</p>	<p>Consistent. Impacts on utilities infrastructure, including wastewater, are discussed in Section 3.14, Utilities and Service Systems. The Project would provide all necessary infrastructure required to serve the Project site. The infrastructure improvements are consistent with City infrastructure plans and capacity requirements. The Project would not result in exceedance of the treatment capacity of the local sewage treatment plant.</p>
<p>PFS-3.6 Fair Share Cost. Ensure that all new developments provide for and fund their fair share of the costs for adequate sewer collection, treatment and disposal, including line extensions, easements, and dedications.</p>	<p>Consistent. As discussed above, the Project would provide all necessary infrastructure, including wastewater infrastructure, required to serve the Project site. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.</p>
<p>PFS-4.1 Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.</p>	<p>Consistent. As discussed in Chapter 2.0, Project Description, development of the proposed Project would include construction of a new storm drainage system. Stormwater generated on this new impervious surface would be routed through on-site pipes to the proposed drainage retention basin located in the southern portion of the Project site. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200</p>

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	percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours. The stormwater drainage system will be constructed to meet the City of Lathrop Standards.
<p>PFS-4.5 Development Review. Continue to require all development projects to:</p> <ul style="list-style-type: none"> a. Demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process and as required by the City’s Small MS4 Phase 2 permit; and b. Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City’s existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts. 	<p>Consistent. As discussed above, Project Description, development of the proposed Project would include construction of a new storm drainage system. Stormwater generated on this new impervious surface would be routed through on-site pipes to the proposed drainage retention basin located in the southern portion of the Project site. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200 percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours. The stormwater drainage system will be constructed to meet the City of Lathrop Standards.</p>
<p>PFS-4.6 Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.</p>	<p>Consistent. As discussed in Chapter 2.0, Project Description, development of the proposed Project would include construction of a new storm drainage system. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. As such, stormwater would be directed towards permeable surfaces to allow for more percolation of stormwater.</p>
<p>PFS-4.7 Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rain water for non-potable uses in compliance with applicable State regulations.</p>	<p>Consistent. As discussed in Chapter 2.0, Project Description, development of the proposed Project would include construction of a new storm drainage system. The stormwater drainage system will be constructed to meet the City of Lathrop Standards. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin.</p>
<p>PFS-4.8 Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.</p>	<p>Consistent. As discussed in Chapter 2.0, Project Description, development of the proposed Project would include construction of a new storm drainage system. Storm water service will be provided by a private storm water infiltration basin located within the Project boundaries. The stormwater drainage system will be constructed to meet the City of Lathrop Standards. In</p>

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	<p>addition, A 7.5-foot-deep private storm water retention basin would be located in the southern portion and a landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin.</p>
<p>PFS-5.4 New Development. Continue to require new development and redevelopment to provide verification from energy providers that states they are able to accommodate the additional demand for service.</p>	<p>Consistent. The proposed Project would be in compliance with all applicable federal, State, and local regulations regulating energy usage. For example, PG&E, the electric providers to the proposed Project, are responsible for the mix of energy resources used to provide electricity for its customers, and it is in the process of implementing the statewide RPS to increase the proportion of renewable energy (e.g. solar and wind) within its energy portfolio. The proposed Project would also be required to implement the applicable Title 24 energy efficiency requirements, as well as other State requirements, such as the California Solar Mandate, as well as all applicable regional and local requirements that affect energy efficiency. .</p>
<p>PFS-8.5 Financing and Proportionate Share. Encourage the local school districts to properly collect required development fees so that new development funds its proportionate share of the Districts’ costs for new school facilities.</p>	<p>Consistent. As discussed in Section 3.12, Public Services and Recreation, the Manteca Unified School District (MUSD) collects impact fees from new developments under the provisions of SB 50. As of July 27, 2022 the current Level I Developer Fees for commercial and industrial development are \$0.78 per square foot. The Project would be subject to these fees.</p>
<p>PFS-9.1 Refuse Collection. Continue to require mandatory refuse collection throughout the city.</p>	<p>Consistent: The Project includes refuse collection facilities on-site. The refuse would be collected periodically, as warranted.</p>
<p>PFS-9.2 Source Reduction and Recycling Program. Implement and enforce the provisions of the City’s Source Reduction and Recycling Program.</p>	<p>Consistent. Impacts on utilities infrastructure (including solid waste) are discussed in Section 3.14, Utilities and Service Systems.</p>
<p>PFS-9.3 Compliance with State Legislation. Continue to comply with all State regulations regarding waste diversion, source reduction, recycling, and composting.</p>	<p>Consistent. Section 8.16 of the Lathrop Municipal Code provides rules and regulations regarding garbage collection and disposal. It includes a list of hazardous materials (8.16.050), prohibitions on the burning and burial of solid waste (8.16.060), rights of the City related to solid waste collection and transportation (8.16.090), a list of requirements for the contractor for solid waste collection and transportation (8.16.100), restrictions on solid waste collection and transportation (8.16.110), a description of billing and collection fees (8.16.160), the garbage collection rate schedule (8.16.170), permit requirements (8.16.190), and a description of fees and other requirements. The project is subject to these requirements of the municipal code.</p>

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PFS-9.5 Waste Service Performance and Collection Facilities. Support efforts of the solid waste service provider to maintain adequate residential, commercial, and industrial solid waste and mixed recycling collection service levels and solid waste facilities in accordance with state law, and periodically review waste collection performance to verify adequacy of service.	Consistent. Impacts on utilities infrastructure (including solid waste) are discussed in Section 3.14, Utilities and Service Systems. As discussed in section 3.14, Solid waste from Lathrop is primarily landfilled at the Forward Sanitary Landfill. The Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. The Forward Landfill has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day. The addition of the volume of solid waste associated with the proposed Project, approximately 6.2 tons per day, would not exceed the Forward Landfill's remaining capacity. Existing landfills have permitted capacity to handle this additional waste.
PFS-9.6 Landfill Capacity. Continue to coordinate with San Joaquin County to ensure adequate landfill capacity in the region.	Consistent. As discussed previously, the Forward Sanitary Landfill has adequate capacity to provide solid waste services to the proposed Project.
PFS-9.9 Hazardous Waste. Promote the proper disposal of hazardous waste—including paint, tires, medications, medical sharps, infectious waste, asbestos waste, construction waste, and electronic waste; encourage materials to be recycled or disposed of in a manner that is safe for the environment, residents, and visitors to the city consistent with the Public Safety Element.	Consistent. The proposed Project would generate hazardous waste, such as tires, vehicle parts, vehicle fluids (motor oil, etc.), and construction waste. The City of Lathrop contracts with Republic Services for hazardous waste collection. Hazardous waste collection facilities receive hazardous waste that comes from homes and small business, including the project site, hazardous waste generators. Furthermore, Mitigation Measure 3.8-2 requires that the project applicant submit a Hazardous Materials Business Plan (HMBP) to the San Joaquin County Environmental Health Department (CUPA) for review and approval. If during the construction process the applicant or any subcontractors generates hazardous waste, the applicant must register with the CUPA as a generator of hazardous waste, obtain an EPA ID# and accumulate, ship and dispose of the hazardous waste per Health and Safety Code Ch. 6.5. (California Hazardous Waste Control Law).
PFS-10.5 Infrastructure. As feasible, require recycled water infrastructure including purple pipes to encourage the future use of reclaimed water for urban landscapes to be included in new development and infrastructure projects.	Consistent. Impacts on utilities infrastructure (sewer, water, storm drainage, and solid waste) are discussed in Section 3.14, Utilities. Water and sewer services for the proposed Project would be extended to the Project site from existing services from the intersection of Harlan Road and Roth Road east of I-5 and would include recycled water service, when it becomes available.
RECREATION AND RESOURCES	
RR-2.1: Open Space Boundaries. Maintain existing open space lands within the city by carefully considering the impact of new development in established open space areas.	Does Not Conflict: The Project site is not designated as Open Space by the City of Lathrop. The proposed Project would result in a land use consistent with the land use designation of the Project site. More specifically, the Project proposes the construction of freeway commercial

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	services, consisting of a new travel center with multiples facilities, gasoline and diesel refueling stations, service station, and parking lots.
RR-2.3 Scenic Resources. Protect the city's scenic resources, including scenic corridors along roads and views of the hillsides, waterways, and other significant natural features, to the extent practical.	Does Not Conflict: There are no designated State Scenic Highways in the vicinity of the Project site. There are also no County designated scenic corridors, trails, or rivers located in the Project site.
RR-3.1: Preservation. Protect areas containing significant historic, archaeological, and paleontological resources, as defined by the California Public Resources Code.	Does Not Conflict: No prehistoric or historic resources were found in the Project site. A record search was conducted for the current Area of Potential Effects (APE) and a 0.25-mile radius at the CCIC of the CHRIS on September 9, 2020 (Record Search File No.: 11495L). According to the Central California Information Center (CCIC) California Historical Resources Information System (CHRIS) results, the Project site has never been surveyed. There are no cultural or archaeological resources recorded in or near the Project site or search radius. However, one historic site remnant was found and recorded as ML-20-06 (described below) in a 2021 field survey effort. However, the building remnant has been recorded, and is not eligible for the California Register of Historical Resources (CRHR), and there are no significant cultural resources with the Project site.
RR-3.2: San Joaquin County Coordination. Coordinate with San Joaquin County to preserve local historic resources, conserve historical assets within the City, and allow for local community events to occur at these special locations.	Does Not Conflict: As noted above, no prehistoric or historic resources were found in the Project site. There are no cultural or archaeological resources recorded in or near the Project site or search radius.
RR-3.3: Human Remains. Ensure that human remains are treated with sensitivity and dignity, and ensure compliance with the provisions of California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097.98.	Consistent: While no human remains were found during field surveys of the Project site, implementation of the Mitigation Measure 3.5-1 would ensure that all construction activities which inadvertently discover human remains implement state-required consultation methods to determine the disposition and historical significance of any discovered human remains.
RR-3.4: Tribal Consultation. Consult with Native American tribes that may be impacted by proposed development, as necessary, and in accordance with state, local, and tribal intergovernmental consultation requirements.	Consistent: Peak & Associates contacted the NAHC for a check of the Sacred Lands files for the Project site. On October 19, 2020, the NAHC provided a reply with positive results from the Sacred Lands files search. Pursuant to both Assembly Bill (AB) 52 and Senate Bill (SB) 18, the City of Lathrop sent a letter to the Northern Valley Yokuts tribe, Buena Vista Rancheria, California Valley Miwok tribe, and the Confederated Villages of Lisjan on January 22, 2021. All correspondence related to the consultation effort are presented in Appendix 3 of Appendix C.

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RR-4.1: Sensitive Communities. Protect, conserve, and enhance Lathrop’s biological resources, with a special focus on sensitive, rare, or endangered plant and wildlife species in accordance with state and federal resource agency requirements.	Consistent: This EIR includes an in-depth analysis of impacts related to biological resources, including the potential for impacts to sensitive, rare or endangered plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable. See Section 3.4, Biological Resources, of this EIR.
RR-4.2: Habitat Conservation. Support habitat conservation efforts to set aside and preserve suitable habitats, with priority given to habitats for rare and endangered species in accordance with state and federal resource agency requirements.	Consistent: This EIR provides a detailed overview of the applicable regulatory requirements to ensure the Project complies with all federal, State, and regional regulations for habitat and species protections. Additionally, this EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable. See Section 3.4, Biological Resources, of this EIR.
RR-4.3: Native Species. Conserve existing native trees and vegetation where possible and encourage the use of native species in development and infrastructure projects.	Consistent: The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter.
RR-4.4: Natural Water Bodies and Drainage Systems. Limit the disturbance of natural water bodies and drainage systems in Lathrop by conserving natural open space areas, protecting channels, and minimizing the impacts from stormwater and urban runoff.	Does not Conflict: There are no natural water bodies onsite. This EIR provides a detailed overview of the applicable regulatory requirements to ensure the Project complies with all federal, State, and regional regulations for habitat and species protections. Additionally, this EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable. See Section 3.4, Biological Resources, of this EIR.
RR-4.6: Urban Forest. To the extent feasible, build upon existing streetscapes and develop an urban forest along the City’s major corridors and in residential neighborhoods to provide avian habitat, sequester carbon emissions, foster pedestrian activity, and provide shade.	Consistent: The landscape plan includes a mix of drought-tolerant shrubs and grasses, and a variety of shade trees appropriate for the climate in Tracy would be used throughout the parking lots and along the Project perimeter.
RR-4.11: Development. Require that all new development identify potential impacts to existing biological resources and provide mitigation measures as necessary pursuant to CEQA in order to protect these resources from negative externalities.	Consistent: This EIR provides a detailed overview of the applicable regulatory requirements to ensure the Project complies with all federal, State, and regional regulations for habitat and species protections. Additionally, this EIR includes an in-depth analysis of impacts for sensitive plants and wildlife, as well as habitat. Where impacts are identified, mitigation measures are presented to minimize, avoid, or compensate to the extent practicable. See Section 3.4, Biological Resources, of this EIR.
RR-7d: Review and regulate new development, infrastructure, and levee	The proposed Project is subject to the SJMSCP. The proposed Project does not conflict with the SJMSCP.

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improvement projects to ensure consistency with Federal and State flood and floodway requirements, including BDCP and Delta Plan policies as applicable.	Mitigation Measure 3.4-2 in Section 3.4 of this EIR requires participation in the SJMSCP.
RR-8.7: Groundwater Recharge. Promote the use of permeable surface materials and provide for ample areas of open space, including parks and greenways, and naturalized land, in order to decrease surface runoff and promote groundwater recharge.	Consistent: The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project’s storm drainage system. Stormwater would be gravity fed and eventually flow to the proposed retention basin. Once at the retention basin, water would percolate to the groundwater. As discussed in Impact 3.9-2 in Section 3.9, Hydrology and Water Quality, the Project would not decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin.
PUBLIC SAFETY	
PS-1.1. Geologic Hazard Identification. Review and monitor geologic and seismic hazards maps in concert with updates from the California Geologic Survey and local surveys.	Consistent. Project design would be subject to the California Building Code (CBC), which includes applicable safety and design standards related to geologic hazards. Additionally, a geotechnical evaluation has been completed for the Project, consistent with Sections 1803.1.1.2, 1803.5.11. and 1803.5.12 of the CBC. The geotechnical evaluation includes a review of hazard maps as well as soil sampling. See Section 3.6, Geology and Soils, of this EIR for discussions pertaining to geologic and seismic hazards.
PS-1.2 Earthquake Protection. Enforce State seismic design standards and guidelines and all relevant building codes to reduce the risk of damage associated with seismic activity.	Consistent. Project design would be subject to the CBC, which includes applicable safety and design standards related to seismic activity. Additionally, as discussed in Impact 3.6-1, the proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides. See Section 3.6, Geology and Soils, of this EIR for discussions pertaining to seismic hazards.
PS-1.3 Development. Require special site-specific studies, generally including but not limited to, soil compaction tests and geotechnical reports, for development projects and City improvement projects to determine the nature and extent of	Consistent. As discussed in Section 3.6, a geotechnical evaluation has been completed for the Project, consistent with Sections 1803.1.1.2, 1803.5.11. and 1803.5.12 of the CBC. See Appendix D of this Draft EIR. The geotechnical evaluation determined the nature and extent of possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to

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possible liquefaction, landslides, and geologic hazards, and to identify engineering and development siting measures to permit development to occur.	permit development to occur. Mitigation measures in Section 3.6 require that the recommendations in the geotechnical evaluation be implemented as part of the Project.
PS-1.4 Development Inspection. Require professional inspection of foundation, excavation, earthwork, and other geotechnical aspects of site development during constructions on those sites specified in geotechnical studies as being prone to seismic or geologic hazard.	Consistent. As discussed above, a geotechnical evaluation has been completed for the Project, consistent with Sections 1803.1.1.2, 1803.5.11. and 1803.5.12 of the CBC. The evaluation includes building requirements and recommendations, all of which are included in Section 3.6, Geology and Soils, of this EIR.
PS-1.6 Title 24 Compliance. Require all structures located within areas containing expansive soils to be designed and engineered to comply with the California Code of Regulations (CCR), Title 24.	Consistent. According to the Geotechnical Engineering Investigation prepared for the Project, the soils in the Project Area have a low shrink-swell potential. Project design would be subject to the California Code of Regulations (CCR), Title 24.
PS-2.1 Building Fire Codes. Require that all buildings and facilities within the city comply with local, state, and federal regulatory standards such as the California Building and Fire Codes, as well as other applicable fire safety standards, to minimize the risk of fire in the city.	Consistent. The proposed Project would be subject to the California Building Code, which requires the California Fire Code. In addition, Project design would be reviewed by the City and fire department for opportunities to use building and site design features as a means for fire prevention and reduction.
PS-2.2 Fire Protection Services. Coordinate with the Lathrop Manteca Fire Protection District (LMFD) in the provision of fire protection services to serve the city's current and future population and development.	Consistent. Impacts on Public Services and Recreation are discussed in Section 3.12. The city has adequate fire department capacity to provide fire protection services to the proposed Project.
PS-2.5: Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.	Consistent: As discussed in Impact 3.13-4 in Section 3.14, the Project is designed to allow access for emergency vehicles into the Project site and would not impair emergency response.
PS-2.6: Water Supply. Ensure that new development is served with adequate water volumes and water pressure to support fire protection, including minimum required fire flow standards for commercial, industrial and residential areas.	Consistent. Impacts on utilities infrastructure (including water infrastructure and supplies) are discussed in Section 3.14, Utilities and Service Systems. The city has adequate water supply capacity to provide water services to the proposed Project.
PS-3.4: Evaluate Hazards. Require evaluation of potential flood hazards prior to approval of development projects to determine whether the proposed development is reasonably safe from flooding and consistent with California Department of Water Resources Urban Level of Flood Protection Criteria (ULOP).	Consistent: Impacts associated with potential flood events are discussed in Section 3.9, Hydrology and Water Quality, of this EIR. As discussed, the Project site is currently located in Zone X, protected by levee, which by definition indicates an area protected by levees from the 1% annual chance flood. Furthermore, the entire Project site is located in the 200-year floodplain. However, pursuant to the City Municipal Code, the proposed Project

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<p>The City shall not approve the execution of a development agreement, a tentative map, or a parcel map for which a tentative map is not required, or a discretionary permit or other discretionary entitlement that would result in the construction of a new building, or construction that would result in an increase in allowed occupancy for an existing building, or issuance of a ministerial permit that would result in the construction of a new residence for property that is located within a 200-year flood hazard zone, unless the adequacy of flood protection as described in Government Code §65865.5(a), 65962(a), or 66474.5(a), has been demonstrated.</p>	<p>would be required to comply with regulations contained in Chapter 17.17 (200-Year Flood Protection) of the City Municipal Code.</p>
<p>PS-3.5 New Development. New development may be permitted in areas not identified as "urban" or "urbanizing" provided that:</p> <ol style="list-style-type: none"> 1. Such areas are protected from 100-year flooding by FEMA-accredited levees or equivalent flood protection as shown on an adopted FEMA Flood Insurance Rate Map, a FEMA-approved Letter of Map Revision or a Conditional Letter of Map Revision, subject to conditions specified in the letter; or 2. Where not protected by FEMA-accredited 100-year levees, such areas are subject to all applicable requirements of Municipal Code Chapter 8.30 (Floodplain Management), the California Building Standards Code as adopted by the City, and the latest promulgated FEMA standards for development in the 100-year floodplain, provided that new development is defined as "urban" or "urbanizing." 	<p>Consistent: Impacts associated with potential flood events are discussed in Section 3.9, Hydrology and Water Quality, of this EIR. As discussed, the Project site is currently located in Zone X, protected by levee, which by definition indicates an area protected by levees from the 1% annual chance flood.</p>
<p>PS-3.7 Mitigation. Require all development projects to demonstrate how storm water runoff will be detained or retained on-site, treated, and/or conveyed to the nearest drainage facility</p>	<p>Consistent. Impacts on utilities infrastructure (including storm drainage) are discussed in Section 3.14, Utilities and Service Systems. As discussed, development of the proposed Project would include construction of a new storm drainage system. The stormwater drainage system</p>

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<p>as part of the development review process. Project applicants shall demonstrate that project implementation would not result in increases in the peak flow runoff to adjacent lands or drainage facilities that would exceed the design capacity of the drainage facility or result in an increased potential for offsite flooding.</p>	<p>will be constructed to meet the City of Lathrop Standards. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200 percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours.</p>
<p>PS-3.8: Construction Activities. Ensure that construction activities will not result in adverse impacts to existing flood control and drainage facilities, and adequate drainage and erosion control measures are provided during construction of new development.</p>	<p>Consistent: The Project includes use of a detention basin to accommodate runoff from the proposed development. Additionally, the proposed storm drain system will include water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.</p>
<p>PS-3.9: Adequate Infrastructure. Maintain and regularly assess the status of local storm drainage infrastructure to ensure that the system is functioning property.</p>	<p>Consistent. Impacts on utilities infrastructure including storm drainage) are discussed in Section 3.14, Utilities and Service Systems. As discussed, development of the proposed Project would include construction of a new storm drainage system. The stormwater drainage system will be constructed to meet the City of Lathrop Standards. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin.</p>
<p>PS-4.2: Reduction. Encourage producers and users of hazardous materials to reduce the amount of hazardous materials produced and used.</p>	<p>Consistent: The project would adhere to all local, state, and federal regulations governing the storage and handling of hazardous materials. This may involve obtaining permits, licenses, and certifications related to hazardous materials storage and management from DTSC. As discussed in Impact 3.8-5 in Section 3.8, the County OES also prepared a Hazardous Materials Area Plan (Chapter 4 of Division 2, Title 19, Article 3, §2720-2728 of the California Code of Regulations) and (California Health and Safety Code, Division 20, Chapter 6.95, Section 25503.5) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is implemented by the San Joaquin County Environmental Health Department. The San Joaquin County</p>

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	<p>Environmental Health Department also maintains a HMBP. The HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials. The project is subject to review by the San Joaquin County Environmental Health Department in conformance with the Hazardous Materials Area Plan.</p>
<p>PS-4.3: Storage. Require the storage of hazardous materials in safe manner.</p>	<p>Consistent: The proposed Project would generate hazardous waste, such as tires, vehicle parts, vehicle fluids (motor oil, etc.), and construction waste. The Project would adhere to all local, state, and federal regulations governing the storage and handling of hazardous materials. This may involve obtaining permits, licenses, and certifications related to hazardous materials storage and management from DTSC.</p>
<p>PS-4.4: Regulations. Ensure that the LMFDD continues to enforce the Uniform Fire Code relating to the use of hazardous material and require the appropriate regulations to be followed and precautions taken for the type and amount of hazard being created, used, stored, and/or disposed.</p>	<p>Consistent. The proposed Project would be subject to the California Building Code, which requires the California Fire Code. In addition, Project design would be reviewed by the City and fire department for opportunities to use building and site design features as a means for fire prevention and reduction. As discussed in Impact 3.8-5 in Section 3.8, the County OES also prepared a Hazardous Materials Area Plan (Chapter 4 of Division 2, Title 19, Article 3, §2720-2728 of the California Code of Regulations) and (California Health and Safety Code, Division 20, Chapter 6.95, Section 25503.5) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is implemented by the San Joaquin County Environmental Health Department. The San Joaquin County Environmental Health Department also maintains a HMBP. The HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials. The project is subject to review by the San Joaquin County Environmental Health Department in conformance with the Hazardous Materials Area Plan.</p>
<p>PS-4.5: Hazardous Materials Business Plan. Coordinate with the LMFDD to ensure that businesses in the city which handle hazardous materials prepare and file a Hazardous Materials Business Plan (HMBP). The HMBP shall consist of general business information, basic</p>	<p>Consistent. Impacts on Public Services and Recreation are discussed in Section 3.12 and impacts related to hazardous waste are discussed in Section 3.8. The proposed Project would generate hazardous waste, such as tires, vehicle parts, vehicle fluids (motor oil, etc.), and construction waste. As discussed in Impact 3.8-5 in Section 3.8, the County OES also prepared a Hazardous</p>

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<p>information on the location, type, quantity, and health risks of hazardous materials, and emergency response and training plans.</p>	<p>Materials Area Plan (Chapter 4 of Division 2, Title 19, Article 3, §2720-2728 of the California Code of Regulations) and (California Health and Safety Code, Division 20, Chapter 6.95, Section 25503.5) that describes the hazardous materials response system developed to protect public health, prevent environmental damage and ensure proper use and disposal of hazardous materials. The plan establishes effective response capabilities to contain and control releases, establishes oversight of long-term cleanup and mitigation of residual releases, and integrates multi-jurisdiction and agency coordination. This plan is implemented by the San Joaquin County Environmental Health Department. The San Joaquin County Environmental Health Department also maintains a HMBP. The HMBP describes agency roles, strategies and processes for responding to emergencies involving hazardous materials. The project is subject to review by the San Joaquin County Environmental Health Department in conformance with the Hazardous Materials Area Plan.</p>
<p>PS-4.6: Cleanup Sites. Require that the hazardous material transporter and/or the party responsible for the release, coordinates with the San Joaquin County Environmental Health Department, LMF, and other agencies as needed, to confirm that hazardous waste cleanup sites located within the city are remediated with the property owner in a manner that keeps the public safe.</p>	<p>Does Not Conflict: The Project site does not include an existing hazardous clean-up site.</p>
<p>PS-4.7: Emergency Response. Work with the LMF and other responding agencies to ensure that emergency personnel respond safely and effectively to a hazardous materials incident in the city.</p>	<p>Consistent. As discussed in Section 3.13, Transportation and Circulation, a preliminary site plan review completed as part of the Transportation Analysis Report (Fehr & Peers, 2023) indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. Therefore, emergency personnel can respond safely and effectively to a hazardous materials incident at the Project site.</p>
PUBLIC FACILITIES AND SERVICES ELEMENT	
<p>PFS-1.4 Revenue Sources. Identify and proactively pursue local, stable, and predictable sources of revenue to meet public facility, service, and infrastructure needs.</p>	<p>Consistent: The Project includes commercial highway serving uses which generate tax-revenue income for the City of Lathrop.</p>
<p>PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based</p>	<p>Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.</p>

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<p>on an evaluation of long-term economic benefits and in a manner consistent with the City’s cost recovery goals.</p>	
<p>PFS-1.12 Infrastructure Rehabilitation. Prioritize the regular maintenance and rehabilitation of public facilities and critical Demonstrate Capacity. Require new development to demonstrate that the City’s public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.</p>	<p>Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance. As discussed in Section 3.12, Public Services and Recreation, the public services (police, fire, and schools) are adequate to serve the Project.</p>
<p>PFS-1.13 Mitigate Impacts. Require new development to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not degraded or impaired by new development, to the satisfaction of the City.</p>	<p>Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance. As discussed in Section 3.12, Public Services and Recreation, the public services (police, fire, and schools) are adequate to serve the Project.</p>
<p>PFS-4.1: Maintain Capacity. Maintain and improve storm drainage infrastructure and flood control facilities in order to protect the community from flood hazards.</p>	<p>Consistent. As discussed in Section 3.14, Utilities and Services Systems, the proposed storm drainage system is adequate to serve the Project and would not result in off-site flooding impacts. Additionally, the Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.</p>
<p>PFS-4.3: Maintenance Districts. Continue to fund the operation and maintenance of stormwater facilities and regulatory compliance through the creation of maintenance districts and/or other appropriate mechanisms that avoid burdening the City’s finances.</p>	<p>Consistent. As discussed above, the proposed storm drainage system is adequate to serve the Project and would not result in off-site flooding impacts. Additionally, the Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance.</p>
<p>PFS-4.5: Development Review. Continue to require all development projects to:</p> <ul style="list-style-type: none"> A. Demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process and as required by the City’s Small MS4 Phase 2 permit; and B. Analyze their drainage and stormwater conveyance impacts and either 	<p>Consistent: The Project includes use of a detention basin to accommodate runoff from the proposed development. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200 percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours. Additionally, the proposed storm drain system will include water quality features designed in conformance with the standards of</p>

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<p>demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.</p>	<p>the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.</p>
<p>PFS-4.6: Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.</p>	<p>Consistent: The Project includes use of a detention basin to accommodate runoff from the proposed development. Stormwater runoff collected at the basin would percolate into the ground.</p>
<p>PFS-4.7: Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rainwater for non-potable uses in compliance with applicable State regulations.</p>	<p>Consistent: As discussed previously, the Project includes use of a detention basin to accommodate runoff from the proposed development. Additionally, the proposed storm drain system will include water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.</p>
<p>PFS-4.8: Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.</p>	<p>Consistent: As discussed previously, the Project includes use of a detention basin to accommodate runoff from the proposed development. Per the engineering design for the basin, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours. Additionally, the proposed storm drain system will include water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.</p>
<p>PFS-4.9: Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.</p>	<p>Consistent. The Project includes a 7.5-foot-deep private storm water retention basin which would be located in the southern portion of the Project site. A landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. Existing naturalized stormwater facilities are not found on-site.</p>
<p>PFS-4.10: Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.</p>	<p>Does Not Conflict. A 7.5-foot-deep private storm water retention basin would be located in the southern portion of the Project site. However, the landscape strip would surround the retention basin, along a 3:1 slope, and would not be conducive for recreational activities.</p>
<p>PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire</p>	<p>Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility</p>

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<p>Protection District (LMFD) and the San Joaquin County Sheriff’s Department to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, police protection, and emergency medical services to existing and future growth in the city.</p>	<p>providers to finance public facility design, construction, operation, and maintenance. Payment of the applicable impact fees by the Project applicant and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund these police, fire, and emergency medical service needs created by the proposed Project. As discussed in Section 3.12, all impacts pertaining to police and fire services would be less than significant.</p>
<p>PFS-7.2 Emergency Response Times. Work cooperatively with the LMFD, the San Joaquin County Sheriff’s Department, and providers of emergency medical services to ensure acceptable response times in accordance with provider standards.</p>	<p>Consistent: The Project site is designed to allow access for emergency vehicles into the Project site and would not impair emergency response. A preliminary site plan review completed as part of the Transportation Analysis Report (Fehr & Peers, 2023) indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. All intersections and street sections would be reviewed by the City of Lathrop and designed to comply with typical City standards.</p>
<p>PFS-7.4 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.</p>	<p>Consistent: As noted above, the Project site is designed to allow access for emergency vehicles into the Project site and would not impair emergency response. As discussed in section 3.13, a preliminary site plan review completed as part of the Transportation Analysis Report (Fehr & Peers, 2023) indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. All intersections and street sections would be reviewed by the City of Lathrop and designed to comply with typical City standards.</p>
<p>PFS-7.5 Department Consultation. Coordinate with LMFD and the San Joaquin County Sheriff’s Department in the review of new development applications to ensure that adequate attention is being paid to fire and safety concerns during the design and planning of a project.</p>	<p>Consistent. The Project would be subject to review to all various City departments for comment and conditions prior to final approval.</p>
<p>PFS-7.8 Site Design. Recognize the role of site design in crime prevention and implement best practices into existing plans and new development strategies.</p>	<p>Consistent. The Project includes pedestrian-scale lighting that would aid in crime prevention practices.</p>
<p>PFS-7.9 Technology. Encourage and support efforts to improve police, fire, and emergency medical services through improved use of modern technology and industry best practices.</p>	<p>Consistent. The Project would be subject to Development Fees outlined in the Master Fee Schedule. These development fees would be used by the City and utility providers to finance public facility design, construction, operation, and maintenance. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would assist in funding efforts to improve police, fire, and</p>

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	emergency medical services through updating technology.
<p>PFS-8.2 Adequate Facilities. Continue to engage Manteca Unified School District (MUSD) in the environmental review process for land use changes so that they can provide adequate educational opportunities for all students in a timely manner in accordance with the pace of residential development.</p>	<p>Consistent. The NOP for the proposed Project was provided to the MUSD. The proposed Project does not include any new residential development and will not directly or indirectly increase the City’s population, as such the need for additional school facilities is not anticipated. MUSD collects impact fees from new developments under the provisions of SB 50. As of July 27, 2022 the current Level I Developer Fees for industrial development are \$0.78 per square foot. Under Section 65996 of the California Government Code, the payment of fees under SB 50 is deemed to fully mitigate the impacts of new development on school facilities. These development fees would be used by the school district to finance facility design, construction, operation, and maintenance.</p>
<p>PFS-8.5 Financing and Proportionate Share. Work with MUSD to encourage the planned financing of new school facilities concurrent with new development and to ensure that new development funds its proportionate share of the development.</p>	<p>Consistent. The proposed Project does not include any new residential development and will not directly or indirectly increase the City’s population, as such the need for additional school facilities is not anticipated. MUSD collects impact fees from new developments under the provisions of SB 50. As of July 27, 2022 the current Level I Developer Fees for industrial development are \$0.78 per square foot. Under Section 65996 of the California Government Code, the payment of fees under SB 50 is deemed to fully mitigate the impacts of new development on school facilities. These development fees would be used by the School district to finance facility design, construction, operation, and maintenance.</p>
NOISE ELEMENT	
<p>N-1.3: Indoor Residential Noise Level. Ensure that new development does not result in indoor noise levels exceeding 45 dBA Ldn for residential uses by requiring the implementation of construction techniques and noise reduction measures for all new residential development.</p>	<p>Consistent. Impacts on Noises are discussed in Section 3.11. As discussed in the Impact 3.11-1 impact analysis, the Project noise levels would exceed the County of San Joaquin non-transportation noise level standard of 45 dBA Leq for nighttime noise levels. Mitigation Measure 3.11-1 requires noise barriers on portions of the northern and southern site boundaries between the Project site and the residential receptors to the north and south of the site. The noise barrier locations are shown in Figure 3.11-3. The barrier to the north would be a minimum of 8 feet in height and the barrier to the south would be a minimum of six feet in height. This would reduce stationary noise levels generated by the Project to below the San Joaquin County noise level standards. Implementation of Mitigation Measure 3.11-1 would reduce operational noise levels to below the County's thresholds. .</p>
<p>N-1.4: Acoustical Studies. For projects that are required to prepare an acoustical study, the following stationary and transportation noise source criteria shall</p>	<p>Consistent. Impacts on Noises are discussed in Section 3.11. As discussed in the Impact 3.11-1, the stationary sources associated with the Project would not result in an increase of 3 dB or greater. Furthermore, the ambient</p>

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<p>be used to determine the significance of those impacts.</p> <ul style="list-style-type: none"> A. Stationary and Non-Transportation Noise Sources – A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater. B. Transportation Noise Sources - <ul style="list-style-type: none"> a. Where existing traffic noise levels are less than 60 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +5 dB Ldn increase in roadway noise levels will be considered significant; b. Where existing traffic noise levels range between 60 and 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a +3 dB Ldn increase in roadway noise levels will be considered significant; and c. Where existing traffic noise levels are greater than 65 dB Ldn at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB Ldn increase in roadway noise levels will be considered significant. 	<p>noise environment in the Project vicinity as defined by the analyzed road segments does not exceed 60 dBA Ldn at the existing sensitive receptors. Therefore, the project is consistent with all noise standards of the City of Lathrop. .</p>
<p>N-1.15: Construction Noise. Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Table N-3 (Table 3.11-4), or, if the criteria cannot be met, to the maximum extent feasible complying with Title 15 of the LMC (Building and Construction) and use best practices.</p>	<p>Consistent. Impacts on Noises are discussed in Section 3.11. As discussed in the Impact 3.11-1, Project construction would not cause an increase of greater than 12 dBA over existing ambient noise levels. In addition, Mitigation Measure 3.11-2 requires that construction activities are limited to certain hours, construction equipment is properly maintained, equipment idling is limited, and stationary equipment is located away from</p>

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Construction activities outside of the permitted construction hours identified in the LMC may be approved on a case-by-case basis by the Building Official.	noise-sensitive uses. Therefore, the Project is consistent with all noise standards of the City of Lathrop.
ENVIRONMENTAL JUSTICE	
EJ-1.1 Land Use Patterns. Create land use patterns that are transit, bicycle, and pedestrian-oriented and have a mix of uses, especially neighborhood serving businesses, within walking distance of homes and workplaces.	Does Not Conflict: The Project is not located within an area which includes a mix of uses, especially neighborhood serving businesses, within walking distance of homes and workplaces.

SOURCE: DE NOVO PLANNING GROUP, 2023.

As such, implementation of the proposed Project will have a **less than significant** impact relative to this topic.

CONSISTENCY WITH THE CITY OF LATHROP ZONING ORDINANCE AND MAP

The Zoning Ordinance has been established to promote and protect the public health, safety, and general welfare of the community. Among the various objectives of the Zoning Ordinance include the promotion of development at appropriate densities/ floor area ratios in order to conserve and enhance the City's physical scale and character as defined in the General Plan. The City of Lathrop's Zoning Ordinance includes land use, development densities and development standards.

The proposed Project includes the pre-zoning of the project area. The City's pre-zoning will follow the land use designation intent of General Plan Land Use Map (Freeway Commercial), as such the site will be zoned Highway Commercial (CH). The pre-zoning would go into effect upon annexation into the City of Lathrop.

The pre-zoned Highway Commercial (CH) zoning district (section 17.44.050) permits Travel Plaza and/or Truck Stop as a Conditional Use under existing zoning requirements. Additionally, the current Zoning Code (Section 17.84.100 Master Signage Program) would require a Zoning Code Text Amendment to allow the detached signs on the project site. Consistency with the Lathrop Municipal Code, including the Zoning Ordinance, is addressed in each individual section of this EIR. Implementation of the proposed Project will have a **less than significant** impact relative to this topic.

CONCLUSION

The policies discussed above are intended to ensure orderly reorganization to local jurisdictional boundaries, including annexation. There are a variety of environmental effects associated with the proposed Project, including loss of important farmland. This is thoroughly analyzed in Section 3.2 Agricultural Resources. The Project will include mitigation measures to offset the impact to the extent feasible.

The proposed Project is consistent with LAFCO policies adopted to address environmental impacts. Although the proposed Project is not included within the current SJCOG RTP/SCS, this fact, by itself,

is not indicative of any significant environmental effect requiring mitigation. Notably, as explained in Section 3.7 (Greenhouse Gases, Climate Change and Energy), the proposed Project is not inconsistent with State climate policies and includes GHG reducing features that cause it to do its fair share towards meeting Statewide GHG reduction targets. For these reasons, implementation of the proposed Project will have a ***less than significant*** impact relative to this topic.

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This section provides a general description of the existing noise sources in the Project site, a discussion of the regulatory setting, and identifies potential noise impacts associated with new development in the City of Lathrop. Project impacts are evaluated relative to applicable noise level criteria and to the existing ambient noise environment. Mitigation measures have been identified for potentially significant noise-related impacts.

3.11.1 ENVIRONMENTAL SETTING

KEY TERMS

Acoustics	The science of sound.
Ambient Noise	The distinctive acoustical characteristics of a given area consisting of all noise sources audible at that location. In many cases, the term ambient is used to describe an existing or pre-project condition such as the setting in an environmental noise study.
Attenuation	The reduction of noise.
A-Weighting	A frequency-response adjustment of a sound level meter that conditions the output signal to approximate human response.
Decibel or dB	Fundamental unit of sound, defined as ten times the logarithm of the ratio of the sound pressure squared over the reference pressure squared.
CNEL	Community noise equivalent level. Defined as the 24-hour average noise level with noise occurring during evening hours (7 - 10 p.m.) weighted by a factor of three and nighttime hours weighted by a factor of 10 prior to averaging.
Frequency	The measure of the rapidity of alterations of a periodic acoustic signal, expressed in cycles per second or Hertz.
Impulsive	Sound of short duration, usually less than one second, with an abrupt onset and rapid decay.
L_{dn}	Day/Night Average Sound Level. Similar to CNEL but with no evening weighting.
L_{eq}	Equivalent or energy-averaged sound level.
L_{max}	The highest root-mean-square (RMS) sound level measured over a given period of time.
L_(n)	The sound level exceeded a described percentile over a measurement period. For instance, an hourly L ₅₀ is the sound level exceeded 50 percent of the time during the one hour period.
Loudness	A subjective term for the sensation of the magnitude of sound.
Noise	Unwanted sound.
SEL	Sound exposure levels. A rating, in decibels, of a discrete event, such as an aircraft flyover or train passby, that compresses the total sound energy into a one-second event.

FUNDAMENTALS OF ACOUSTICS

Acoustics is the science of sound. Sound may be thought of as mechanical energy of a vibrating object transmitted by pressure waves through a medium to human (or animal) ears. If the pressure

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variations occur frequently enough (at least 20 times per second), then they can be heard and are called sound. The number of pressure variations per second is called the frequency of sound, and is expressed as cycles per second or Hertz (Hz).

Noise is a subjective reaction to different types of sounds. Noise is typically defined as (airborne) sound that is loud, unpleasant, unexpected or undesired, and may therefore be classified as a more specific group of sounds. Perceptions of sound and noise are highly subjective from person to person.

Measuring sound directly in terms of pressure would require a very large and awkward range of numbers. To avoid this, the decibel scale was devised. The decibel scale uses the hearing threshold (20 micropascals), as a point of reference, defined as 0 dB. Other sound pressures are then compared to this reference pressure, and the logarithm is taken to keep the numbers in a practical range. The decibel scale allows a million-fold increase in pressure to be expressed as 120 dB, and changes in levels (dB) correspond closely to human perception of relative loudness.

The perceived loudness of sounds is dependent upon many factors, including sound pressure level and frequency content. However, within the usual range of environmental noise levels, perception of loudness is relatively predictable, and can be approximated by A-weighted sound levels. There is a strong correlation between A-weighted sound levels (expressed as dBA) and the way the human ear perceives sound. For this reason, the A-weighted sound level has become the standard tool of environmental noise assessment. All noise levels reported in this section are in terms of A-weighted levels, but are expressed as dB, unless otherwise noted.

The decibel scale is logarithmic, not linear. In other words, two sound levels 10 dB apart differ in acoustic energy by a factor of 10. When the standard logarithmic decibel is A-weighted, an increase of 10 dBA is generally perceived as a doubling in loudness. For example, a 70-dBA sound is half as loud as an 80-dBA sound, and twice as loud as a 60-dBA sound.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given environment. A common statistical tool to measure the ambient noise level is the average, or equivalent, sound level (L_{eq}), which corresponds to a steady-state A weighted sound level containing the same total energy as a time varying signal over a given time period (usually one hour). The L_{eq} is the foundation of the composite noise descriptor, L_{dn} , and shows very good correlation with community response to noise.

The day/night average level (L_{dn}) is based upon the average noise level over a 24-hour day, with a +10 decibel weighing applied to noise occurring during nighttime (10:00 p.m. to 7:00 a.m.) hours. The nighttime penalty is based upon the assumption that people react to nighttime noise exposures as though they were twice as loud as daytime exposures. Because L_{dn} represents a 24-hour average, it tends to disguise short-term variations in the noise environment. CNEL is similar to L_{dn} , but includes a +5 dB penalty for evening noise. Table 3.11-1 lists several examples of the noise levels associated with common situations.

TABLE 3.11-1: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL (dBA)	COMMON INDOOR ACTIVITIES
	--110--	Rock Band
Jet Fly-over at 300 m (1,000 ft)	--100--	
Gas Lawn Mower at 1 m (3 ft)	--90--	
Diesel Truck at 15 m (50 ft), at 80 km/hr (50 mph)	--80--	Food Blender at 1 m (3 ft) Garbage Disposal at 1 m (3 ft)
Noisy Urban Area, Daytime Gas Lawn Mower, 30 m (100 ft)	--70--	Vacuum Cleaner at 3 m (10 ft)
Commercial Area Heavy Traffic at 90 m (300 ft)	--60--	Normal Speech at 1 m (3 ft)
Quiet Urban Daytime	--50--	Large Business Office Dishwasher in Next Room
Quiet Urban Nighttime	--40--	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	--30--	Library
Quiet Rural Nighttime	--20--	Bedroom at Night, Concert Hall (Background)
	--10--	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	--0--	Lowest Threshold of Human Hearing

SOURCE: CALTRANS, TECHNICAL NOISE SUPPLEMENT, TRAFFIC NOISE ANALYSIS PROTOCOL. SEPTEMBER 2013.

EFFECTS OF NOISE ON PEOPLE

The effects of noise on people can be placed in three categories:

- Subjective effects of annoyance, nuisance, and dissatisfaction;
- Interference with activities such as speech, sleep, and learning; and
- Physiological effects such as hearing loss or sudden startling.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants can experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise or the corresponding reactions of annoyance and dissatisfaction. A wide variation in individual thresholds of annoyance exists and different tolerances to noise tend to develop based on an individual’s past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so-called ambient noise level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- Except in carefully controlled laboratory experiments, a 1-dBA change cannot be perceived;
- Outside of the laboratory, a 3-dBA change is considered a just-perceivable difference;
- A change in level of at least 5-dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause an adverse response.

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Stationary point sources of noise – including stationary mobile sources such as idling vehicles – attenuate (lessen) at a rate of approximately 6 dB per doubling of distance from the source, depending on environmental conditions (i.e., atmospheric conditions and either vegetative or manufactured noise barriers, etc.). Widely distributed noises, such as a large industrial facility spread over many acres, or a street with moving vehicles, would typically attenuate at a lower rate.

EXISTING NOISE LEVELS

Existing and Surrounding Land Uses

Sensitive land uses adjacent to the Project site include residential uses located north, south, and southwest of the Project area. These land uses are located outside of the boundaries of the City of Lathrop and within the boundaries of San Joaquin County.

Existing Ambient Noise Levels

The ambient noise environment in the Project vicinity is primarily defined by traffic noise from Interstate 5 (I-5). Secondary noise sources include traffic on Roth Road and Manthey Road. To quantify the existing ambient noise environment in the vicinity of the Project site, two continuous (24-hour) noise level measurements were conducted on the Project site on September 23rd, 2020. The noise measurement locations are shown on Figure 3.11-1. The noise level measurement survey results are provided in Table 3.11-2. Appendix B of Appendix F shows the complete results of the noise monitoring survey.

TABLE 3.11-2: SUMMARY OF EXISTING BACKGROUND NOISE MEASUREMENT DATA

SITE	LOCATION	DATE/TIME	L _{DN}	AVERAGE MEASURED HOURLY NOISE LEVELS, DB					
				DAYTIME (7AM-10PM)			NIGHTTIME (10PM-7AM)		
				L _{EQ}	L ₅₀	L _{MAX}	L _{EQ}	L ₅₀	L _{MAX}
<i>CONTINUOUS (24-HOUR) NOISE LEVEL MEASUREMENTS</i>									
LT-1	Northern Edge of Project Site	9/23/20	70	66	63	86	64	63	79
LT-2	Southern Edge of Project Site	9/23/20	73	68	65	88	67	65	82

SOURCE: SAXELBY ACOUSTICS, 2020.

The sound level meters were programmed to collect hourly noise level intervals at each site during the survey. The maximum value (L_{max}) represents the highest noise level measured during an interval. The average value (L_{eq}) represents the energy average of all of the noise measured during an interval. The median value (L₅₀) represents the sound level exceeded 50 percent of the time during an interval.

Larson Davis Laboratories (LDL) Model 812 precision integrating sound level meters were used for the ambient noise level measurement survey. The meters were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the American National Standards Institute for Type 1 sound level meters (ANSI S1.4).

Existing Traffic Noise Environment at Sensitive Receptors

METHODOLOGY

To predict existing noise levels due to traffic, the Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA RD-77-108) was used. The model is based upon the Calveno reference noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and the acoustical characteristics of the site. The FHWA model was developed to predict hourly L_{eq} values for free-flowing traffic conditions. Traffic volumes for existing conditions were obtained from the traffic data prepared for the Project. Truck percentages and vehicle speeds on the local area roadways were estimated from field observations.

Traffic noise levels are predicted at the sensitive receptors located at the closest typical setback distance along each Project-area roadway segment. Where traffic noise barriers are predominately located along a roadway segment, a -5 dB offset was added to the noise prediction model to account for various noise barrier heights. A -5 dB offset was also applied where outdoor activity areas are shielded by intervening buildings. In some locations, sensitive receptors may be located at distances which vary from the assumed calculation distance and may experience shielding from intervening barriers or sound walls. However, the traffic noise analysis is believed to be representative of the majority of sensitive receptors located closest to the Project-area roadway segments analyzed in the Environmental Noise Assessment.

OFF-SITE TRAFFIC NOISE

Table 3.11-3 shows the existing traffic noise levels in terms of L_{dn} at closest sensitive receptors along each roadway segment. A complete listing of the FHWA Model input data is contained in Appendix C of Appendix F.

TABLE 3.11-3: EXISTING TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	EXTERIOR TRAFFIC NOISE LEVEL, DB L_{DN}
Roth Rd.	East of Manthey Rd.	49.6
Manthey Rd.	South of Roth Rd.	45.0
SB I-5 Off Ramp	North of Roth Rd.	55.5
SB I-5 On Ramp	South of Roth Rd.	51.2
NB I-5 On Ramp	North of Roth Rd.	51.5
NB I-5 Off Ramp	South of Roth Rd.	47.7
Roth Rd.	East of Harlan Rd.	59.6
Harlan Rd.	South of Roth Rd.	58.0
Manthey Rd.	South of Project Driveway	43.9

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS. 2023.

It should be noted that I-5 is the dominant noise source in the Project vicinity. Increases in traffic volumes on I-5 would be negligible compared to existing volumes on the roadway. Therefore, increases in traffic volumes are assessed conservatively based on increases in noise level generated by the segments listed in Table 3.11-3.

3.11.2 REGULATORY SETTING

STATE

California Environmental Quality Act

The California Environmental Quality Act (CEQA) Guidelines, Appendix G, includes questions that indicate that a significant noise impact may occur if a project exposes persons to noise or vibration levels in excess of local general plans or noise ordinance standards, or cause a substantial permanent or temporary increase in ambient noise levels. CEQA case law also addresses noise impacts. (See, e.g., *King & Gardiner Farms, LLC v. County of Kern* (2020) 45 Cal.App.5th 814, 883-894.) CEQA standards are discussed more below under the Thresholds of Significance section.

Governor's Office of Planning and Research

The State of California General Plan Guidelines (State of California, 2017), published by the Office of Planning and Research (OPR), provides guidance for the acceptability of projects within specific CNEL or L_{dn} contours. The guidelines also present adjustment factors that may be used in order to arrive at noise acceptability standards that reflect the noise control goals of the community, the particular community's sensitivity to noise, and the community's assessment of the relative importance of noise pollution.

LOCAL

City of Lathrop General Plan

POLICIES: NOISE ELEMENT

- N-1.3: Indoor Residential Noise Level. Ensure that new development does not result in indoor noise levels exceeding 45 dBA L_{dn} for residential uses by requiring the implementation of construction techniques and noise reduction measures for all new residential development.
- N-1.4: Acoustical Studies. For projects that are required to prepare an acoustical study, the following stationary and transportation noise source criteria shall be used to determine the significance of those impacts.
 - A. Stationary and Non-Transportation Noise Sources – A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater.
 - B. Transportation Noise Sources -
 1. Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in roadway noise levels will be considered significant;
 2. Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in roadway noise levels will be considered significant; and

3. Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB L_{dn} increase in roadway noise levels will be considered significant.

- N-1.15: Construction Noise. Require construction activities to reduce noise impacts on adjacent uses to the criteria identified in Table N-3 (Table 3.11-4), or, if the criteria cannot be met, to the maximum extent feasible complying with Title 15 of the LMC (Building and Construction) and use best practices. Construction activities outside of the permitted construction hours identified in the LMC may be approved on a case-by-case basis by the Building Official.

TABLE 3.11-4: PERFORMANCE STANDARDS FOR STATIONARY NOISE SOURCES, INCLUDING AFFECTED PROJECTS^{1,2,3,4}

NOISE LEVEL DESCRIPTOR	DAYTIME (7 AM TO 10 PM)	NIGHTTIME (10 PM TO 7 AM)
Hourly L _{eq} , dB	55	45

1. EACH OF THE NOISE LEVELS SPECIFIED ABOVE SHOULD BE LOWERED BY 5 DB FOR SIMPLE NOISE TONES, NOISES CONSISTING PRIMARILY OF SPEECH OR MUSIC, OR RECURRING IMPULSIVE NOISES. SUCH NOISES ARE GENERALLY CONSIDERED TO BE PARTICULARLY ANNOYING AND ARE A PRIMARY SOURCE OF NOISE COMPLAINTS.

2. NO STANDARDS HAVE BEEN INCLUDED FOR INTERIOR NOISE LEVELS. STANDARD CONSTRUCTION PRACTICES SHOULD, WITH THE EXTERIOR NOISE LEVELS IDENTIFIED, RESULT IN ACCEPTABLE INTERIOR NOISE LEVELS.

3. STATIONARY NOISE SOURCES WHICH ARE TYPICALLY OF CONCERN INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

- | | |
|----------------------|---------------------------------------|
| HVAC SYSTEMS | COOLING TOWERS/EVAPORATIVE CONDENSERS |
| PUMP STATIONS | LIFT STATIONS |
| EMERGENCY GENERATORS | BOILERS |
| STEAM VALVES | STEAM TURBINES |
| GENERATORS | FANS |
| AIR COMPRESSORS | HEAVY EQUIPMENT |
| CONVEYOR SYSTEMS | TRANSFORMERS |
| PILE DRIVES | GRINDER |
| DRILL RIGS | GAS OR DIESEL MOTORS |
| WELDERS | CUTTING EQUIPMENT |
| OUTDOOR SPEAKER | BLOWERS |

4. THE TYPES OF USES WHICH MAY TYPICALLY PRODUCE THE NOISE SOURCES DESCRIBED ABOVE INCLUDE BUT ARE NOT LIMITED TO: INDUSTRIAL FACILITIES, PUMP STATIONS, TRUCKING OPERATIONS, TIRE SHOPS, AUTO MAINTENANCE SHOPS, METAL FABRICATING SHOPS, SHOPPING CENTERS, DRIVE-UP WINDOWS, CAR WASHES, LOADING DOCKS, PUBLIC WORKS PROJECTS, BATCH PLANTS, BOTTLING AND CANNING PLANTS, RECYCLING CENTERS, ELECTRIC GENERATING STATIONS, RACE TRACKS, LANDFILLS, SAND AND GRAVEL OPERATIONS, AND ATHLETIC FIELDS.

SOURCE: CITY OF LATHROP GENERAL PLAN, NOISE ELEMENT, TABLE N-3.

City of Lathrop Municipal Code

8.20.040 AMBIENT BASE NOISE LEVEL

Where the ambient noise level is less than designated in this section the respective noise level in this section shall govern.

TABLE 3.11-5: COMMUNITY ENVIRONMENT CLASSIFICATION

ZONE	TIME	VERY QUIET (RURAL, SUBURBAN)	SLIGHTLY QUIET (SUBURBAN, URBAN)	NOISY (URBAN)
Residential, Low	10 p.m. to 7 a.m.	40	45	50
	7 p.m. to 10 p.m.	45	50	55
	7 a.m. to 7 p.m.	50	55	60

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<i>ZONE</i>	<i>TIME</i>	<i>VERY QUIET (RURAL, SUBURBAN)</i>	<i>SLIGHTLY QUIET (SUBURBAN, URBAN)</i>	<i>NOISY (URBAN)</i>
Residential, Multifamily	10 p.m. to 7 a.m.	45	50	55
	7 a.m. to 10 p.m.	50	55	60
Commercial	10 p.m. to 7 a.m.	50	55	60
	7 a.m. to 10 p.m.	55	60	65
Limited Industrial	anytime	70	70	70
General Industrial	anytime	75	75	75

(ORD. 21-418 § 2; PRIOR CODE § 99.04)

8.20.110 CONSTRUCTION OF BUILDINGS AND PROJECTS

It shall be unlawful for any person within a residential zone or within a radius of five hundred (500) feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures or projects or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays, in such a manner that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance unless beforehand a permit therefore has been duly obtained from the office or body of the city having the function to issue permits of this kind. No permit shall be required to perform emergency work as defined in Sections 8.20.010 through 8.20.040. (Prior code § 99.40)

San Joaquin County General Plan

For non-transportation noise sources, the General Plan establishes Table 3.11-6 standards for sensitive uses.

TABLE 3.11-6: SAN JOAQUIN COUNTY GENERAL PLAN NON-TRANSPORTATION NOISE STANDARDS

<i>NOISE LEVEL DESCRIPTOR</i>	<i>OUTDOOR ACTIVITY AREAS^{1,2} DAYTIME³ (7 A.M. TO 10 P.M.)</i>	<i>OUTDOOR ACTIVITY AREAS^{1,2} NIGHTTIME³ (10 P.M. TO 7 A.M.)</i>
Hourly equivalent sound level (L _{eq}), dB	50	45
Maximum sound level (L _{max}), dB	70	65

NOTES: THESE STANDARDS APPLY TO NEW OR EXISTING RESIDENTIAL AREAS AFFECTED BY NEW OR EXISTING NON-TRANSPORTATION SOURCES.

¹WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

²REFER TO MOUNTAIN HOUSE MASTER PLAN, TABLE 11.2, EXTERIOR NOISE STANDARDS FOR NOISE-SENSITIVE USES AFFECTED BY NON-TRANSPORTATION NOISE SOURCES, PAGE 11.12, FOR MOUNTAIN HOUSE NOISE STANDARDS.

³EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 dB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

SOURCE: SAN JOAQUIN GENERAL PLAN, NOISE ELEMENT, TABLE PHS-1.

San Joaquin County Development Regulations

The San Joaquin County Development Regulations, Section 9-1025.9(b) establishes land use noise level standards for new non-transportation or “stationary” noise sources, as outlined below that would be applicable to the proposed Project.

9-1025.9(B) STATIONARY NOISE SOURCES

Proposed projects that will create new stationary noise sources shall be required to mitigate the noise levels from these stationary noise sources so as not to exceed the noise level standards specified in Table 9-1025.9(b), Part II (Table 3.11-7).

TABLE 3.11-7: STATIONARY NOISE SOURCES

<i>NOISE LEVEL DESCRIPTOR</i>	<i>OUTDOOR ACTIVITY AREAS¹ DAYTIME² (7 A.M. TO 10 P.M.)</i>	<i>OUTDOOR ACTIVITY AREAS¹ NIGHTTIME² (10 P.M. TO 7 A.M.)</i>
Hourly equivalent sound level (L _{eq}), dB	50	45
Maximum sound level (L _{max}), dB	70	65

¹WHERE THE LOCATION OF OUTDOOR ACTIVITY AREAS IS UNKNOWN OR IS NOT APPLICABLE, THE NOISE STANDARD SHALL BE APPLIED AT THE PROPERTY LINE OF THE RECEIVING LAND USE. WHEN DETERMINING THE EFFECTIVENESS OF NOISE MITIGATION MEASURES, THE STANDARDS SHALL BE APPLIED ON THE RECEIVING SIDE OF NOISE BARRIERS OR OTHER PROPERTY LINE NOISE MITIGATION MEASURES.

²EACH OF THE NOISE LEVEL STANDARDS SPECIFIED SHALL BE REDUCED BY 5 dB FOR IMPULSIVE NOISE, SINGLE TONE NOISE, OR NOISE CONSISTING PRIMARILY OF SPEECH OR MUSIC.

(ORD. 3675; ORD. 4036 § 2(PART), 1999)

SOURCE: ORDINANCE CODE OF SAN JOAQUIN COUNTY, CALIFORNIA

9-1025.9(C) EXEMPTIONS

The following shall be exempt from the provisions of this Chapter: (3) Noise sources associated with construction, provided such activities do not take place before 6:00 a.m. or after 9:00 p.m. on any day;

VIBRATION STANDARDS

Vibration is like noise in that it involves a source, a transmission path, and a receiver. While vibration is related to noise, it differs in that in that noise is generally considered to be pressure waves transmitted through air, whereas vibration usually consists of the excitation of a structure or surface. As with noise, vibration consists of an amplitude and frequency. A person’s perception to the vibration will depend on their individual sensitivity to vibration, as well as the amplitude and frequency of the source and the response of the system which is vibrating.

Vibration can be measured in terms of acceleration, velocity, or displacement. A common practice is to monitor vibration measures in terms of peak particle velocities in inches per second. Standards pertaining to perception as well as damage to structures have been developed for vibration levels defined in terms of peak particle velocities.

The City of Lathrop does not have specific policies pertaining to vibration levels. Human and structural response to different vibration levels is influenced by a number of factors, including

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ground type, distance between source and receptor, duration, and the number of perceived vibration events. Table 3.11-8 indicates that the threshold for damage to structures ranges from 0.2 to 0.6 peak particle velocity in inches per second (in/sec p.p.v). A threshold of 0.20 in/sec p.p.v. is considered to be a reasonable threshold for short-term construction projects.

TABLE 3.11-8: EFFECTS OF VIBRATION ON PEOPLE AND BUILDINGS

PEAK PARTICLE VELOCITY		HUMAN REACTION	EFFECT ON BUILDINGS
MM/SEC.	IN./SEC.		
0.15-0.30	0.006-0.019	Threshold of perception; possibility of intrusion	Vibrations unlikely to cause damage of any type
2.0	0.08	Vibrations readily perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
2.5	0.10	Level at which continuous vibrations begin to annoy people	Virtually no risk of "architectural" damage to normal buildings
5.0	0.20	Vibrations annoying to people in buildings (this agrees with the levels established for people standing on bridges and subjected to relative short periods of vibrations)	Threshold at which there is a risk of "architectural" damage to normal dwelling - houses with plastered walls and ceilings. Special types of finish such as lining of walls, flexible ceiling treatment, etc., would minimize "architectural" damage
10-15	0.4-0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage.

SOURCE: CALTRANS. TRANSPORTATION RELATED EARTHBOEN VIBRATIONS. TAV-02-01-R9601 FEBRUARY 20, 2002.

3.11.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Appendix G of the CEQA Guidelines states that a project would normally be considered to result in significant noise impacts if noise levels conflict with adopted environmental standards or plans or if noise generated by the project would substantially increase existing noise levels at sensitive receivers on a permanent or temporary basis. Significance criteria for noise impacts are drawn from CEQA Guidelines Appendix G (Items XI [a-f]).

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

- Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generate excessive groundborne vibration or groundborne noise levels; and/or
- 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.

Determination of a Significant Increase in Noise Levels

IMPACTS DUE TO TEMPORARY CONSTRUCTION NOISE INCREASES

With temporary noise impacts (construction), identification of “substantial increases” depends upon the duration of the impact, the temporal daily nature of the impact, and the absolute change in decibel levels. Policy N-1.15 of the City of Lathrop General Plan restricts maximum noise levels from construction to the standards listed in Table 3.11-4. However, the General Plan also states that if this is not feasible, construction noise control best practices should be implemented to reduce noise levels as much as possible. Section 8.20.110 of the City of Lathrop Municipal Code prohibits construction noise between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays where construction occurs within 500 feet of a residential zone.

The City has not adopted any formal standard for evaluating temporary construction noise which occurs within allowable hours. For short-term noise associated with Project construction, Saxelby Acoustics recommends use of the California Department of Transportation (Caltrans) increase criteria of 12 dBA (Caltrans Traffic Noise Protocol, 2020), applied to existing residential receptors in the Project vicinity. This level of increase is approximately equivalent to a doubling of sound energy and has been the standard of significance for Caltrans projects at the state level for many years. Application of this standard to construction activities is considered reasonable considering the temporary nature of construction activities.

IMPACTS DUE TO PERMANENT NOISE INCREASES

The City of Lathrop General Plan Policy N-1.4 establishes the following criteria to determine the significance of noise impacts:

- A. Stationary and Non-Transportation Noise Sources – A significant impact will occur if the project results in an exceedance of the noise level standards contained in this element, or the project will result in an increase in ambient noise levels by more than 3 dB, whichever is greater.
- B. Transportation Noise Sources –
 1. Where existing traffic noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in roadway noise levels will be considered significant;
 2. Where existing traffic noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in roadway noise levels will be considered significant; and
 3. Where existing traffic noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a + 1.5 dB L_{dn} increase in roadway noise levels will be considered significant.

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IMPACTS AND MITIGATION MEASURES

Impact 3.11-1: The proposed Project has the potential to generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant with Mitigation)

TRAFFIC NOISE ENVIRONMENT AT OFF-SITE RECEPTORS WITH AND WITHOUT THE PROJECT

Implementation of the proposed Project would result in an increase in daily traffic volumes on the local roadway network, and consequently, an increase in noise levels from traffic sources along affected segments. Table 3.11-9 shows the predicted traffic noise level increases on the local roadway network for Existing and Existing Plus Project conditions. Table 3.11-10 shows the predicted traffic noise level increases on the local roadway network for the Cumulative No Project and Cumulative Plus Project conditions. Appendix C of Appendix E provides the complete inputs and results of the FHWA traffic noise modeling.

TABLE 3.11-9: EXISTING AND EXISTING PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN} , DB) AT NEAREST SENSITIVE RECEPTORS				
			EXISTING	EXISTING + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
Roth Rd.	East of Manthey Rd.	80	49.6	52.6	3.0	+ 5.0 dB	No
Manthey Rd.	South of Roth Rd.	200	45.0	47.3	2.2	+ 5.0 dB	No
SB I-5 Off Ramp	North of Roth Rd.	50	55.5	56.2	0.6	+ 5.0 dB	No
SB I-5 On Ramp	South of Roth Rd.	50	51.2	52.2	1.0	+ 5.0 dB	No
NB I-5 On Ramp	North of Roth Rd.	80	51.5	52.0	0.5	+ 5.0 dB	No
NB I-5 Off Ramp	South of Roth Rd.	140	47.7	48.5	0.9	+ 5.0 dB	No
Roth Rd.	East of Harlan Rd.	45	59.6	59.7	0.2	+ 5.0 dB	No
Harlan Rd.	South of Roth Rd.	40	58.0	58.1	0.2	+ 5.0 dB	No
Manthey Rd.	South of Project Driveway	200	43.9	43.7	-0.1	+ 5.0 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS, 2023.

TABLE 3.11-10: CUMULATIVE AND CUMULATIVE PLUS PROJECT TRAFFIC NOISE LEVELS

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN} , DB) AT NEAREST SENSITIVE RECEPTORS				
			CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
Roth Rd.	East of Manthey Rd.	80	56.0	56.9	0.9	+ 5.0 dB	No
Manthey Rd.	South of Roth Rd.	200	51.4	52.0	0.6	+ 5.0 dB	No
SB I-5 Off Ramp	North of Roth Rd.	50	58.7	59.0	0.3	+ 5.0 dB	No
SB I-5 On Ramp	South of Roth Rd.	50	56.5	56.9	0.3	+ 5.0 dB	No
NB I-5 On Ramp	North of Roth Rd.	80	53.7	54.0	0.3	+ 5.0 dB	No
NB I-5 Off Ramp	South of Roth Rd.	140	51.4	51.8	0.4	+ 5.0 dB	No

ROADWAY	SEGMENT	APPROX. RECEPTOR DISTANCE	NOISE LEVELS (L_{DN} , DB) AT NEAREST SENSITIVE RECEPTORS				
			CUMULATIVE	CUMULATIVE + PROJECT	CHANGE	CRITERIA	SIGNIFICANT?
Roth Rd.	East of Harlan Rd.	45	64.0	64.1	0.1	+ 5.0 dB	No
Harlan Rd.	South of Roth Rd.	40	58.9	59.0	0.1	+ 5.0 dB	No
Manthey Rd.	South of Project Driveway	200	50.0	50.0	0.0	+ 5.0 dB	No

SOURCE: FHWA-RD-77-108 WITH INPUTS FROM FEHR & PEERS AND SAXELBY ACOUSTICS, 2023.

The City of Lathrop General Plan Policy N-1.4 specifies criteria to determine the significance of traffic noise impacts. Where existing traffic noise levels are greater than 65 dBA L_{dn} , at the outdoor activity areas of noise-sensitive uses, a +1.5 dBA L_{dn} increase in roadway noise levels will be considered significant. Where traffic noise levels are between 60 dBA L_{dn} and 65 dBA L_{dn} , a +3.0 dB L_{dn} increase in roadway noise levels will be considered significant. Where traffic noise levels are less than 60 dBA L_{dn} , a +5.0 dB L_{dn} increase in roadway noise levels will be considered significant.

According to Tables 3.11-9 and 3.11-10, the ambient noise environment in the Project vicinity as defined by the analyzed road segments does not exceed 60 dBA L_{dn} at the existing sensitive receptors. Therefore, the significance criterion for all segments is +5.0 dBA. As shown in the tables, the greatest increase due to traffic from the proposed Project is +3.0 dBA, which is less than the threshold of +5.0 dBA. Therefore, impacts resulting from increased traffic noise would be considered **less-than-significant**.

PROJECT-GENERATED NON-TRANSPORTATION NOISE ENVIRONMENT AT OFF-SITE RECEPTORS

The primary non-transportation noise sources associated with the proposed Project are the truck repair shop, on-site vehicle circulation, backup generators, rooftop mechanical equipment, the drive-thru restaurant speaker box, and gas station canister vacuums. In order to evaluate these noise sources at the nearest sensitive receptors, Saxelby Acoustics used the SoundPLAN noise prediction model to generate noise level predictions according to the assumptions outlined below.

The SoundPLAN noise prediction model was used to plot noise contours and to calculate noise levels at the sensitive receptors located around the Project site. Inputs to the SoundPLAN model included ground topography and ground type, noise source locations and heights, receiver locations, and sound power level data. These predictions are made in accordance with International Organization for Standardization (ISO) standard 9613-2:1996 (Acoustics – Attenuation of sound during propagation outdoors).

It should be noted that sound power is a measure of the total acoustic energy emitted by a noise source and is irrespective of distance from the source. Sound power is input into the SoundPLAN model as a representation of the total acoustic energy emitted by a specific noise source. Sound power levels in this report are A-weighted decibel levels, noted as “dBA, PWL” per industry standards. The model then corrects for the many factors (i.e., distance, terrain shielding, atmospheric absorption, etc.) which affect sound propagation from the noise source to the receiver location.

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Saxelby Acoustics used the SoundPLAN noise model to calculate noise levels at the nearest sensitive receptors. Input data included all proposed amenities as discussed below as well as topography and existing and proposed buildings/sound walls. The proposed project includes an 8-foot-tall, 215-foot-long sound wall shielding the residence north of the project site and an 8-foot-tall 650-foot-long sound wall shielding the residence south of the project site. Figure 3.11-2 shows the results of this analysis for the site layout in terms of the peak hour average (L_{eq}), adjusted for ambient noise levels.

Truck Repair Shop: To determine typical noise levels associated with the proposed four bay truck repair shop, noise level measurement data from a Sacramento Unified School District bus repair facility was utilized. The noise level measurements were conducted at a distance of 120 feet from the repair shop entrance. Primary noise generation emanated from pneumatic tools. This bus repair facility is being used for this analysis as it is the most similar scenario to the proposed Project due to the movement of heavy vehicles (trucks), number of repair bays, and the use of similar types of tools.

The results of the bus repair shop noise measurements indicate that a busy hour generated an average noise level of 61 dBA L_{eq} and 76 dBA L_{max} at a distance of 120 feet from the bay of the bus repair shop. This analysis conservatively assumes that each repair bay could operate continuously at this level of activity in a busy hour.

Parking Lot Circulation: Based upon the Transportation Analysis Report completed for the Project (Fehr & Peers, 2023), the peak hour trips for the Project would be 208 vehicles. Saxelby Acoustics assumed that, based on similar projects, 10 percent of these trips could be heavy trucks. Based upon noise measurements conducted of vehicle movements in parking lots, the sound exposure level (SEL) for a single passenger vehicle is 71 dBA at a distance of 50 feet while the SEL of a heavy truck is 85 dBA at the same distance.

Backup Generators: The proposed Generac SG100 backup generator set is predicted to generate noise levels of up to 67 dBA L_{eq} at a distance of seven meters (23 feet), per manufacturer's specifications. This assumes that an acoustical enclosure will be used for each generator. The Project includes three backup generators.

Rooftop Mechanical Equipment: Saxelby Acoustics assumed the proposed convenience store will be serviced by three ten-ton packaged units and one ten-ton air-cooled chiller package operating continuously. Manufacturer's data was incorporated to analyze the noise from the rooftop mechanical equipment.

Quick Serve Restaurant Speaker Box: Saxelby Acoustics estimated that Project activity would occur continuously during the peak day and night hour of usage. Based on Saxelby Acoustics data for similar projects, one speaker per drive-through aisle would result in noise levels at 68 dBA L_{eq} and 78 dBA L_{max} at 3 feet.

Fuel Station Canister Vacuum: Saxelby Acoustics assumed a canister type vacuum station will be installed on the northeastern portion of the Project site. The vacuum canister is expected to produce

an average noise level of 64 dBA L_{eq} at 25 feet. This analysis assumes that the vacuum could run for 15 minutes in a given hour during daytime hours only.

Operational Noise Levels at Existing Receptors: Operational noise levels produced by the proposed Project were analyzed in accordance with the San Joaquin County noise level standards as the existing sensitive receptors are located outside of the boundaries of the City of Lathrop.

As shown in Figure 3.11-2, the proposed Project is predicted to generate noise levels ranging from 42 to 46 dBA L_{eq} during both daytime and nighttime hours at the residential uses to the north and south of the proposed Project. The City of Lathrop also defines a significant increase due to stationary (non-transportation) sources as an increase of 3 dB above the background noise levels. The existing average nighttime ambient noise level at these receptors was measured to be 64 dBA L_{eq} . The Existing Plus Project noise would be 64 dBA L_{eq} . Therefore, the stationary sources associated with the Project would not result in an increase of 3 dB or greater. However, the Project noise levels would exceed the County of San Joaquin non-transportation noise level standard of 45 dBA L_{eq} for nighttime noise levels. Therefore, this is a potentially significant impact and additional noise control measures would be required.

Mitigation Measure 3.11-1 requires the extension of the noise barrier at the northern boundary of the project site. The barrier should be increased in length from 215 feet to 250 feet with the additional 35 feet added west of the proposed wall. This will allow the sound wall to sufficiently shield the entire outdoor area of the adjacent sensitive receptor. The extended noise barrier and resulting noise level contours are shown in Figure 3.11-3. This would reduce stationary noise levels generated by the Project to below the San Joaquin County noise level standards. Implementation of Mitigation Measure 3.11-1 would reduce operational noise levels to below the County's thresholds and reduce the impact to a *less-than-significant* level.

It should be noted that the noise-generating uses associated with the proposed Project are not predicted to generate maximum noise levels more than 20 dBA above the average (L_{eq}) noise levels. The San Joaquin County maximum noise level standards for both daytime and nighttime hours are 20 dBA above the average noise level standards. Therefore, where the average Project-generated noise levels comply with the County's standards, Project-generated maximum noise levels will also comply.

CONSTRUCTION NOISE

During the construction of the proposed Project, noise from construction activities would temporarily add to the noise environment in the Project vicinity. As shown in Table 3.11-11, activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet. Construction activities would also be temporary in nature and are anticipated to occur during normal daytime working hours.

3.11 NOISE

TABLE 3.11-11: CONSTRUCTION EQUIPMENT NOISE

TYPE OF EQUIPMENT	MAXIMUM LEVEL, DB AT 50 FEET
Auger Drill Rig	84
Backhoe	78
Compactor	83
Compressor (air)	78
Concrete Saw	90
Dozer	82
Dump Truck	76
Excavator	81
Generator	81
Jackhammer	89
Pneumatic Tools	85

SOURCE: ROADWAY CONSTRUCTION NOISE MODEL USER'S GUIDE. FEDERAL HIGHWAY ADMINISTRATION. FHWA-HEP-05-054. JANUARY 2006.

Caltrans defines a significant increase in noise as 12 dBA over existing ambient noise levels; Saxelby Acoustics used this criterion to evaluate increases due to construction noise associated with the Project. As shown in Table 3.11-11, construction equipment is predicted to generate noise levels of up to 90 dBA L_{max} at 50 feet. Construction noise is evaluated as occurring at the center of the site to represent average noise levels generated over the duration of construction across the Project site. The nearest residential uses are located approximately 400 feet as measured from the center of the Project site. At this distance, maximum construction noise levels would be up to 72 dBA. The average daytime maximum noise level in the vicinity of the sensitive receptors was measured to be 86 to 88 dBA. Therefore, Project construction would not cause an increase of greater than 12 dBA over existing ambient noise levels.

Noise would also be generated during the construction phase by increased truck traffic on area roadways. A Project-generated noise source would be truck traffic associated with transport of heavy materials and equipment to and from the construction site. This noise increase would be of short duration and would occur during daytime hours.

Although construction activities are temporary in nature and would occur during normal daytime working hours, construction-related noise could result in sleep interference at existing noise-sensitive land uses in the vicinity of the construction if construction activities were to occur outside the normal daytime hours. Therefore, impacts resulting from noise levels temporarily exceeding the threshold of significance due to construction would be considered potentially significant.

Mitigation Measure 3.11-2 requires that construction activities are limited to certain hours, construction equipment is properly maintained, equipment idling is limited, and stationary equipment is located away from noise-sensitive uses. Implementation of Mitigation Measure 3.11-2 would reduce this impact to a *less-than-significant* level.

MITIGATION MEASURE(S)

Mitigation Measure 3.11-1: *The proposed noise barrier at the northern boundary of the project must be extended an additional 35 feet to the west to adequately shield the entire outdoor area of the sensitive receptor to the north. The total wall length should be at least 250 feet. The extended barrier is depicted in Figure 3.11-3.*

Mitigation Measure 3.11-2: *The following multi-part mitigation measure shall be implemented during construction of the Project:*

- *Construction activities (excluding activities that would result in a safety concern to the public or construction workers) shall be prohibited between the hours of ten p.m. of one day and seven a.m. of the next day, or eleven p.m. and nine a.m. Fridays, Saturdays and legal holidays.*
- *Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and engine shrouds, in accordance with manufacturers' recommendations. Equipment engine shrouds shall be closed during equipment operation.*
- *When not in use, motorized construction equipment shall not be left idling for more than 5 minutes.*
- *Stationary equipment (power generators, compressors, etc.) shall be located at the furthest practical distance from nearby noise-sensitive land uses or sufficiently shielded to reduce noise-related impacts.*

These requirements shall be noted on the Project improvement plans and implemented prior to approval of grading and/or building permits. The City of Lathrop Community Development Department shall review and approve the improvements plans.

Impact 3.11-2: The proposed Project would not generate excessive groundborne vibration or groundborne noise levels. (Less than Significant)

Construction vibration impacts include human annoyance and building structural damage. Human annoyance occurs when construction vibration rises significantly above the threshold of perception. Building damage can take the form of cosmetic or structural damage. The primary vibration-generating activities would be grading, utilities placement, and parking lot construction. Table 3.11-12 shows the typical vibration levels produced by construction equipment.

With the exception of vibratory compactors, the Table 3.11-12 data indicate that construction vibration levels anticipated for the Project are less than the 0.2 in/sec threshold at a distance of 25 feet. Use of vibratory compactors within 26 feet of the adjacent buildings could cause vibrations in excess of 0.2 in/sec. Structures which could be impacted by construction-related vibrations, especially vibratory compactors/rollers, are located approximately 30 feet, or further, from where compaction would occur. Therefore, this is a **less-than-significant** impact and no mitigation is required.

3.11 NOISE

TABLE 3.11-12: VIBRATION LEVELS FOR VARIOUS CONSTRUCTION EQUIPMENT

TYPE OF EQUIPMENT	P.P.V. AT 25 FEET (INCHES/SECOND)	P.P.V. AT 50 FEET (INCHES/SECOND)	P.P.V. AT 100 FEET (INCHES/SECOND)
Large Bulldozer	0.089	0.031	0.011
Loaded Trucks	0.076	0.027	0.010
Small Bulldozer	0.003	0.001	0.000
Auger/drill Rigs	0.089	0.031	0.011
Jackhammer	0.035	0.012	0.004
Vibratory Hammer	0.070	0.025	0.009
Vibratory Compactor/roller	0.210 (Less than 0.20 at 26 feet)	0.074	0.026

SOURCE: TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT GUIDELINES. FEDERAL TRANSIT ADMINISTRATION. MAY 2006.

Impact 3.11-3: The proposed Project is not located within the vicinity of a private airstrip or an airport land use plan, within two miles of a public airport or public use airport, and would not expose people residing or working in the Project area to excessive noise levels. (No Impact)

The Project site is not located within two miles of a public or private airport or airstrip. The nearest airport, the Stockton Metropolitan Airport, is located approximately 3.5 miles northeast of the Project site. Therefore, the Project would have **no impact** related to airports and airport noise.

The Project site is located approximately 3.5 miles northeast of the Project site. The Project falls within the Stockton Metropolitan Airport Influence Area (AIA) (Zone 8). Within Zone 8, prohibited uses include hazards to flight and new dumps or landfills. The Project site falls outside of the 60 dBA CNEL contour as determined from Exhibit 3B of the Airport Land Use Compatibility Plan Update for the Stockton Metropolitan Airport (published May 2016, Amended February 2018). Therefore, noise on the project from airport operations would be not expose people to excessive noise levels. Therefore, the project would have **no impact** related to airports and airport noise.





**Singh Petroleum
Investments, Inc**

City of Lathrop, California

Figure 3.11-1

Noise Measurement Sites

Legend

-  Project Site
-  Noise Measurement - Long Term



Projection: State Plane (California Zone 3) / NAD83 / meters
Rev. Date: 02/10/2023



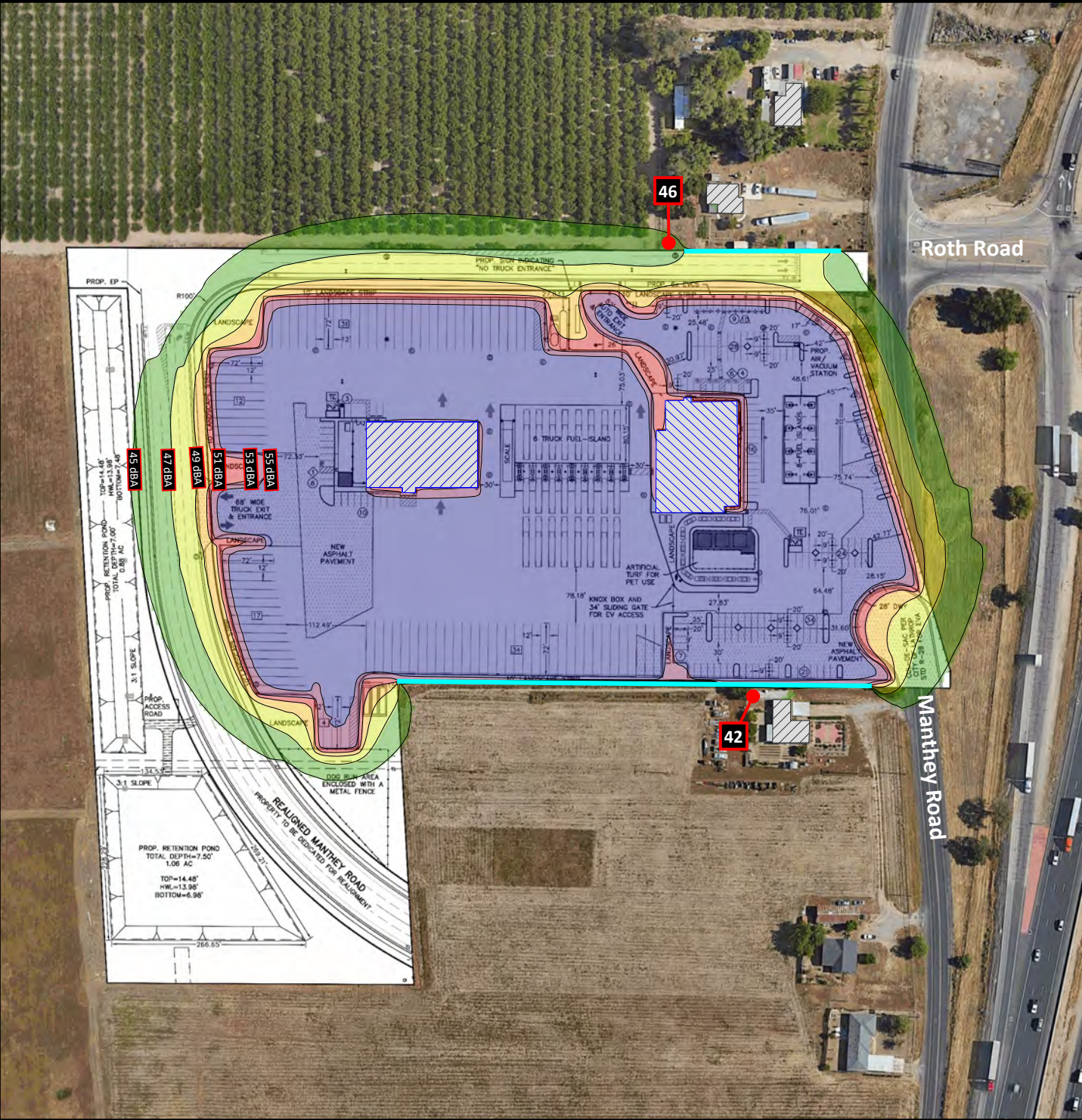
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Figure 3.11-2

Project Noise Levels
Leq, dB(A) Daytime and Nighttime



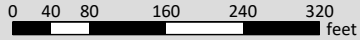
Noise Level, dB(A)

45 <	<= 47
47 <	<= 49
49 <	<= 51
51 <	<= 53
53 <	<= 55
55 <	

Legend

- Project Site
- Project Building
- Existing Building

Scale 1:200

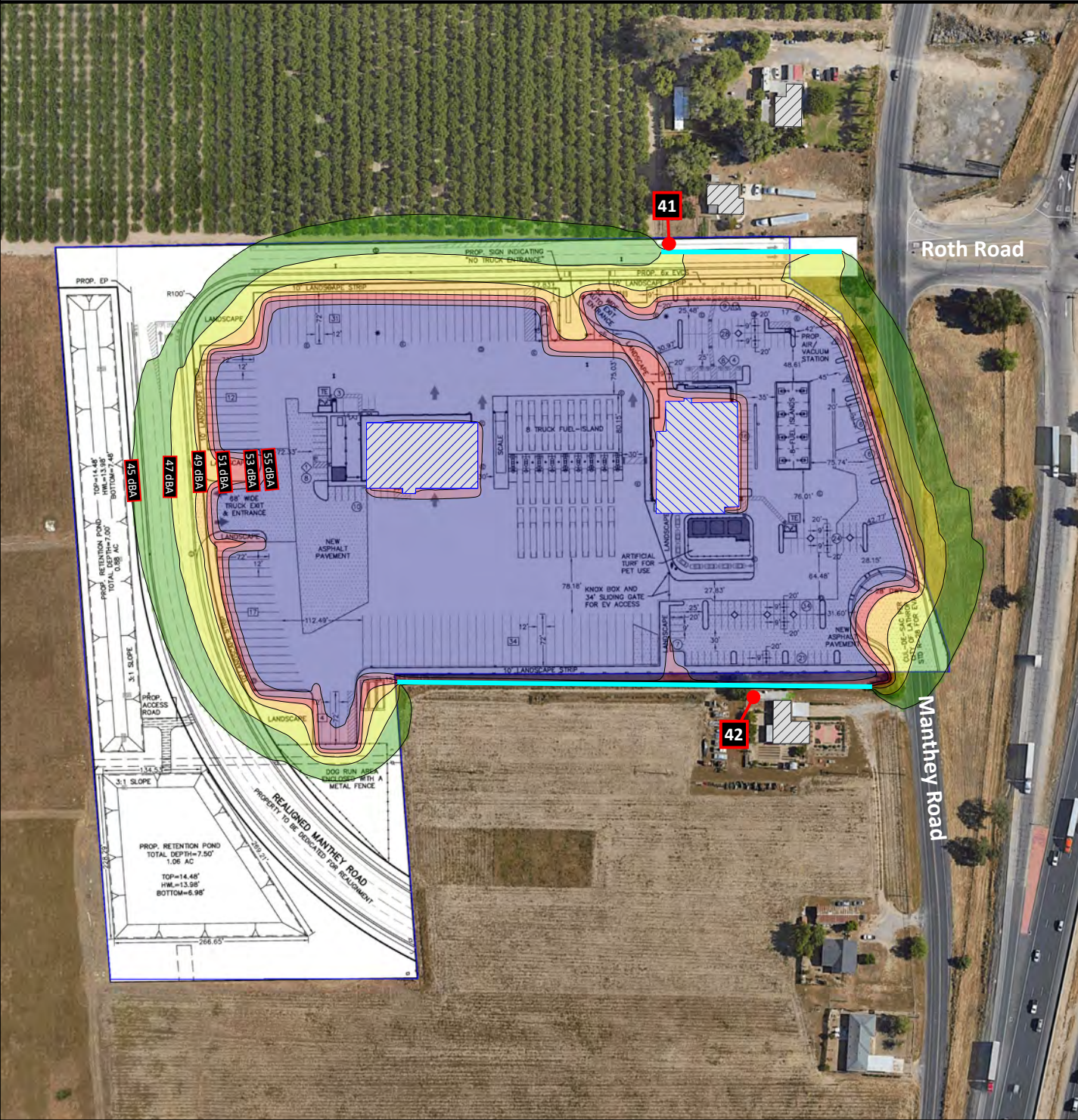


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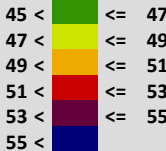
Singh Petroleum Investment

City of Lathrop, California

Figure 3.11-3
 Project Noise Levels with Walls
 Leq, dB(A) Daytime and Nighttime



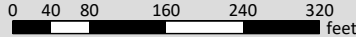
Noise Level, dB(A)



Legend

- Project Site
- Project Building
- Existing Building
- Sound Wall

Scale 1:200



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This section describes and evaluates potential impacts associated with the provision of police protection, fire protection and emergency services, parks and recreation, schools, and other public facilities for the proposed Project. The information in this section is primarily derived from the *City of Lathrop General Plan* (City of Lathrop, 2022), the *Draft Environmental Impact Report for the Lathrop General Plan Update* (City of Lathrop, 2022), and the *Lathrop Municipal Services Review and Sphere of Influence Plan* (City of Lathrop, 2022).

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

3.12.1 ENVIRONMENTAL SETTING

Governmental Agencies receive funds for the provision of public services through development fees, property taxes, and connection and usage fees. As land is developed within the City and annexed into the City of Lathrop, these fees apply. The City of Lathrop, and other service providers, review these fee structures on an annual basis to ensure that they provide adequate financing to cover the provision of services. The service provider is responsible for continual oversight to ensure that the fee structures are adequate, and that they are collected prior to development. The service provider reviews the referenced fees and user charges on an annual basis to determine the correct level of adjustment required to reverse any deficits and assure funding for needed infrastructure going forward.

POLICE SERVICES

The Lathrop Police Department was created in 2021 in order to transition law enforcement services from the San Joaquin County Sheriff to the City. The new Lathrop Police Department identifies 46 new sworn and non-sworn positions and on May 10, 2021, the City approved a Master Consulting Services Agreement with CPS HR Consulting (CPS) to begin recruitment of personnel for the new City of Lathrop Police Department and authorized the creation of a new Police Chief Position. The City continues to recruit for the various levels of staffing, purchase necessary equipment, such as Police vehicles, and coordination with other jurisdictions for the purpose of evidence storage and 911 operations. The Lathrop Police Department initiated operations on June 29, 2022.

The Lathrop Police Department has 35 sworn officers including 2 Police Commanders, 6 Sergeants, and 26 Police Officers. The Lathrop Police Department also has 12 Professional Staff, including 1 Executive Assistant, 1 Records Supervisor, 2 Records Assistants, 1 Management Analyst, 1 Property/Evidence Technician, 1 Community Services Supervisor and Community Services Officers. If needed, additional assistance can be summoned under a mutual aid agreement with surrounding cities and the County. Existing police staffing levels in the City are approximately 1.22 officers per 1,000 residents. The current City Wide Priority 1 average response time is 4 minutes.

The approval and/or pending development projects in the City will result in additional demand for law enforcement services. Capital costs for new facilities and equipment is funded through development impact fees and operational costs are funded through a combination of an increased

tax base, participation in Community Facility District (CFD) and Measure C funding (A City initiated special tax which does not have a sunset clause).

FIRE SERVICES

The Lathrop Planning Area is covered by two independent Fire Protection Districts, the Lathrop-Manteca Fire Protection District (LMFD) and French Camp-McKinley Fire District (French Camp). The LMFD provides fire protection services for all lands within the City of Lathrop, including lands south of Roth Road in addition to providing service to some 84.7 square miles of rural area around Lathrop and Manteca (in the southern San Joaquin County area).

LMFD was established in 1936 to provide fire protection for the township of Lathrop, rural Lathrop and the rural areas surrounding Manteca. The Fire District was organized under the laws of the State of California, Health and Safety Code Section 13800, known as the Fire Protection District law of 1987. LMFD is governed by a five-member Board of Directors who are elected at-large to serve a four-year term. Since 1936 the Fire District has developed into a pro-active Fire Department covering 100 square miles including the City of Lathrop. The Fire District is organized to maintain career personnel on duty, 24 hours a day, year-round, to respond to emergencies from the fire stations. LMFD has three (3) Fire Stations located in the City of Lathrop.

The French Camp Fire District provides fire protection for the rural area primarily south of Stockton and north of Roth Road, both east and west of Interstate 5. French Camp service boundaries include some 16 square miles, including a small portion of Stockton. Approximately 805 acres of the French Camp Fire District is in the Lathrop proposed Area of Interest and about 149 acres is in the SOI. The District was established in 1946 to provide fire protection for the French Camp Community and surrounding area. The Fire District was organized under the laws of the State of California, Health and Safety Code Section 13800, known as the Fire Protection District law of 1987.

Lathrop-Manteca Fire Protection District (LMFPD)

Since the incorporation of Lathrop in 1989, the LMFD has worked with the City Council to develop plans to provide adequate coverage for potential urban growth of the city. This has included the imposition of Fire Facilities Fees for new development as well as a sharing in the Special Sales Tax (Measure C) passed city-wide.

The LMFD-wide fire suppression force is organized into three shifts consisting of 13 members each. Each of the shifts is on duty for rotating periods of 24 hours. A minimum of three full time firefighters are on duty at the satellite fire stations at all times. Each of the fire stations within the City of Lathrop, J Street (Station 31), Mossdale (Station 34), and River Islands (Station 35), have three full time firefighters assigned to each station, 24 hours a day seven days a week. Additionally, one Battalion Chief is assigned to a station within the city to manage the day to day operations and provide scene management for emergency operations. Station 35 also includes the Fire Chief, administrative services, and Fire Prevention staff.

Per the LMFD 2018 Master Plan, the next planned Stations will be located as follows:

- South Lathrop near the Yosemite Avenue and McKinley Avenue Corridor (Station 36);
- Kio Road, north of Lathrop City limits (Station 37); and
- River Islands Parkway, within the Phase 2 development area (Station 38).

The LMFD District boundaries spread over about 100 square miles, with the bulk of the District's population (70 percent) within the City limits of Lathrop.

In 2014, the LMFD switched dispatch providers. LMFD calls are now being dispatched by the City of Stockton along with the Manteca Fire Department, Stockton Fire Department, South County Fire Authority (Tracy) and Lodi Fire Departments. LMFD tracks the following times segments and continuously works to improve response times. These times are provided from LMFD's records, specific to the City of Lathrop's capturing data from Jan 1, 2020 to Dec 31, 2020.

Alarm Processing Time: Defined as the time elapsed between receipt of alarm and the dispatch of apparatus to the emergency call. The LMFD benchmarks this according to the National Fire Protection Association Standard 1221: Installation, Maintenance, and Use of Emergency Services Communications Systems. Section 7.4.3 of this standard identifies the that elapsed alarm processing for the highest priority of life-threatening calls shall have an alarm, processing time of 60 seconds for at least 90 percent of these total calls. The Lathrop Manteca Fire District currently contracts with the City of Stockton for dispatch services. In addition, the Fire District has moved its primary alerting system to an internet protocol system that increases the speed of which alarms are "pushed" to the emergency responding units. The Fire District meets this standard 100 percent of the time.

Turnout Time: This time is calculated from the receipt of the alarm by the station of unit and ends at the time the unit begins its rolling travel time. Benchmarks for these time standards are 60 seconds for 90 percent of the total Emergency Medical Calls and 80 seconds for 90 percent of the total Fire Calls. The Fire District's data shows a 60 second turnout time for EMS Calls for 88 percent percent of occurrences and have an 80 second turnout time for 95 percent of the fire occurrences.

Response Time: Response time is reflected by the turnout time and travel time that are added together to create a complete picture of the Fire District response time. In 2020, the Fire District responded to emergency incidents 70 percent of the time within five minutes at the 90th percentile with all combined responses. It should be noted that due to growth demands and development planning the fire district responds to areas of new development that are often outside of the existing service zones. While call volumes in those areas are generally lower, they do have an impact on the overall analyses. The District has plans to add two to three additional fire stations/companies in order to service these developments. At buildout, the Fire District expects to be closely meeting travel distance times that are closer in alignment with LMFD standards.

The Fire Marshal administers the District's fire prevention and code enforcement program. Plan checks are done by the Fire Marshal along with the more complex inspections. Fire Company personnel conduct inspections and annual re-inspections. Additional fire safety programs include

smoke detector installation for the elderly and disabled and fire safety and awareness in the schools.

The Fire District responds, not only to fires of all types, but also medical emergencies, traffic accidents, and river rescues. The Fire District is an active member of the San Joaquin County Hazardous Materials Response Team. The Fire District is also part of the Urban Search and Rescue Team).

French Camp

The authorized personnel strength of French Camp consists of 16 employees, of which 7 are line staff and 9 are reserve personnel. The French Camp and Montezuma Fire Protection Districts rotate Fire Chiefs in order to provide coverage for the respective Fire Stations. The fire district is organized to maintain three personnel with automatic aid agreements with other agencies. French Camp maintains one Fire Station located at 310 East French Camp Road. This station is staffed by 2 engine companies and is staffed 24-hours per day. The District receives about 1,000 calls per year.

According to response data by Lifecom Dispatch Center, the District's 90 percentile "turnout time" and "travel" times in 2015 were 1:50 minutes and 6:01 minutes respectively to the Roth Road area. These times were below the average 90 percentile time for all rural fire districts at 2:42 minutes turnout time and 7:38 minutes response time.

The Fire District responds not only to fires of all types, but also medical emergencies, traffic accidents, and river rescues. The Fire District is an active member of the San Joaquin County Hazardous Materials Response Team. The Fire District is also part of the Urban Search and Rescue Team.

ISO RATING

The Insurance Services Office (ISO) rating measures individual fire protection agencies against a national Fire Suppression Rating Schedule which includes such criteria as facilities and support for handling and dispatching fire alarms, first-alarm responses and initial attack, and adequacy of the local water supply for the fire suppression purposes. ISO ratings are on a scale of 1-10 with 1 being the highest rating. In 2013, ISO developed split classifications for some communities, which can represent the risk of loss more precisely. An example of a split classification system is 4/4X or 4/4Y. The first number refers to the classification of properties within 5 road miles of a fire station and within 1,000 feet of a creditable water supply. The second number, with either the X or Y designation, applies to properties within 5 road miles of a fire station but beyond 1,000 feet of a creditable water supply. ISO generally assigned Class 10 to properties beyond 5 road miles.

LATHROP-MANTECA FIRE PROTECTION DISTRICT

In its most recent report, the ISO Public Classification Program rates the LMFD as a community classification of 3 for the City of Lathrop¹. This rating is unchanged since the ISO rating for the City of Lathrop in their January 2013 ISO report.

FRENCH CAMP

The ISO Public Classification Program rates the French Camp in their November 2017 report as a community classification of 4/4Y for the District². This is an improvement from the community classification of 4/8b for the District in the ISO November 23, 2010 report.

FIRE STATIONS

The Lathrop-Manteca Fire Protection District currently operates three fire stations within the Lathrop Planning area, listed below.

- **Station 31 (800 E. J Street, Lathrop, CA 95330):** Station 31 acts as the headquarters station for the District, and services a large section of East Lathrop. The boundaries generally run from Interstate 5 at Roth Road to Louise Avenue. Station 31 is staffed with four personnel, with the 4th Firefighter/Engineer used as a vacation relief.
- **Station 34 (460 River Islands Parkway, Lathrop, CA 95330):** Station 34 is located on the west side of Interstate 5 within the City of Lathrop. This station officially opened on May 20th, 2006. This station responds to calls for service on the west side of Interstate 5 and south of Louise Avenue. Staffing for this station includes one Captain and one Firefighter/Engineer.
- **Station 35 (19001 Somerston, Lathrop, CA 95330):** Station 25 is located in the southern portion of Lathrop west of Interstate 5. The primary response area for Station 35 is the River Islands development in the southwestern portion of the City of Lathrop. The fire station houses one of the LMFD's Type 3 (wildland) fire engines and the LMFD rescue unit.

As noted above, per the LMFD 2018 Master Plan, the next planned Stations will be located as follows:

- South Lathrop near the Yosemite Avenue and McKinley Avenue Corridor (**Station 36**);
- Kio Road, north of Lathrop City limits (**Station 37**); and
- River Islands Parkway, within the Phase 2 development area (**Station 38**).

¹ City of Lathrop General Plan Draft EIR, 2022

² City of Lathrop General Plan Draft EIR, 2022

FRENCH CAMP

French Camp currently operates a single fire station located which is listed below:

Station 11-1 (310 E. French Camp Road, French Camp, CA): The Station is staffed with at least two on-duty personnel and on Duty Chief available 24 hours a day, seven day a week. In addition, the Reserve Firefighter personnel are an important supplemental force to augment the line staff in firefighting duties in fire suppression of structural, wildland, and other types of fires. As of 2015, French Camp expanded fire protection service to the community of Mountain House on a contract basis.

PARKS AND RECREATION

The City of Lathrop Parks and Recreation Department manages 108 acres of parks and open space throughout the City of Lathrop. Local parks offer amenities such as a community center with a gymnasium, open space, athletic fields, playgrounds, and picnic areas. The Parks and Recreation Department manages programs that are multi-generation in nature such as community events, sports camps, adult and youth sports programs, youth before and after school programs, art programs, and senior programs.

Types of Parks

COMMUNITY PARKS

Community parks are typically up to 20 acres in size and include areas for active sports as well as space for family and group activities. Community parks are larger than neighborhood parks and provide services to fulfill the active and passive recreational needs of multiple neighborhoods. Community parks serve the needs of a local neighborhood by providing a close to home site for more active recreation that is not typically suitable or physically possible in a neighborhood park such as formal sports fields or lighted courts.

The City of Lathrop has four community parks totaling 47 acres. The facilities included in these parks are fields and courts for various sports, a large swimming pool, a community center building for arts and crafts, clubs, and social activities. Some of the community center buildings are joint-use facilities with the school district.

NEIGHBORHOOD PARKS

Neighborhood parks are typically a minimum of four acres in size and serve as the focal point of the community providing the hub for both physical and social activities. Neighborhood parks should be designed to be flexible to serve a variety of seasonal recreation needs. These parks act as critical building blocks of the City's image and assist in developing an overall sense of community and security. They also serve as essential access points for the City-wide green space network.

Currently, Lathrop has ten neighborhood parks accounting for 42.6 acres.

MINI PARKS

Mini parks are generally less than 2 acres in size and provide residents with a social and recreational gathering place, similar to a neighborhood park, but on a smaller scale. Mini-parks should provide small-scale recreational and aesthetic benefits primarily in denser residential areas or commercial areas with high pedestrian use. Each resident should be within walking distance (1/2 mile) of a neighborhood or mini park.

Currently, Lathrop has eight mini parks totaling 7.6 acres.

OPEN SPACE CORRIDORS

The Open Space Corridor can take several forms, including the pedestrian parkway separate from auto traffic, a combined vehicle and pedestrian parkway, a buffer zone between residential and commercial or industrial areas, or as a lineal park or paseo connecting with other components of the Parks and Recreation system or located separate from other areas such as along reaches of the San Joaquin River or other waterways.

River Park North and South have been included in this classification, putting Lathrop at (2) two linear parks, accounting for 10.7 acres.

City Parks

The City currently manages 25 distinct parks and four public facilities. Table 3.12-1 summarizes the City's park facilities. Additional parks within the City of Lathrop will become available in the City of Lathrop as development continues within the River Islands development area.

TABLE 3.12-1: SUMMARY OF PARKS AND RECREATION FACILITIES

<i>PARK/FACILITY NAME</i>	<i>FACILITY TYPE</i>	<i>ACREAGE</i>
Apolinar Sangalang Park	Community Park	9.7
Armstrong Park	Mini Park	0.4
Basin Park	Neighborhood Park	4.4
Crescent Park	Mini Park	1.4
Crystal Cove Park	Neighborhood Park	3.3
Generations Center	Community Park	6.0
Lathrop Skate Park	Mini Park	0.3
Leland & Jane Stanford Park	Neighborhood Park	4.1
Libby Park	Mini Park	1.2
Michael Vega Park	Neighborhood Park	2.9
Milestone Manor Park	Mini Park	1.00
Mossdale Commons	Mini Park	1.45
Mossdale Landing Community Park	Community Park	20.4
Park West	Neighborhood Park	6.8
Reflections Park	Neighborhood Park	5.2
River Park North	Open Space Corridor	3.2
River Park South	Open Space Corridor	7.4
Somerston Park	Neighborhood Park	2.0
Summer House Park	Neighborhood Park	2.0
The Green	Mini Park	1.0
Thomsen Park	Mini Park	0.8
Tidewater Park	Neighborhood Park	2.1

3.12 PUBLIC SERVICES AND RECREATION

<i>PARK/FACILITY NAME</i>	<i>FACILITY TYPE</i>	<i>ACREAGE</i>
Valverde Park	Community Park	9.1
William S. Moss Park	Neighborhood Park	4.1
Woodfield Park	Neighborhood Park	5.5

SOURCE: CITY OF LATHROP PARKS AND RECREATION Master Plan. 2020.

PARK STANDARDS

Lathrop has established the following standards for acres of parkland:

5 acres per 1000 residents including:

- 2 acres of neighborhood park for every 1000 new residents
- 3 acres a community park for every 1000 new residents

As described in the Lathrop Parks Master Plan (2020) Lathrop has 107.8 acres of parks identified in the parks inventory and notes that to continue to meet the adopted standard of 5 acres per 1000 residents (2 acres of neighborhood park space and 3 acres of community park space), Lathrop is short approximately 0.1 acre of park for the current (2020) population.

On a regional scale, the City is located in the Sacramento-San Joaquin Delta (Delta), which contains several recreational areas and facilities, primarily for water-based recreation. Regional County parks near the City include the 9.85-acre Dos Reis Regional Park and the 3.7-acre Mossdale Crossing Regional Park, both located along the San Joaquin River. Mossdale Crossing Park is located on the west side of Interstate 5. Each of these parks includes boat launch ramps, picnic/barbeque areas, and children’s play areas. Dos Reis Regional Park also has camping facilities. Also in the vicinity is the Haven Acres Marina, a private marina located on the San Joaquin River north of Dos Reis Regional Park. This facility provides river access to the San Joaquin River and includes parking areas, a boat ramp, and 10 boat berths.

SCHOOL SERVICES

Schools within the City of Lathrop are part of the Manteca Unified School District (MUSD). The MUSD provides school services for grades K through 12 within the communities of Manteca, Lathrop, Stockton, and French Camp. The District is approximately 113 square miles and serves more than 23,000 students. Within the City of Lathrop, there are three elementary schools (Lathrop Elementary School, Joseph Widmer School, and Mossdale Elementary School) and one high school (Lathrop High School). River Islands has two charter elementary schools, located within the Banta Unified School District (River Islands Technology Academy and the S.T.E.A.M. Academy).

Table 3.12-2 lists MUSD schools in Lathrop and recent enrollment for each school.

TABLE 3.12-2: PUBLIC SCHOOLS SERVING LATHROP

SCHOOL	GRADES SERVED	ADDRESS	ENROLLMENT 2019-20 SCHOOL YEAR
<i>ELEMENTARY AND MIDDLE SCHOOLS</i>			
Lathrop Elementary School	K-8	15851 5 th Street	895
Joseph Widmer Elementary School	K-8	751 Stonebridge Lane	792
Mossdale Elementary School	K-8	455 Brookhurst Boulevard	1,040
River Islands Technology Academy	K-8	1175 Marina Drive	1,021
Next Generation S.T.E.A.M. Academy	K-8	18001 Commercial Street	637
Total			4,385
<i>HIGH SCHOOLS</i>			
Lathrop High School	9-12	647 Spartan Way	1,337
Total			1,337

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-20

As shown in Table 3.12-2, the schools in the City had a total enrollment of approximately 5,722 students, of which 4,385 were enrolled in elementary and middle school (grades K – 8) and 1,330 were enrolled in high school (grades 9 – 12).

District-wide MUSD Schools has a total enrollment of 23,834 students for the 2019-2020 school year. Table 3.12-3 provides a summary of the public school enrollment by grade within MUSD.

TABLE 3.12-3: ENROLLMENT BY GRADE MUSD (2019-2020)

MANTECA UNIFIED	GRADE LEVEL													TOTAL 2019-2020
	K	1	2	3	4	5	6	7	8	9	10	11	12	
Total	1,931	1,645	1,692	1,740	1,740	1,716	1,811	1,883	2,002	2,002	1,859	1,907	1,931	23,834

SOURCE: CALIFORNIA DEPARTMENT OF EDUCATION EDUCATIONAL DEMOGRAPHICS UNIT ENROLLMENT FOR 2019-2020

OTHER AGENCY SERVICES

Library Services

The Lathrop Branch Library is located at 459 Spartan Way. The Lathrop Branch Library offers computer workstations for Internet and word processing use, a ready reference collection, and a circulating collection of popular materials in English and Spanish. Items include books, magazines, audiobooks, large print books, DVDs, and music CDs. The Manteca Bulletin is available for reading in the branch. Customers are able to receive hold requests, check out and return items, and to return materials from other library locations at this branch. The Lathrop Branch Library is open Monday through Thursday, from 1:00 to 6:00 PM, and Friday and Saturday from noon to 5:00 PM.

Lathrop Senior Center

The Lathrop Senior Center located at 15707 Fifth Street provides lunches, classes, and various trip and activities. There are no membership fees to participate at the center' however, some classes

and activities have nominal fees. The facility is open Monday through Friday, 9:00 AM through 4:00 PM. In addition, each month, the Senior Advisory Committee meets at the Lathrop Senior Center, which is designed by the City of Lathrop to coordinate recreational, education, and social service opportunities for those aged fifty and above.

Lathrop Hospital and Medical Facilities

Lathrop is mostly served by hospital and medical facilities from neighboring communities in French Camp and Manteca. Health care facilities within Manteca encompass Doctor's Hospital of Manteca, Kaiser Permanente Manteca Medical Center, residential care facilities, as well as private physicians and other medical practitioners. The primary medical facility in French Camp is San Joaquin General Hospital. Lathrop does have an urgent care clinic located within city limits.

Doctor's Hospital of Manteca provides acute care service for Manteca and the surrounding community. The hospital is located at 1205 east North Street in the City of Manteca. Doctor's Hospital of Manteca offers Comprehensive diagnostic and surgical services, Intensive care unit, Breast healthcare, including mammography, behavioral health care, a 67-bed adult inpatient psychiatric treatment center, expanded imaging services, hip and knee surgery, back pain treatment and surgery, bariatric (weight-loss) surgery. Kaiser Permanente Manteca Medical Center also provides acute care service for Manteca and the surrounding community. The hospital is located at 1777 West Yosemite Avenue. Residents typically travel to other facilities, for certain specialized services including severe trauma and psychiatric care.

San Joaquin General Hospital is a general acute care facility located at 500 W. Hospital Rd in the City of French Camp. The hospital contains 196-beds and provides a range of services including general medical and surgical care, high-risk obstetrics, neonatal intensive care, and pediatrics and intensive care. The associated medical campus includes primary care and specialty outpatient clinics.

The San Joaquin County Public Health Services provides maternal and child health care programming, California Children's Services, child health and disability programs, vaccinations and general public health nursing to the community. Alcohol & drug programs are also organized under the County Health Services and provide residential treatment, out-patient counseling, perinatal programs and community education and information.

3.12.2 REGULATORY SETTING

FEDERAL

There are no Federal regulations applicable to the environmental topics of public services and recreation.

STATE AND LOCAL

Fire Protection and Emergency Response

CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment" the California Occupational Safety and Health Administration (Cal/OSHA) has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all fire fighting and emergency medical equipment.

EMERGENCY RESPONSE/EVACUATION PLANS

The State passed legislation authorizing the Office of Emergency Services (OES) to prepare a Standard Emergency Management System (SEMS) program, which sets forth measures by which a jurisdiction should handle emergency disasters. Non-compliance with SEMS could result in the State withholding disaster relief from the non-complying jurisdiction in the event of an emergency disaster.

FIRE PROTECTION

The California Fire Code contains regulations relating to construction and maintenance of buildings and the use of premises. Topics addressed in the Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions to protect and assist first responders, industrial processes, and many other general and specialized fire safety requirements for new existing buildings and premises.

CALIFORNIA FIRE CODE

The 2022 California Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the California Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code contains specialized technical regulations related to fire and life safety.

CALIFORNIA HEALTH AND SAFETY CODE

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code. This includes regulations for building standards (as also set forth in the California Building

Code), fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

NFPA 1710

The National Fire Protection Association (NFPA) 1710 Standards are applicable to urban areas and where staffing is comprised of career Firefighters. According to these guidelines, a career fire department needs to respond within six minutes, 90 percent of the time with a response time measured from the 911 call to the time of arrival of the first responder.

The standards are divided as follows:

- Dispatch time of one minute or less for at least 90 percent of the alarms;
- Turnout time of one minute or less for EMS calls (80 seconds for fire and special operations response);
- Fire response travel time of four minutes or less for the arrival of the first arriving engine company at a fire incident and eight minutes or less travel time for the deployment of an initial full alarm assignment at a fire incident;
- Eight minutes or less travel time for the arrival of an advanced life support (ALS) (4 minutes or less if provided by the fire department).

CITY OF LATHROP MUNICIPAL CODE

The City of Lathrop Municipal Code has ordinances related to fire protection, such as Chapter 3.20 (Impact Fee Ordinance), which requires development impact fees to be charged to fund improvements to the City's infrastructure. Additionally, Chapter 1.12 (Administrative Enforcement Procedures) describes the authority of the LMFD fire marshal in determining imminent health and safety hazards, and the powers associated with such a determination. Chapter 16.28 (Improvements) describes the requirements of a subdivider to provide and connect water mains and fire hydrants to the City's water system, with approval of the number and location of fire hydrants to be determined by the Fire Chief.

Parks and Recreation

QUIMBY ACT

The Quimby Act (California Government Code Section 66477) states that "the legislative body of a city or county may, by ordinance, require the dedication of land or impose a requirement of the payment of fees in lieu thereof, or a combination of both, for park or recreational purposes as a condition to the approval of a tentative or parcel map." Requirements of the Quimby Act apply only to the acquisition of new parkland and do not apply to the physical development of new park facilities or associated operations and maintenance costs. The Quimby Act seeks to preserve open space needed to develop parkland and recreational facilities; however, the actual development of parks and other recreational facilities is subject to discretionary approval and is evaluated on a case-by-case basis with new residential development. The City has adopted park fees as allowed by the Quimby Act, as described in greater detail below.

LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating park fees within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 12.20 allows the city council to authorize the adoption of fees for recreation programs and for the use of park facilities for non-city functions, and provides other provisions related to parks within the City of Lathrop.

LATHROP PARKS AND RECREATION MASTER PLAN

The City of Lathrop adopted a Parks and Recreation Master Plan in 2020. The Master Plan evaluates the parks and recreation needs of the community and develop strategies, policies, and actions that reflect those needs to create better places to recreate within Lathrop. This document provides the City's Parks and Recreation Department with precise direction and be a realistic guide over the Planning Period.

Schools

CALIFORNIA CODE OF REGULATIONS

The California Code of Regulations, Chapter 4.9, Payment of Fees, Charges, Dedications, or Other Requirements Against a Development Project. Section 65995-65998 (h) The payment or satisfaction of a fee, charge, or other requirement levied or imposed pursuant to Section 17620 of the Education Code in the amount specified in Section 65995 and, if applicable, any amounts specified in Section 65995.5 or 65995.7 are hereby deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities.

CALIFORNIA DEPARTMENT OF EDUCATION

The California Department of Education (CDE) School Facilities Planning Division (SFPD) prepared a School Site Selection and Approval Guide that provides criteria for locating appropriate school sites in the State of California. School site and size recommendations were changed by the CDE in 2000 to reflect various changes in educational conditions, such as lowering of class sizes and use of advanced technology. The expanded use of school buildings and grounds for community and agency joint use and concern for the safety of the students and staff members also influenced the modification of the CDE recommendations.

Specific recommendations for school size are provided in the School Site Analysis and Development Guide. This document suggests a ratio of 1:2 between buildings and land. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, the SFPD may approve an amount of acreage less than the recommended gross site size and building-to-ground ratio.

Certain health and safety requirements for school site selection are governed by state regulations and the policies of the SFPD relating to:

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- Proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- Presence of toxic and hazardous substances;
- Hazardous facilities and hazardous air emissions within one-quarter mile;
- Proximity to high-pressure natural gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- Noise;
- Results of geological studies or soil analyses; and
- Traffic and school bus safety issues.

THE KINDERGARTEN-UNIVERSITY PUBLIC EDUCATION FACILITIES BOND ACT OF 2002 (PROP 47)

This act was approved by California voters in November 2002 and provides for a bond issue of \$13.05 billion to fund necessary education facilities to relieve overcrowding and to repair older schools. Funds will be targeted at areas of greatest need and must be spent according to strict accountability measures. Funds will also be used to upgrade and build new classrooms in the California Community Colleges, the California State University, and the University of California in order to provide adequate higher education facilities to accommodate growing student enrollment.

LEROY F. GREENE SCHOOL FACILITIES ACT OF 1998 (SB 50)

The “Leroy F. Greene School Facilities Act of 1998,” also known as Senate Bill 50 or SB 50 (Chapter 407, Statutes of 1998), governs a school district’s authority to levy school impact fees. This comprehensive legislation, together with the \$9.2 billion education bond act approved by the voters in November 1998 known as “Proposition 1A”, reformed methods of school construction financing in California. SB 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. It imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provided the authority for school districts to levy fees at three different levels:

- Level I fees are the current statutory fees allowed under Education Code 17620. This code section provides the basic authority for school districts to levy a fee against residential and commercial construction for the purpose of funding school construction or reconstruction of facilities. These fees vary by district for residential construction and commercial construction and are increased biannually.
- Level II fees are outlined in Government Code Section 65995.5, allowing school districts to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multi-track year-round scheduling, having an assumed debt equal to 15–30 percent of the district’s bonding capacity (percentage is based on revenue sources for repayment), having at least 20 percent of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past four years which received at least 50 percent plus one of the votes cast. A Facility Needs Assessment must demonstrate the need for

new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next five years.

- Level III fees are outlined in Government Code Section 655995.7. If State funding becomes unavailable, this code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives State funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

LOCAL

City of Lathrop General Plan

POLICIES: PUBLIC FACILITIES AND SAFETY ELEMENT

- PFS-1.1 Service Enhancements. Encourage the implementation of new techniques and technologies to provide the best available level of community services in a cost-effective manner.
- PFS-1.4 Revenue Sources. Identify and proactively pursue local, stable, and predictable sources of revenue to meet public facility, service, and infrastructure needs.
- PFS-1.6 Capital Improvements. Maintain and fund the capital improvement program to ensure the adequate and efficient provision of public facility and municipal improvements.
- PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based on an evaluation of long-term economic benefits and in a manner consistent with the City's cost recovery goals.
- PFS-1.9 Economic Development and Residential Growth Focus. Plan and develop public services and facilities to support economic development and residential growth.
- PFS-1.12 Infrastructure Rehabilitation. Prioritize the regular maintenance and rehabilitation of public facilities and critical Demonstrate Capacity. Require new development to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.
- PFS-1.13 Mitigate Impacts. Require new development to offset or mitigate impacts to community services and facilities to ensure that service levels for existing users are not degraded or impaired by new development, to the satisfaction of the City.
- PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire Protection District (LMFD) and the San Joaquin County Sheriff's Department to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, police protection, and emergency medical services to existing and future growth in the city.
- PFS-7.2 Emergency Response Times. Work cooperatively with the LMFD, the San Joaquin County Sheriff's Department, and providers of emergency medical services to ensure acceptable response times in accordance with provider standards.
- PFS-7.4 Roadway Design and Maintenance. Design and maintain roadways to maintain acceptable emergency vehicle response times.

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- PFS-7.5 Department Consultation. Coordinate with LMFD and the San Joaquin County Sheriff's Department in the review of new development applications to ensure that adequate attention is being paid to fire and safety concerns during the design and planning of a project.
- PFS-7.6 Crime Prevention. Promote and support community-based crime prevention programs, such as community policing, public education, youth crime prevention, and outreach programs, as an important tool to the provision of professional police services.
- PFS-7.7 Community Awareness. Support the LMFD and the San Joaquin County Sheriff's Department in promoting community awareness regarding crime through public service organizations, and the establishment of citizen involved programs and patrols.
- PFS-7.8 Site Design. Recognize the role of site design in crime prevention and implement best practices into existing plans and new development strategies.
- PFS-7.9 Technology. Encourage and support efforts to improve police, fire, and emergency medical services through improved use of modern technology and industry best practices.
- PFS-8.2 Adequate Facilities. Continue to engage Manteca Unified School District (MUSD) in the environmental review process for land use changes so that they can provide adequate educational opportunities for all students in a timely manner in accordance with the pace of residential development.
- PFS-8.5 Financing and Proportionate Share. Work with MUSD to encourage the planned financing of new school facilities concurrent with new development and to ensure that new development funds its proportionate share of the development.

POLICIES: PUBLIC SAFETY ELEMENT

- PS-2.2 Fire Protection Services. Coordinate with the Lathrop Manteca Fire Protection District (LMFD) in the provision of fire protection services to serve the city's current and future population and development.
- PS-2.6 Water Supply. Ensure that new development is served with adequate water volumes and water pressure to support fire protection, including a fire flow standard of 3,000 gpm for commercial and industrial areas and 1,500 gpm for residential areas.

3.12.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project will have a significant impact on public services if it would result in:

- Substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
 - Police Protection
 - Fire Protection

- Parks and Recreation
 - Schools
 - Other public facilities
- 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.
 - Require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

It is important to note that, in addressing public service demand issues under CEQA, including parks and recreational facilities, the appropriate focus is on the environmental effects of whatever steps might be necessary to achieve or maintain adequate service. For example, if proposed new development would create an increased demand for law enforcement or fire protection services, an EIR should inquire as to whether new or expanded physical facilities may be required in order to provide such service. The “impacts” addressed under CEQA are the physical effects of providing service, not any possible failure to provide adequate service under applicable standards. (See *City of Hayward v. Board of Trustees of the Cal. State University* (2015) 242 Cal.App.4th 833, 843 [“[t]he need for additional fire protection services is not an environmental impact that CEQA requires a project proponent to mitigate”]; *Goleta Union School Dist. v. Regents of Univ. of Cal.* (1995) 37 Cal.App.4th 1025, 1031–1034 [school overcrowding attributable to new development is not an environmental effect subject to CEQA, though the physical effects of new facility construction to serve new students would be]; and CEQA Guidelines, § 15131, subd. (a) [“[e]conomic or social effects of a project shall not be treated as significant effects on the environment”].)

This does not mean, however, that a city or county is powerless to require new development to take the steps needed to ensure adequate public services, such as law enforcement service. Such steps are simply beyond the scope of CEQA. They should instead be imposed under some other body of State statutory law (e.g., the Planning and Zoning Law [Gov. Code, § 65300 et seq.] or the Subdivision Map Act [Gov. Code, § 66410 et seq.]) or under a local government’s broad police power under the California Constitution. (See Cal. Const., Art. XI, § 7; *Candid Enterprises, Inc. v. Grossmont Union High School Dist.* (1985) 39 Cal.3d 878, 885.)

It is also important to understand that special legal principles apply to impacts to school facilities. According to Government Code Section 65996, the development fees authorized by Senate Bill 50 (1998) (described earlier) are deemed to be “full and complete school facilities mitigation” for impact caused by new development. The legislation also recognized the need for the fee to be adjusted periodically to keep pace with inflation. The legislation indicated that in January 2000, and every two years thereafter, the State Allocation Board would increase the maximum fees according to the adjustment for inflation in the statewide index for school construction.

Section 65996 also prohibits public agencies from using CEQA or “any other provision of state or local law” to deny approval of “a legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property or any change in governmental organization or reorganization” on the basis of the project’s impacts on school facilities.

IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: The proposed Project will not result in or require the construction of police department facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The City's General Plan includes policies that would allow for the City's police services to continue providing adequate staffing levels. Below is a list of relevant policies:

- PFS-1.6 Capital Improvements. Maintain and fund the capital improvement program to ensure the adequate and efficient provision of public facility and municipal improvements.
- PFS-1.13 Demonstrate Capacity. Require new development to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.
- PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire Protection District (LMFD) to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, and emergency medical services to existing and future growth in the city.
- PFS-7.3 Enhanced Service. Periodically review and, if necessary, amend the criteria for determining the circumstances under which fire, police, and emergency services will be enhanced.
- PFS-7.5 Department Consultation. Coordinate with LMFD and the Lathrop Police Department in the review of new development applications to ensure that adequate attention is being paid to fire and safety concerns during the design and planning of a project.
- PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based on an evaluation of long-term economic benefits and in a manner consistent with the City's cost recovery goals.

The City collects impact fees from new development based upon projected impacts from each development. The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with police services.

According to the City's General Plan Update Draft EIR, development and growth facilitated by the General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for services increases, there will likely be a need for new or expanded service structures (e.g., office, maintenance, and administrative buildings and facilities, schools, parks, fire facilities, libraries, etc.) to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the city. Existing facilities may be expanded at their current location. New facilities may

also be constructed. The Public/Quasi-Public, Park, and Open Space land use designations would accommodate the majority of new public facilities necessary to provide community services. There would likely be environmental impacts associated with the construction or expansion of the facilities needed to provide public services. Such development would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Any future expansion of public facilities required by growth in the City would be required to be reviewed for site-specific impacts.

The proposed Project would not result in, or have the potential to require, the construction of police department facilities which may cause substantial adverse physical environmental impacts. Development of the Project would not directly trigger the need for a new facility. The City collects impact fees from new development based upon projected impacts from the development. The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with anticipated future facilities demands, assessed on a fair share basis for new development. Payment of the applicable impact fees by the Project applicant and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund these public service needs created by the proposed Project.

The proposed Project does not trigger the need for a police station or expansion of existing facilities. Therefore, the Project will have a *less than significant* impact relative to this topic.

Impact 3.12-2: The proposed Project will not require the construction of fire department facilities which may cause substantial adverse physical environmental impacts (Less than Significant)

The City's General Plan includes policies and actions that would allow for LMFD to continue providing adequate facilities and staffing levels. Below is a list of relevant policies:

- PFS-1.6 Capital Improvements. Maintain and fund the capital improvement program to ensure the adequate and efficient provision of public facility and municipal improvements.
- PFS-1.8 Cost Recovery. Recover the direct upfront costs and indirect long-term costs of providing services and facilities to new development through a combination of fees, exactions, and other methods based on an evaluation of long-term economic benefits and in a manner consistent with the City's cost recovery goals.
- PFS-1.13 Demonstrate Capacity. Require new development to demonstrate that the City's public services and facilities can accommodate the increased demand for said services and facilities associated with the project as part of the entitlement process.
- PS-2.2 Fire Protection Services. Coordinate with the Lathrop Manteca Fire Protection District (LMFD) in the provision of fire protection services to serve the city's current and future population and development.
- PFS-7.1 Fire and Police Facilities. Encourage the Lathrop Manteca Fire Protection District (LMFD) to maintain adequate staff and equipment to provide efficient, high quality, and responsive fire protection, and emergency medical services to existing and future growth in the city.

3.12 PUBLIC SERVICES AND RECREATION

- PFS-7.3 Enhanced Service. Periodically review and, if necessary, amend the criteria for determining the circumstances under which fire, police, and emergency services will be enhanced.
- PFS-7.5 Department Consultation. Coordinate with LMFD and the Lathrop Police Department in the review of new development applications to ensure that adequate attention is being paid to fire and safety concerns during the design and planning of a project.
- PFS-7b The LMFD and the Public Works Department will review proposed development projects and street networks to evaluate the accessibility for fire engines and other emergency response functions.

Fire sprinklers are required by the California Fire Code and will be incorporated into the proposed Project. Additionally, the Project includes two fire hydrants as required by current city standards. Both are located in the north- and west-central portions of the site near the future Roth Road to provide fire suppression access.

The City of Lathrop collects impact fees from new development based upon projected impacts from each development. The adequacy of impact fees is reviewed on an annual basis to ensure that the fee is commensurate with the need for new fire stations and expanded fire services to serve areas of Lathrop. The proposed Project is required to pay its fair share of the fire impact fee. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with fire protection services.

As noted above in Impact 3.12-1, according to the City's General Plan Update Draft EIR, development and growth facilitated by the General Plan would result in increased demand for public services, including fire protection, law enforcement, schools, parks, libraries, and other public and governmental services. As the demand for services increases, there will likely be a need for new or expanded service structures (e.g., office, maintenance, and administrative buildings and facilities, schools, parks, fire facilities, libraries, etc.) to provide for adequate staffing, equipment, and appropriate facilities to serve growth in the city. Existing facilities may be expanded at their current location. Such development would also be analyzed for potential environmental impacts, consistent with the requirements of CEQA. Any future expansion of public facilities required by growth in the City would be required to be reviewed for site-specific impacts.

The proposed Project does not trigger the need for a fire station or expansion of existing facilities. Therefore, the Project will have a *less than significant* impact relative to this topic.

Impact 3.12-3: The proposed Project will not 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, but the proposed Project will require the construction of park and recreational facilities which may cause substantial adverse physical environmental impacts. (Less than Significant)

The proposed Project does not include any new residential development and will not directly or indirectly increase the City's population. As such the need for additional park facilities is not anticipated. Although the Project does not propose formal park or recreational facilities, the Project includes development of a dug run area enclosed with a metal fence. The Project would add additional jobs to the local economy, The City collects impact fees from new development based upon projected impacts from each development, including impacts on these park facilities. The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with recreational facilities.

The proposed Project does not trigger the need for new park or recreational facilities. Thus, the Project will have a *less than significant* impact relative to this topic.

Impact 3.12-4: Project implementation will not result in the need for the construction of new schools which have the potential to cause substantial adverse physical environmental impacts (Less than Significant)

As noted previously, the proposed Project does not include any new residential development and will not directly or indirectly increase the City's population. As such the need for additional school facilities is not anticipated. The Project could add additional jobs to the local economy, however, the additional employment is anticipated to come primarily from the local workforce. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with schools services.

MUSD collect impact fees from new developments under the provisions of SB 50. As of July 27, 2022 the current Level I Developer Fees for industrial development are \$0.78 per square foot. Under Section 65996 of the California Government Code, the payment of fees under SB 50 is deemed to fully mitigate the impacts of new development on school facilities. Implementation of the proposed Project would have a *less than significant* impact relative to this topic.

Impact 3.12-5: The proposed Project will not have significant effects on other public facilities. (Less than Significant)

As noted previously, the proposed Project does not include any new residential development and will not directly or indirectly increase the City's population. As such the need for additional public services such as library services, animal services, parks and recreation, and other services provided

3.12 PUBLIC SERVICES AND RECREATION

to City residents is not anticipated. The Project could add additional jobs to the local economy, however, the additional employment is anticipated to come primarily from the local workforce. Additional demands on other public facilities including utilities could result from Project implementation. Impacts on these facilities is discussed in further detail in Section 3.14 (Utilities). The City collects impact fees from new development based upon projected impacts from each development, including impacts on these other public services. The City also reviews the adequacy of impact fees on an annual basis to ensure that the fee is commensurate with the service. Payment of the applicable impact fees by the Project applicant, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the Project, would fund capital and labor costs associated with these other public services.

The proposed Project does not trigger the need for new facilities associated with these other public services. New facilities for these other public services are not proposed at this time. The proposed Project would not result in the need for new facilities for these other public services, thus it will have a *less than significant* impact relative to this topic.

This section of the EIR analyzes the potential impacts of the proposed Project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, and transit facilities/services. This section identifies the significant impacts of the proposed Project and recommends mitigation measures to lessen their significance. An evaluation of vehicular access to the Project Area is also provided. All technical calculations are in Appendix G of the Draft EIR.

3.13.1 ENVIRONMENTAL SETTING

PROJECT LOCATION

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

- **Project Site (or Annexation Area)** – totals 22.42 acres and includes the whole of the Project, including the proposed 19.63-acre Development Area, and 2.79 acres of land along Roth Road and Manthey Road.
- **Development Area** – totals 19.63 acres and is intended for the development of a travel center and associated circulation and parking improvements over two phases.

The proposed Project site is located on Assessor's Parcel Numbers (APNs) 191-250-14 and 191-250-06, located in the northern portion of the City of Lathrop. The proposed Project is located west of Interstate 5 (I-5) and is bordered by Manthey Road and the future extension of Roth Road.

PROJECT AREA ROADWAYS AND INTERSECTIONS

Roadways

Regional access to the Project Area is currently provided by many roads that fall under the jurisdiction of the City of Lathrop, as well as roads maintained by the City of Stockton, San Joaquin County, and Caltrans.

Two major streets generally adjoin the Specific Plan Area:

Roth Road is an east-west arterial that extends easterly through Lathrop from the intersection on Manthey Road on the west to its eastern terminus at the Airport Way intersection. Roth Road is a two-lane roadway with center left-turn lanes in various portions. Roth Road continues under I-5 near the Project site. The posted speed limit on Roth Road is 40 miles per hour (mph).

In the 2022 San Joaquin Council of Governments (SJCOG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) Document, the I-5 at Roth Road interchange (Project SJ11-2004) would be modified to provide operational (traffic signals) and capacity (through lanes and turn pockets) improvements to serve projected traffic volumes from the City of Lathrop, City of Manteca, San Joaquin County, and City of Stockton.

Manthey Road is a north-south arterial that extends from the City of Stockton just south of Walker Slough to its southern terminus at the Lathrop Road intersection in the City of Lathrop.

Manthey Road is a two-lane roadway. The posted speed limit on Manthey Road is 40 mph from Lathrop Road to Dos Reis Road and 45 mph from Dos Reis Road to City Limits.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

The following sections define bicycle facility types:

- **Class I Bike Path:** Class I bike paths, often referred to as shared-use paths or trails, are off-street facilities that provide exclusive use for non-motorized travel, including bicyclists and pedestrians. Bike paths have minimal cross flow with motorists and are typically located along landscaped corridors.
- **Class II Bike Lane:** Class II bike lanes are on-street facilities that use striping, stencils, and signage to denote preferential or exclusive use by bicyclists. On-street bike lanes are located adjacent to motor vehicle traffic.
- **Class III Bike Route:** Class III bike routes are streets with signage and optional pavement markings where bicyclists travel on the shoulder or share a lane with motor vehicles. Class III bike routes are utilized on low-speed and low-volume streets to connect bike lanes or paths along corridors that do not provide enough space for dedicated lanes.
- **Class III Bicycle Boulevard:** Class III bicycle boulevards are similar to Class III bike routes, in that they are primarily utilized on low-speed and low-volume streets, and can close important gaps in the bicycle network where there may be insufficient space for dedicated lanes. Bicycle boulevards provide further enhancements to bike routes to encourage slow speeds and discourage non-local vehicle traffic via traffic diverters, chicanes, traffic circles, and/or speed tables.
- **Class IV Separated Bikeway:** Class IV separated bikeways, commonly known as cycle tracks, are physically separated bicycle facilities that are distinct from the sidewalk and designed for exclusive use by bicyclists. They are located within the street right-of-way, but provide comfort similar to Class I bike paths.

Pedestrian facilities include sidewalks along roadways, crosswalks at intersections, and pedestrian push buttons and pedestrian signal timings at signalized intersections.

There are currently no bicycle or pedestrian facilities on Manthey Road, Roth Road, or Harlan Road in the project study area.

TRANSIT SERVICE

The Altamont Corridor Express (ACE) rail service connects Lathrop to San Jose and the Bay Area and also connects Stockton to Lathrop. During weekdays, four westbound trains serve Lathrop between 4:29 AM and 7:51 AM and four eastbound trains serve Lathrop between 5:23 PM and 8:26 PM. The Lathrop/Manteca station is located on Shideler Parkway at Yosemite Avenue (just east of McKinley Avenue). ACE trains allow bicycles on designated passenger train cars.

The San Joaquin Regional Transit District provides connections from Lathrop to Stockton, and Dublin/Pleasanton, and other destinations in San Joaquin County.

San Joaquin Regional Transit District **Route 90** connects Lathrop to Stockton and Tracy with service weekdays, once in the morning and once in the afternoon both northbound and southbound. A stop is provided on Louise Avenue at Harlan Road and 5th Street at the Lathrop Community Center.

San Joaquin Regional Transit District **Route 150** provides commuter service from Lathrop to the Dublin/Pleasanton BART station with seven departures every day. One stop is provided at the Crossroads Shopping Center on Harlan Road south of Lathrop Road.

San Joaquin Regional Transit District **Van Go!** service provides on-demand rideshare travel anywhere within the county with a 48-hour reservation from 8 AM to 5 PM seven days a week.

There is currently no local or regional transit stop in the vicinity of the project site.

3.13.2 REGULATORY SETTING

Existing transportation policies, laws, and regulations that would apply to the proposed Project are summarized below. This information provides a context for the impact discussion related to the proposed Project's consistency with applicable regulatory conditions and development of significance criteria for evaluating Project impacts.

FEDERAL

Americans With Disabilities Act

The Americans with Disabilities Act (ADA) of 1990 provides comprehensive rights and protections to individuals with disabilities. The goal of the ADA is to assure equality of opportunity, full participation, independent living, and economic self-sufficiency. To implement this goal, the United States Access Board has created accessibility guidelines for public rights-of-way. The guidelines address various issues, including roadway design practices, slope and terrain issues, pedestrian access to streets, sidewalks, curb ramps, street furnishings, pedestrian signals, parking, and other components of public rights-of-way.

STATE

Senate Bill 743

Senate Bill (SB) 743 (Steinberg, 2013), enacted in 2013, created Public Resources Code section 21099, which directed the Governor's Office of Planning and Research (OPR) and the Secretary of the Natural Resources Agency to establish criteria for determining the significance of transportation impacts of projects within transit priority areas, with the option of creating new statewide criteria. The significance criteria for transit priority areas were to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the new criteria, OPR and the Secretary were to recommend potential metrics that included, but were not limited to, vehicle miles traveled [VMT], vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. Section

21099 further provided that, once the CEQA Guidelines had been updated as required by the statute, “automobile delay, as described solely by level of service [LOS] or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any.”

Consistent with these directives, the Natural Resources Agency promulgated CEQA Guidelines section 15064.3, which became effective in late 2018. It provides that “[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts,” with VMT referring to “the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel.” Rather than limit its scope only to transit priority areas, the section changed the approach to assessing transportation impacts under CEQA all over the State. By its own terms, however, the section did not require agencies to begin using VMT as a new metric until July 1, 2020. LOS had ceased to be a valid significance criterion as of late 2018, however. (See *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal.App.5th 609, 625-626.)

In December 2018, OPR published final technical guidance for implementing CEQA Guidelines Section 15064.3. While this document does not have the force of law, the technical guidance provides helpful information to agencies such as the City, and sets forth OPR’s own understanding of the best strategies for implementing Section 15064.3.

Caltrans

Caltrans is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways in California. Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the state highway system within the City of Lathrop need to be approved by Caltrans. The City of Lathrop does not have the ability to unilaterally make improvements to the state highway system.

TRAFFIC STUDY GUIDELINES

The Caltrans document *Transportation Impact Study Guide* (California Department of Transportation 2020) identifies circumstances under which Caltrans determines that a traffic impact study would be required. The document also details information that is to be included in the study, analysis scenarios, and guidance on acceptable analysis methodologies, including CEQA focus on VMT rather than level of service (LOS), alternative transportation modes and safety.

LOCAL

SJCOG Regional Transportation Plan and Sustainable Community Strategy

The current RTP/SCS produced by SJCOG was adopted in 2022. The RTP/SCS sets forth regional transportation policy and provides capital program planning for all regional, state, and federally funded projects. The RTP/SCS also demonstrates how land use development and transportation

can work together to meet greenhouse gas emission reduction targets for cars and light trucks. The RTP can be considered the San Joaquin region's "statement of priorities" for the future transportation system.

Measure K: San Joaquin County Local Transportation Improvement Plan

Measure K, the San Joaquin County Local Transportation Improvement Plan, was passed by San Joaquin County voters in November 1990 and renewed in November 2006. Measure K assesses a half-cent sales tax on purchases made throughout the County to provide direct funding for local transportation projects. The funds are dedicated to the specific programs and projects specified in the Measure K expenditure plan, including improved highways and local streets, new passenger rail service, regional and interregional bus routes, park-and-ride lots, new bicycle facilities, and railroad crossings. The renewal of Measure K is estimated to generate \$2.552 billion for these transportation programs in the region through the year 2041. Funding from Measure K has been used to construct the Lathrop Road overcrossing of the Union Pacific railroad, among other projects.

SJCOG San Joaquin County Regional Congestion Management Program

As the designated Congestion Management Agency (CMA) for San Joaquin County, the SJCOG is responsible for updating County's Regional Congestion Management Program (RCMP) and monitoring its implementation. The 2021 proposed RCMP network includes the following corridors in Lathrop:

- I-5
- SR 120
- Roth Road
- Lathrop Road
- Louise Avenue
- Golden Valley Parkway

None of these proposed corridors are identified in the program as deficient.

San Joaquin Valley Air Pollution Control District (SJVAPCD)

SJVAPCD has implemented Rule 9410, Employer Based Trip Reduction. The purpose of this rule is to reduce VMT from private vehicles used by employees to commute to and from their worksites to reduce emissions of NO_x, ROG, and particulate matter (PM₁₀ and PM_{2.5}). The rule applies to employers with at least 100 employees. Employers are required to implement an Employer Trip Reduction Implementation Plan (ETRIP) for each worksite with 100 or more eligible employees to meet applicable targets specified in the rule. Employers are required to facilitate the participation of the development of ETRIPs by providing information to its employees explaining the requirements and applicability of this rule. Employers are required to prepare and submit an ETRIP for each worksite to the District. The ETRIP must be updated annually. Under this rule, employers shall collect information on the modes of transportation used for each eligible employee's

commutes both to and from work for every day of the commute verification period, as defined in using either the mandatory commute verification method or a representative survey method. Annual reporting includes the results of the commute verification for the previous calendar year along with the measures implemented as outlined in the ETRIP and, if necessary, any updates to the ETRIP.

City of Lathrop General Plan

POLICIES: LAND USE

- LU-1.1 Support a full spectrum of conveniently located residential, commercial, industrial, public, and quasi-public uses that support business development, regional transportation objectives and the livability of residential neighborhoods.
- LU-1.9 Promote equitable land use patterns to provide all residents in all neighborhoods access to community amenities and transportation choices, and increase safety for walking and biking.
- LU-3.1 Support regional efforts that promote higher densities and intensities near major transit and travel facilities, and reduce regional vehicle miles traveled by supporting active modes of transportation including walking, biking, and public transit.

POLICIES: CIRCULATION

- CIR-1.2 Complete Streets. Consider all modes of travel in planning, design, and construction of all transportation projects to create safer, more livable, and more inviting environments for pedestrians, bicyclists, motorists and public transit users of all ages and capabilities.
- CIR-1.3 Facility Service Levels. Strive for intersection level of service (LOS) D or better within the City, except where maintaining such levels of service are infeasible:
 - a. Where maintaining the standard would be a disincentive to walking, bicycling, or transit.
 - b. Where maintaining the standard would be incompatible with adjacent land uses.
 - c. Where constructing facilities would prevent the City from achieving goals for vehicle miles traveled (VMT) or other priorities.
 - d. Where constructing facilities with sufficient capacity would be unreasonably expensive.
- CIR-2.2 Safety. Improve safety conditions, efficiency, and comfort for bicyclists and pedestrians by providing shade trees and controlling traffic speeds by implementing narrow lanes or other traffic calming measures.
- CIR-2.4 Transit Access. Provide safer, more convenient access to transit service including rail, bus, and paratransit.
- CIR-2.5 Amenities. To support bicycle, pedestrian, and transit usage, provide amenities including pedestrian-scale lighting, bicycle parking, shade trees and landscaping, and bus shelters and benches.

- CIR-4.1 Land Use Supporting Reduced VMT. Support land use with increased land use densities and mixed uses, consistent with the Land Use Element, to reduce vehicle miles traveled and promote the use of walking, biking, and transit.
- CIR-4.2 Demand Management. Encourage employers to provide programs for carpooling/transit/biking/walking, transit ridership subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, working at home, employee education, and preferential parking for carpools/vanpools.
- CIR-4.3 New Technologies. Monitor deployment of new transportation technologies and services and develop policies that implement best practices to ensure these technologies and services benefit the public and the multimodal transportation system.

POLICY: ENVIRONMENTAL JUSTICE

- EJ-1.1 Land Use Patterns. Create land use patterns that are transit, bicycle, and pedestrian-oriented and have a mix of uses, especially neighborhood serving businesses, within walking distance of homes and workplaces.

City of Lathrop VMT Screening Criteria and Thresholds of Significance

Resolution No. 20-4784, adopted by the City Council on September 14, 2020, enacted the following levels of significance for land use projects in the City:

- **Residential projects:** 15 percent below existing (baseline) citywide VMT per household or per resident
- **Office projects:** 15 percent below existing (baseline) citywide VMT per employee
- **Retail projects:** A net increase in existing (baseline) citywide VMT per employee
- **Mixed-use projects:** Evaluate each land use separately

Baseline VMT is defined as the average VMT per project type for the City of Lathrop under Baseline Year 2020 conditions using the City of Lathrop Travel Demand Model.

The resolution also adopted the following screening criteria to quickly identify when a project should be expected to cause a less than significant VMT impact without conducting a detailed VMT analysis:

- **Small projects:** Generation of less than 110 daily trips.
- **Projects located in low-VMT areas:** Projects in areas with low VMT (to be identified as part of the General Plan update), with similar features (i.e., density, mix of uses, and transit accessibility) to the nearby developments.
- **Projects in proximity to a major transit stop:** Projects located within a half-mile of an existing or planned high-quality transit corridor or major transit station. In Lathrop, this includes the existing Lathrop ACE station, the future Valley Link stations, and at stops for bus routes with headways of 15 minutes or less. This criterion does not apply if a project:
 - Has a floor area ratio (FAR) of less than 0.75;
 - Includes more parking than required by the City of Lathrop;

- Is inconsistent with the SJCOG RTP/SCS; or
- Replaces affordable residential units with a smaller number of moderate- or high-income residential units.
- **Affordable housing:** Residential projects containing a particular amount of affordable housing (based on local circumstances and substantial evidence as determined by the City).
- **Local-serving retail:** Local-serving retail projects of less than 50,000 square feet. Staff shall evaluate both the project characteristics and the context of the project location to decide as to whether a given retail project is local serving.
- **Transportation projects that do not result in an increase in VMT:** Transit projects, bicycle and pedestrian projects, and roadway projects that do not result in an increase in vehicle capacity or VMT.

City of Lathrop Bicycle Transportation Plan

The 1995 Lathrop Bicycle Transportation Plan, last updated in 2004, was developed to improve and expand bicycling opportunities in Lathrop. The Bicycle Transportation Plan provides an additional level of refinement to the General Plan's Transportation and Circulation Element by providing a detailed set of policies and programs for bicycle circulation improvement. The Plan establishes bicycle goals, objectives, and policies; identifies future bicycle infrastructure projects; and promotes support facilities and educational programs. The following goal and objectives were established by the Plan:

Goal A: To create a bikeway system that provides for convenient and safe bicycle circulation throughout Lathrop and maximizes the number of bicycle commuters.

Objective A.1: Provide a comprehensive network of bikeways that provides access to destination points throughout the community.

Objective A.2: Assure bikeways are fully integrated into all future development occurring within the City's General Plan Sphere.

Objective A.3: Provide route linkages to regional bikeways.

Objective A.4: Provide for a high level of rider safety along all bikeways.

City of Lathrop Truck Route Map

The City of Lathrop Truck Route Map identifies existing and future truck routes within the City. The map includes both Surface Transportation Assistance Administration (STAA) truck routes and other City truck routes. In October 2021, the City Council removed the truck route designation for Lathrop Road between Harlan Road and McKinley Avenue. In November 2023, the City Council removed truck route designation for Golden Valley Parkway north of River Islands Parkway, Lathrop Road west of the southbound I-5 off-ramp, and Manthey Road south of 900 feet north of Dos Reis Road.

City of Lathrop Transportation Monitoring Program

As part of local development agreements and CEQA mitigation requirements developments within the city require participation in an annual Traffic Monitoring Plan TMP that forecasts street and circulation improvement needs.

The TMP monitors roadway conditions, projects roadway congestion two and four years into the future, and schedules when planned roadway improvements should be constructed to keep congestion at acceptable levels. The TMP is important because it establishes performance standards and details how the operations of the roadway system are to be monitored, as well as how improvements are to be scheduled for construction to avoid the roadway system falling below acceptable standards of operation. Developers are required to fund the TMP on a continuing basis until all required traffic improvements have been completed.

City of Lathrop Design and Construction Standards

The City's design and construction standards and standard details provide for coordinated and standardized development of City facilities, including roadways. The standards apply to, regulate, and guide the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, and related public improvements. All public roadway infrastructure improvements must be designed and constructed in accordance with the city standards and Caltrans' Standard Specifications (Caltrans 2018).

3.13.3 IMPACTS AND MITIGATION MEASURES

THRESHOLDS OF SIGNIFICANCE

The transportation analysis assesses how the study area's transportation system would operate with the implementation of the proposed Project. The analysis includes effects that would result in significant impacts as set forth in the CEQA Guidelines.

The proposed Project's impact is not considered to be significant unless it would:

- Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.
- Conflict or be inconsistent with CEQA Guideline section 15064.3, subdivision (b).
- Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- Result in inadequate emergency access.

The second significance criteria is related to the implementation of VMT as the primary performance metric.

Transit, Roadway, Bicycle, and Pedestrian Facilities

These criteria have been applied:

A project is considered to have a significant impact on bicycle or pedestrian facilities if it would:

- eliminate or adversely affect an existing bikeway or pedestrian facility in a way that would discourage its use;
- interfere with the implementation of a planned bikeway as shown in the Bicycle Transportation Plan; or
- result in unsafe conditions for bicyclists or pedestrians, including unsafe bicycle/pedestrian, bicycle/motor vehicle, or pedestrian/motor vehicle conflicts.

A proposed Project is considered to have a significant impact on the public transit system if the proposed Project would generate ridership which may exceed available or planned system capacity, or create a demand for service that cannot reasonably be accommodated by existing transit services.

CEQA Guideline Section 15064.3, Subdivision (b)

APPLICABLE POLICIES AND SIGNIFICANCE CRITERIA

SB 743 was signed into law in 2013 and resulted in a substantial change in the way transportation impact analyses are being prepared. Notably, it precludes the use of LOS to identify significant transportation impacts in CEQA documents for land use projects, with SB 743 recommending that VMT be used as the preferred metric.

On December 28, 2018, the CEQA Guidelines were amended to add Section 15064.3, Determining the Significance of Transportation Impacts, which states that, generally, VMT is the most appropriate measure of transportation impacts. According to 15064.3(a), “Except as provided in subdivision (b)(2) (regarding roadway capacity), a project’s effect on automobile delay shall not constitute a significant environmental impact.” Beginning on July 1, 2020, the provisions of 15064.3 applied statewide.

To aid lead agencies with SB 743 implementation, the Governor’s OPR produced the Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018).¹ The Technical Advisory helps lead agencies think about the variety of implementation questions they face with respect to shifting to a VMT metric. However, the guidance is not a recipe for SB 743 implementation; lead agencies must still make their own specific decisions about methodology, thresholds, and mitigation.

The City of Lathrop adopted thresholds of significance and screening criteria for the purpose of analyzing transportation impacts under CEQA related to VMT on September 20, 2020 and in the

¹ http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf

City of Lathrop General Plan Update (September 2022) Circulation Element. The methodology and thresholds identified in Attachment 2 in Resolution No. 20-4784 will be applied to the proposed Project to determine if the Project would result in a CEQA VMT impact.

The City's guidelines identify VMT per employee as the VMT metric for retail / commercial land uses. VMT per retail employee includes VMT associated with trips produced by a project on a typical weekday. The VMT Guidelines also identify a project resulting in a net increase in existing city-wide VMT per employee would indicate a significant transportation impact. This metric reflects the nature of most local-serving retail to distribute existing vehicle trips and serve both pass-by and diverted vehicle trips, rather than generate or inducing all new vehicle trips to and from the project site.

VMT ANALYSIS METHODOLOGY

As part of the City of Lathrop General Plan Update, Fehr & Peers developed the City of Lathrop, Manteca, and Ripon Travel Forecasting Model (Three City TFM). The Three City TFM is a modified version of the Three-County RTP/SCS Air Quality Conformity Model, with improvements to all major components (transportation network, land use, and trip-generation rates) focused on this three-city area. Each scenario of the TFM used for VMT forecasting is described below.

Baseline Year (2019) TFM: The Base Year TFM developed for the General Plan Update was used to develop Baseline city-wide average weekday daily VMT per employee for all retail / commercial projects in the City of Lathrop. It should be noted that the use of VMT per employee is the standard methodology used to evaluate potential SB 743 VMT impacts. The Baseline Year TFM incorporates Base Year land use data for dwelling units (single-family and multi-family) and employment (food, retail, office, industrial, medical, government, and school), as well as the roadway network (travel lanes, speed, capacity class), based on Base Year (i.e., 2019) data. The Three City TFM vehicle trip generation rates were derived from the Institute of Transportation Engineer's (ITE) Trip Generation Manual and include inbound/outbound trip generation rates for residential and employment land uses for Daily, AM and PM peak hour conditions.

The Three City TFM was calibrated to reflect more accurate trip distribution for Internal-to-Internal Trips (II), Internal-to-External Trips (IX), External-to-Internal Trips (XI) and External-to-External (XX or Through) Trips based on a combination of the Caltrans Household Travel Survey (CHTS), the American Community Survey (ACS), and California Statewide Model to replicate the majority of vehicle trips traveling to and from the west (Metropolitan San Francisco Bay Area) and a smaller percentage to and from the north (including Stockton and Sacramento) and the smallest percentage to and from the south (I-5 corridor).

The existing (baseline) city-wide average VMT per employee was determined to be 135.3 miles per employee and is based on all types of employment (food, retail, office, industrial, medical, government, and school) in the City of Lathrop.

Cumulative Adopted (September 2022) General Plan Buildout Scenario TFM: The City of Lathrop updated its General Plan, and the Three City TFM was used to estimate the Project’s weekday daily home-based VMT per retail employee under cumulative Adopted General Plan Buildout conditions. This scenario of the TFM incorporates land use data (dwelling units and employment) and reflects the City of Lathrop’s jobs-housing balance, II, IX, XI, and XX trips under cumulative conditions where the City of Lathrop General Plan is built out.

This scenario also incorporates roadway network (lanes, speed, capacity class) based on the adopted City of Lathrop General Plan, the City of Lathrop Capital Improvement Program (CIP), and the SJCOG RTP/SCS Project List.

The cumulative (general plan) city-wide average VMT per employee was determined to be 211.5 miles per employee and is based on all types of employment (food, retail, office, industrial, medical, government, and school) in the City of Lathrop.

IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Implementation of the proposed Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. (Less than Significant with Mitigation)

TRANSIT SERVICE AND FACILITIES

The proposed Project would not be expected to noticeably increase bus ridership. The Project would not disrupt or interfere with existing or planned public transit services or facilities. It would not create an inconsistency with policies concerning transit systems set forth in a General Plan or in the local plans. Therefore, this impact is considered *less than significant*.

BICYCLE AND PEDESTRIAN FACILITIES

Traffic generated by the Project would not change the traffic mix in the area and would be compatible with existing and planned roadway and highway facility design. The Project will also support the implementation of City of Lathrop’s General Plan and CIP to serve the vehicle (cars and trucks), transit, bicycle, and pedestrian system. These improvement in the vicinity of the proposed Project would improve multi-modal safety in the City of Lathrop. The proposed Project does not consist of any improvements or physical changes to the freeway mainline, freeway interchange, or other State Highway System (SHS) facilities. A detailed review of the facility design of the safety improvement projects confirmed that the proposed Project would improve on the non-existent multi-modal facility by providing sidewalks along the Project frontage on Roth Road and Manthey Road.

The City of Lathrop Bicycle Transportation Plan establishes the City’s goals and objectives for bicycle travel. The Bicycle Transportation Plan also establishes standards for bicycle facilities and

identifies planned bicycle network facilities to address the City's bicycle needs. The Circulation Element developed as part of the General Plan contains Policy CIR-2.1 and Implementation Actions CIR-2a and CIR-2g, which support bicycle and pedestrian routes and facilities and creating an active transportation plan supporting the development and funding of bicycle and pedestrian networks.

The City of Lathrop is currently (as of August 2023) preparing an Active Transportation Plan that will identify pedestrian, bicycle and transit improvements in the vicinity of the proposed Singh Petroleum Investments Project site. Based on the location of the future active transportation facilities, Mitigation Measure 3.13-1 is recommended. This mitigation requires coordination with the City to construct sidewalks along the Project frontage, among other requirements related to pedestrian facilities. Consequently, this impact would be reduced to a *less-than-significant* level.

MITIGATION MEASURE(S)

Mitigation Measure 3.13-1: *The Project applicant shall coordinate with the City to construct sidewalks along the Project frontage on Roth Road and Manthey Road and also preserve right-of-way along the future Manthey Road re-alignment. The driveways on Manthey Road and Roth Road shall be designed to provide visibility to eliminate potential hazards to pedestrians and adjacent parcels / homes. The design of the driveways shall be reviewed and approved by the City Engineer. The Project applicant shall work with the City to refine the design of the re-aligned Manthey Road at the Project driveway to provide the following:*

- *One southbound through travel lane;*
- *One 150-foot southbound left-turn lane;*
- *One northbound through travel lane'*
- *One northbound shared through / right-turn lane;*
- *One westbound left-turn lane;*
- *One westbound right-turn lane; and*
- *One southbound refuge / acceleration lane for vehicles (cars and trucks) exiting the project site and making a left-turn onto southbound Manthey Road.*

This requirement shall be noted on the Project improvement plans.

Impact 3.13-2: Implementation of the proposed Project would not conflict with or be inconsistent with CEQA Guideline section 15064.3, subdivision (b). (Less than Significant)

As discussed earlier in this section, the proposed Project would result in a significant transportation impact if the proposed Project would result in a net increase in Baseline (existing) Lathrop city-wide VMT by employee or Cumulative Lathrop city-wide VMT by employee.

Table 3.13-1 presents the established city-wide VMT and the Project generated VMT under baseline and cumulative conditions. VMT generated by the Project is compared to the baseline

3.13 TRANSPORTATION AND CIRCULATION

city-wide average VMT per employee. The proposed Project would result in a combination of net new, pass-by, and diverted vehicle trips and associated VMT per employee.

TABLE 3.13-1: VMT ANALYSIS – PROJECT-GENERATED VMT

<i>SCENARIO</i>	<i>VMT PER RETAIL EMPLOYEE</i>	<i>COMPARED TO BASELINE CITYWIDE AVERAGE WITHOUT PROJECT</i>
Existing (Baseline) City-wide Average	135.3	-
Singh Petroleum Investments Project – Existing (Baseline) Conditions Net New Trips – 20% - VMT of 135.3 miles per retail employee Pass-By Trips – 15% - VMT of 0.2 miles from Manthey Road Diverted Trips – 65% - VMT of 1.1 miles from I-5	27.8	- 79.5%
Cumulative Lathrop General Plan Update	211.5	-
Singh Petroleum Investments Project - Cumulative Lathrop General Plan Update Net New Trips – 20% - VMT of 195.2 miles per retail employee Pass-By Trips – 15% - VMT of 0.2 miles from Manthey Road Diverted Trips – 65% - VMT of 1.1 miles from I-5	43.1	- 79.6%

SOURCE: FEHR & PEERS, 2023.

The definition of net new trips are vehicle trips that have the sole purpose of traveling to and from the proposed Project from either home or work and represent approximately 20% of the daily VMT. The definition of pass-by trips are vehicle trips that are already on Manthey Road and decide to stop at the proposed Project and represent approximately 15% of the daily VMT. The definition of diverted trips are vehicle trips that are already on Interstate 5 and decide to stop at the proposed Project and represent approximately 65% of the daily VMT.

As shown in Table 3.13-1, under Existing (Baseline) Conditions, based on the type of Project that includes a combination of net new, pass-by, and diverted vehicle trips, the proposed Project would generate an estimated average of 27.8 VMT per employee, which is 79.5% below the baseline city-wide average.

The City’s Adopted (September 2022) General Plan Update includes a substantial increase in both employment and retail land uses, which would allow residents to travel shorter distances to access jobs and local services without the need to travel outside of the City of Lathrop. To complement this increase in employment, the City of Lathrop General Plan also includes a substantial increase in residential projects (single-family and multi-family dwelling units) that would complement the employment and retail land uses by supplying workers (employees) and patrons (shoppers) to businesses. The improved jobs-housing balance under the cumulative scenario is consistent with the City’s vision for future development of providing local services for a growing population.

Under Cumulative Adopted General Plan Buildout conditions, based on the type of project that includes a combination of net new, pass-by and diverted vehicle trips, the Project would generate

an estimated average of 43.1 VMT per employee, which is 79.6% below the cumulative city-wide average.

Therefore, because the proposed Project would generate VMT per employee that is less than existing city-wide VMT by employee or cumulative city-wide VMT by employee, the VMT impact of the proposed Singh Petroleum Investments Project would be *less than significant*.

Impact 3.13-3: Implementation of the proposed Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant with Mitigation)

The following describes the results of potential safety impacts associated with transportation and circulation that could result from implementation of the proposed Project. The following describes the safety-related reviews, investigations, and analysis that was completed for Existing Plus Project and Cumulative Plus Project conditions.

PLANNED TRAFFIC SAFETY IMPROVEMENTS IN THE PROJECT AREA

The following documents and projects in the City of Lathrop, SJCOG, and Caltrans jurisdictions are reviewed for traffic safety improvements:

- City of Lathrop General Plan – Section 3.14, Circulation;
- City of Lathrop CIP; and
- SJCOG RTP/SCS.

The proposed Project includes an eight-island (16 position) fueling station, an 16,668 square foot retail / convenience store that includes a quick service restaurant (QSR) with a drive-thru lane, an eight-truck fuel island, and a 13,846 square foot truck service / repair facility. Traffic generated by the proposed Project would increase traffic volumes on local roadways, I-5 / Roth Road on-ramps, and I-5 / Roth Road off-ramps serving the Project study area. Existing and future land use in the vicinity of the Project area consists of a mix of warehousing, trucking, food, retail, and service uses. It should be noted that California legal and STAA trucks are prohibited from using Golden Valley Parkway, Spartan Road and the I-5 / Lathrop Road interchange

Traffic generated by the Project would include a mix of passenger cars and trucks that would use the fueling, convenience store and quick service restaurant land uses. The project would also attract commercial vehicles and trucks that would use the fueling, truck service / repair facility and quick service restaurant land uses.

Therefore, both the passenger and commercial vehicles that the proposed project would attract from I-5, Roth Road and Manthey Road would not change the traffic mix in the area and would be compatible with existing and planned facility design. The Project will also support the implementation of City of Lathrop's General Plan and CIP to serve the Vehicle (cars and trucks), Transit, Bicycle and Pedestrian System. These improvement in the vicinity of the proposed project

3.13 TRANSPORTATION AND CIRCULATION

would improve multi-modal safety in the City of Lathrop. The proposed Project does not consist of any improvements or physical changes to the freeway mainline, freeway interchange, or other State Highway System (SHS) facilities. A detailed review of the facility design of the safety improvement projects listed above confirmed that the proposed Project would improve on the non-existent multi-modal facility by providing sidewalks along the project frontage on Roth Road and Manthey Road.

As noted previously, the City of Lathrop Bicycle Transportation Plan established the City's goals and objectives for bicycle travel. The Bicycle Transportation Plan establishes standards for bicycle facilities and identifies planned bicycle network facilities to address the City's bicycle needs. The Circulation Element developed as part of the proposed General Plan contains Policy CIR-2.1 and Implementation Actions CIR-2a and CIR-2g, which support bicycle and pedestrian routes and facilities and creating an active transportation plan supporting the development and funding of bicycle and pedestrian networks.

The City of Lathrop is currently (as of August 2023) preparing an Active Transportation Plan that will identify pedestrian, bicycle, and transit improvements in the vicinity of the proposed Project site. Based on the location of the future active transportation facilities, the following Condition of Approval (COA) is recommended:

Traffic COA #3 – The developer shall coordinate with the City to construct sidewalks along the project frontage on Roth Road and Manthey Road and also preserve right-of-way along the future Manthey Road re-alignment. The driveways on Manthey Road and Roth Road shall be designed to provide visibility to eliminate potential hazards to pedestrians and adjacent parcels / homes. The design of the driveways shall be reviewed and approved by the Director of Engineering/City Engineer. The developer shall work with the City to refine the design of the re-aligned Manthey Road at the project driveway to provide the following:

- One southbound through travel lane;
- One 150-foot southbound left-turn lane;
- One northbound through travel lane'
- One northbound shared through / right-turn lane;
- One westbound left-turn lane;
- One westbound right-turn lane; and
- One southbound refuge / acceleration lane for vehicles (cars and trucks) exiting the project site and making a left-turn onto southbound Manthey Road.

This COA is included as Mitigation Measure 3.13-1 in Impact 3.13-1 previously.

FREEWAY OFF-RAMP QUEUEING ANALYSIS

As part of the Transportation Analysis Report (Fehr & Peers, 2023), intersection operations analyses were completed for the following freeway ramp terminal intersections:

1. Southbound Interstate 5 On/Off-Ramps / Roth Road; and
2. Northbound Interstate 5 On/Off-Ramps / Roth Road.

Results of the intersection operations analysis show that under Existing Plus Project Conditions, both side-street stop-controlled ramp intersections would continue to operate at acceptable LOS A/B conditions during the AM peak hour and acceptable LOS A/B/C conditions during the PM peak hour. With the improvement and signalization of the I-5 / Roth Road interchange, both ramp intersections would operate at acceptable LOS B/C during both AM and PM peak hours under Cumulative No Project and Cumulative Plus Project conditions.

A freeway off-ramp queueing analysis was completed for both ramp intersections during the AM and PM peak hour. The off-ramp queueing analysis was completed using the Synchro 11 software package, and the 95th percentile queue is reported for all freeway off-ramp movements.

Table 3.13-2 presents the results of the freeway off-ramp queueing analysis for the AM and PM peak hour under Existing and Existing Plus Project conditions. Technical Calculations are included in Appendix A and Appendix B of Appendix G for Existing, and Existing Plus Project Conditions, respectively.

TABLE 3.13-2: FREEWAY OFF-RAMP QUEUEING ANALYSIS – EXISTING AND EXISTING PLUS PROJECT CONDITIONS 95TH PERCENTILE QUEUE

INTERSECTION	MOVE- MENT	STORAGE (FT)	EXISTING				EXISTING PLUS PROJECT			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			VOL.	QUEUE (FT)	VOL.	QUEUE (FT)	VOL.	QUEUE (FT)	VOL.	QUEUE (FT)
1. SB I-5 Ramps / Roth Road	SB LT	525	123	128	123	113	123	125	123	132
	SB LT/TH	1,520	123	98	123	89	123	101	123	117
	SB RT	25	40	72	37	67	74	81	82	87
2. NB I-5 Ramps / Roth Road	NB LT/TH	1,300	8	28	35	84	21	66	82	100
	NB RT	625	172	101	181	173	172	90	181	131
	SB LT	525	123	128	123	113	123	125	123	132

NOTES: **BOLD** INDICATED 95TH PERCENTILE QUEUE EXCEEDS STORAGE LENGTH

SOURCE: FEHR & PEERS, 2023.

As shown in Table 3.13-2, with the addition of the Project traffic, all freeway off-ramp queues can be accommodated within the off-ramp storage, except for the Southbound I-5 off-ramp right-turn movement. The short 25-foot right-turn lane results in minor queueing under both Existing and Existing Plus Project Conditions. It should be noted that under no circumstances does the queue extend back toward the freeway off-ramp gore point on southbound I-5.

Based on the freeway off-ramp queueing analysis, the proposed Project would not result in freeway off-ramp queueing spilling back from the I-5 / Roth Road interchange under Existing Plus Project Conditions.

3.13 TRANSPORTATION AND CIRCULATION

Table 3.13-3 presents the results of the freeway off-ramp queueing analysis for the AM and PM peak hour under Cumulative and Cumulative Plus Project conditions. As shown, with the improvement and signalization of the I-5 / Roth Road interchange, all freeway off-ramp queues can be accommodated within the off-ramp storage. Technical calculations are included in Appendix C and Appendix F of Appendix G for Cumulative No Project and Cumulative Plus Project Conditions, respectively.

TABLE 3.13-3: FREEWAY OFF-RAMP QUEUEING ANALYSIS – CUMULATIVE NO PROJECT AND CUMULATIVE PLUS PROJECT CONDITIONS 95TH PERCENTILE QUEUE

INTERSECTION	MOVE- MENT	STORAGE (FT)	EXISTING				EXISTING PLUS PROJECT			
			AM PEAK HOUR		PM PEAK HOUR		AM PEAK HOUR		PM PEAK HOUR	
			VOL.	QUEUE (FT)	VOL.	QUEUE (FT)	VOL.	QUEUE (FT)	VOL.	QUEUE (FT)
1. SB I-5 Ramps / Roth Road	SB LT	525	123	128	123	113	123	125	123	132
	SB LT/TH	1,520	123	98	123	89	123	101	123	117
	SB RT	25	40	72	37	67	74	81	82	87
2. NB I-5 Ramps / Roth Road	NB LT/TH	1,300	8	28	35	84	21	66	82	100
	NB RT	625	172	101	181	173	172	90	181	131

NOTES: **BOLD** INDICATED 95TH PERCENTILE QUEUE EXCEEDS STORAGE LENGTH
SOURCE: FEHR & PEERS, 2023.

Based on the freeway off-ramp queueing analysis, the proposed Project would not result in freeway off-ramp queueing spilling back from the I-5 / Roth Road interchange under Cumulative Plus Project Conditions. With the improvement and signalization of the I-5 / Roth Road interchange, all freeway off-ramp queues can be accommodated within the off-ramp storage. Traffic generated by the proposed Project would remain compatible with the planned traffic safety improvements in the vicinity of the Project.

It should be noted that the design of the future I-5 / Roth Road interchange improvement has not been formalized; however, off-ramp queueing of the future interchange will be studied in detail as part of the Interstate 5 / Roth Road Interchange Improvement Project led by the City of Lathrop, in coordination with Caltrans. As such, the Project applicant should coordinate with the City to begin the Project Study Report / Project Development Support (PSR/PDS) project initiation document which will be used to program the project development support for State Transportation Improvement Program (STIP) and SCOG RTP/SCS funding. Coordination with the City is required by Mitigation Measure 3.13-2.

It is noted that, at the November 13, 2023 City of Lathrop Council Meeting, approval of a professional consulting agreement was adopted to undertake and complete the project initiation document (also known as a PSR/PDS) for the Roth Road and I-5 Interchange (Capital Improvement Project PS 14-04). This represents the first project phase in developing interchange improvements and approval from the California Department of Transportation (Caltrans). The proposed schedule would complete the Final PSR/PDS document by November 2024.

INTERSECTION OPERATIONS

As part of the Transportation Analysis Report (Fehr & Peers, 2023), intersection operations analyses were completed. It is important to note that LOS is no longer a CEQA issue. However, based on results of the intersection operations analysis, review of the site plan, and adjacent land uses on Manthey Road, two mitigation measures are recommended. Mitigation Measure 3.13-3 requires the Project applicant to coordinate with the City of Lathrop Public Works Department to construct the fourth (west) leg of the Manthey Road / Roth Road intersection and modify the intersection from a side-street stop controlled to an all-way stop controlled intersection. Mitigation Measure 3.13-4 requires the Project applicant to coordinate with the City of Lathrop Public Works Department to ensure access and egress from the existing driveway / house located directly south of the proposed full access driveway on the current alignment of Manthey Road is maintained and adequate site distance is provided.

SITE ACCESS EVALUATION

Under Existing / Near-term conditions (i.e., Phase I of the Project), access to the Project site would be provided via two full-access driveway on Manthey Road, approximately 300 feet and 500 feet south of the Roth Road / Manthey Road intersection. The first driveway would be for passenger vehicles / delivery trucks and the second driveway would be for CA legal and STAA trucks. Two outbound (right-turn only) driveways would be provided on the proposed extension of Roth Road west of Manthey Road, approximately 400 feet and 550 feet west of the Roth Road / Manthey Road intersection. The first driveway would be for passenger vehicles / delivery trucks and the second driveway would be for California (CA) legal and STAA trucks.

Under Cumulative conditions (i.e., Phase II of the Project), access to the Project site for passenger vehicles / delivery trucks would be provided via a right-turn in / right-turn out driveway on Roth Road, approximately 650 feet west of the southbound I-5 / Roth Road ramp terminal intersection. Access to the project site for CA legal and STAA trucks would be provided on the proposed relocated Manthey Road, approximately 300 feet south of the re-aligned Roth Road / Manthey Road intersection.

Both Project driveways were analyzed under the Existing Plus Project and the Cumulative Plus Project conditions. According to the Transportation Analysis Report, both Project driveways would operate acceptably as side-street stop controlled intersections, and Project traffic would be able to enter and exit Project driveways without excessive delay.

The proposed site plan shows sidewalks being constructed along the project frontage on Roth Road and Manthey Road. It is important that the site design provides adequate throat depth for vehicular traffic. Without this, queueing may extend onto public streets, thereby adversely affecting traffic operations and creating potential safety hazards. All intersections and street sections would be reviewed by the City of Lathrop and designed to comply with typical City standards.

CONCLUSION

Implementation of the proposed Project would not result in a geometric design feature that is inconsistent with applicable design standards for the City of Lathrop. The Project would not result in a significant change to the vehicle mix or speed of traffic that is not compatible with the design of existing or planned facility design. With implementation of Mitigation Measures 3.13-1 through 3.13-4, this impact would be ***less than significant***.

MITIGATION MEASURE(S)

*Implement **Mitigation Measure 3.13-1.***

Mitigation Measure 3.13-2: *The Project applicant shall coordinate with the City to begin the Project Study Report / Project Development Support (PSR/PDS) project initiation document which shall be used to program the project development support for State Transportation Improvement Program (STIP) and San Joaquin Council of Governments (SJCOG) Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS) funding.*

Mitigation Measure 3.13-3: *The Project applicant shall coordinate with the City of Lathrop Public Works Department to construct the fourth (west) leg of the Manthey Road / Roth Road intersection and modify the intersection from a side-street stop controlled to an all-way stop controlled intersection. This requirement shall be noted on the Project improvement plans.*

Mitigation Measure 3.13-4: *The Project applicant shall coordinate with the City of Lathrop Public Works Department to ensure access and egress from the existing driveway / house located directly south of the proposed full access driveway on the current alignment of Manthey Road is maintained and adequate site distance is provided. This requirement shall be noted on the Project improvement plans.*

Impact 3.13-4: Implementation of the proposed Project would not result in inadequate emergency access. (Less than Significant)

Emergency response requires a balance of emergency response time and evacuation needs with other community concerns, such as urban design and traffic calming. A preliminary site plan review completed as part of the Transportation Analysis Report (Fehr & Peers, 2023) indicates adequate emergency access would be provided and there do not appear to be any geometric hazards. However, all project access intersections, internal intersections, and internal roadways should be carefully designed to ensure they can accommodate emergency vehicles. All intersections and street sections would be reviewed by the City of Lathrop and designed to comply with typical City standards.

Overall, implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

This section describes the regulatory setting, impacts associated with wastewater services, water services, storm drainage, and solid waste disposal that are likely to result from Specific Plan implementation, and measures to reduce potential impacts to wastewater, water supplies, storm drainage, and solid waste facilities. This section is based in part on the following documents, reports and studies: *California's Groundwater*, *CalRecycle Solid Waste Information System*, *CalRecycle Jurisdiction Diversion/Disposal Rate Summary*, *City of Lathrop Municipal Service Review & Sphere of Influence Plan* (City of Lathrop, 2022), the *Tracy Subbasin Groundwater Sustainability Plan* (2021), *2020 Urban Water Management Plan* (2021), *Recycled Water System Master Plan* (2018), *Water System Master Plan* (2018), and *Wastewater System Master Plan* (2018).

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

3.14.1 WASTEWATER SERVICES

This section describes the City of Lathrop's wastewater infrastructure, wastewater flows, treatment plant permit requirements, and previous infrastructure planning. Wastewater service is provided by Lathrop via their network of collection infrastructure and the Manteca Water Quality Control Facility (MWQCF) and the Lathrop Consolidated Treatment Facility (LCTF).

ENVIRONMENTAL SETTING

KEY TERMS

Effluent: Effluent is an outflowing of water from a natural body of water, or from a man-made structure. Effluent in the man-made sense is generally considered to be water pollution, such as the outflow from a sewage treatment facility or the wastewater discharge from industrial facilities. In the context of wastewater treatment plants, effluent that has been treated is sometimes called secondary effluent or treated effluent.

NPDES: Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches. Individual homes that are connected to a municipal system, use a septic system, or do not have a surface discharge do not need an NPDES permit; however, industrial, municipal, and other facilities must obtain permits if their discharges go directly to surface waters.

WWTP: Wastewater treatment plant. Treatment of wastewater may include the following processes: screening to remove large waste items; grit removal to allow sand, gravel, and sediment to settle out; primary sedimentation where sludge can settle out of the wastewater; secondary treatment to substantially degrade the biological content of the sewage; tertiary treatment to raise the quality of the effluent before it is discharged; and, discharge.

SEWER COLLECTION SYSTEM AND WASTEWATER TREATMENT

Wastewater System Overview

Wastewater from the City of Lathrop is currently treated at the MWQCF and the LCTF. The MWQCF treats most of the City's wastewater generated in areas east of Interstate Highway 5 (I-5), excluding the Crossroads development area. The LCTF treats the wastewater generated west of I-5 and in the Crossroads, Gateway and South Lathrop development areas. In 2016, the City generated a total average annual flow of 1.46 mgd with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the City's IWRMP.

Wastewater Collection System

The City's wastewater collection system consists of approximately 72 miles of gravity mains ranging from 6 to 36 inches, 21 miles of force mains ranging from 4 to 18 inches, and 12 pump stations. Approximately 63% of gravity mains are polyvinyl chloride pipes, which is the City's current standard pipe material. The remaining 37% of pipes are vitrified clay pipes that are in Historic Lathrop and Crossroad Business Park areas. The City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities. The City's wastewater collection system service area is generally contiguous with the city limits.

The City currently provides wastewater service to approximately 6,100 residential, commercial, industrial and institutional/governmental properties. However, there are areas within the city limits that are not served by the wastewater system. Many large facilities (e.g., Simplot, and former Carpenter Company facility) have historically self-managed their wastewater (West Yost Associates, 2018). Some of these areas have been planned to move to City service, as they are re-developed. Some residential homes and businesses in the central portion of Lathrop (e.g. Lathrop Industrial and South Lathrop) are served by a septic system.

LCTF and MWQCF have independent sewer sheds except at the 8-inch Mossdale Intertie. The Mossdale Intertie crosses beneath I-5 on River Islands Parkway and Louise Avenue. The Mossdale intertie is not routinely operated, but could potentially be utilized in the future to reroute a portion of flows from the Mossdale Pump Station to the MWQCF collection system.

Wastewater Treatment Facilities

Wastewater treatment facilities that serve the City include the MWQCF and the LCTF. These facilities are described below.

MANTECA WATER QUALITY CONTROL FACILITY

The City of Lathrop owns 14.7% of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's *Municipal Service Review and Sphere of Influence Plan*, and as listed in Table 3.14-1, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7% capacity or 3.97 mgd. Treatment at the MWQCF consists of primary

sedimentation followed by roughing biotowers, conventional activated sludge, secondary clarification, tertiary filtration, and ultraviolet disinfection. Disinfected tertiary effluent is discharged to the San Joaquin River. A portion of the secondary effluent is not disinfected and is used to irrigate medians and agricultural fields.

TABLE 3.14-1: FUTURE SEWER CAPACITY, MGD

YEAR	2016	2020	2025	2030	2035	2040	BUILDOUT 2050
<i>DEMAND</i>							
<i>MWQCF Projected ADWF</i>	1.08	1.23	1.36	1.37	1.38	1.39	1.47
<i>LCTF Projected ADWF</i>	0.61	1.33	2.18	3.03	3.67	4.30	5.61
ADWF Total	1.69	2.56	3.54	4.40	5.05	5.69	7.08
<i>TREATMENT CAPACITY</i>							
<i>MWQCF</i>	1.45	1.45	1.45	1.45	1.45	1.45	1.45
<i>MWQCF Improvements</i>	0	0	0	0	0	0	0
<i>LCTF</i>	0.75	0.75	0.75	0.75	0.75	0.75	0.75
<i>LCTF Phase I</i>	0.25 ^(a)	0.25	0.25	0.25	0.25	0.25	0.25
<i>LCTF Phase II</i>	Not Complete ^(b)	1.33 ^(b)	1.0	1.0	1.0	1.0	1.0
<i>LCTF Phase III</i>		Not Complete ^(c)	2.0	2.0	2.0	2.0	2.0
<i>LCTF Phase IV^(d)</i>					2.0	2.0	2.0
Treatment Total	2.45	3.78	5.45	5.45	7.45	7.45	7.45

SOURCE: CITY OF LATHROP GENERAL PLAN EIR, TABLE 3.15-6.

NOTES:

(A) COMPLETED IN 2017

(B) FACILITY IS SUBSTANTIALLY COMPLETED AS OF JUNE, 2018. FULL TREATMENT CAPACITY OF 1.5 MGD WILL BE AVAILABLE WHEN RIVER DISCHARGE BEGINS OPERATION IN LATE 2022, AS STORAGE AND DISPOSAL LIMITS WILL BE ELIMINATED, BUT WILL BE REDUCED TO 1.0 DUE TO HIGH BOD LOADING

(C) FACILITY IS UNDER DESIGN AND WILL BE AVAILABLE BY 2024

(D) LCTF PHASE IV IS EXPECTED TO BE AVAILABLE BY 2035

LATHROP CONSOLIDATED TREATMENT FACILITY

The LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF’s treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd.

Wastewater treatment and disposal at the LCTF is regulated under the California Regional Quality Control Board Central Valley Region Waste Discharge Requirements. LCTF applies the effluent to land rather than discharging to a water body, and is therefore not subject to the NPDES requirements. The wastewater treatment processes at the LCTF includes secondary treatment, tertiary infiltration, and disinfection prior to storage and disposal. The LCTF produces disinfected tertiary recycled water suitable for irrigation at parks, landscape strips, median islands, pond berms, and agricultural fields.

3.14 UTILITIES

Wastewater treatment processes at the LCTF include secondary treatment, tertiary filtration, disinfection, and reuse for irrigation of agricultural and landscape use areas. The following major components make up the LCTF:

- Raw wastewater undergoes screening and grit removal prior to entering the influent pump station. A 0.95 MG steel tank provides diurnal flow equalization and short-term emergency storage. Wastewater in the tank is automatically returned to the influent pump station as treatment capacity becomes available.
- From the influent pump station, wastewater is distributed evenly to two Membrane Bioreactor treatment trains for a combined treatment capacity of 1.0 mgd. Each Membrane Bioreactor train includes an anoxic basin, recirculation mixers, an aeration basin, anoxic pumps, aeration and membrane blowers, membrane modules, a membrane tank, mixed liquor recycle pumps, and filtrate pumps.
- Disinfection is accomplished using sodium hypochlorite solution in a chlorine contact tank that provides more than 32 minutes of modal contact time. If disinfection fails, the effluent is rerouted back to the emergency storage basin and retreated.
- Tertiary treated effluent is discharged into Pond S5 for immediate storage, and is then transferred to off-site storage in Ponds S1, S2, S3, S6, S16, and the Crossroads Wastewater Treatment Effluent Storage Ponds A, B, and C.
- Waste activated sludge generated from LCTF is pumped to the solids handling facility located at the adjacent Crossroads Wastewater Treatment Facility. The solids handling facility includes a 0.19 MG aerobic sludge storage tank, two belt filter presses, and a concrete drying bed used for supplemental air drying of dewatered sludge when conditions permit. Air-dried sludge is temporarily stored on the drying bed until transportation to the City of Merced for land application.
- The City's existing recycled water system is governed by State Discharge Requirements outlined in Order R5-2018-0023 and supports the disposal of the effluent produced by the LCTF at eight agricultural land application areas (LAAs): A23, A28, A30, A31, A35, A35b, A35c, and A36. The distribution system consists of nine storage ponds; S1, S2, S3, S5, S6, S16, S-28, A, B, and C, their associated pump stations PMP1, PMP2, PMP3, PMP10, PMP12, and the Crossroads PMP. The City has approximately 30.3 miles of recycled water pipeline, as of 2018.

The RWQCB approved a San Joaquin River Discharge NPDES in 2020 and expires 31 March 2025. The City is constructing the required modifications to the LCTF to add required de-chlorination facilities and have awarded a contract to construct an outfall pipeline from the LCTF to the San Joaquin River. Developer Funding Agreements for the NPDES facilities will, upon operation of the NPDES facilities in late 2022, return storage ponds and spray fields to the developers who funded the NPDES project, except for Ponds S5, S6, A, B and C located at the LCTF plus Pond S16 on Stewart Tract which will all be retained as part of the permanent recycled water system.

Demands

The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. From 2009 to 2016, total per capita average dry weather flow (ADWF) varied between 60 and 69 gallons of wastewater per capita per day. It is anticipated that the City's total ADWF in 2040 will be 5.69 mgd, and increase to 7.07 mgd at buildout in 2050. Of this total, the MWQCF is projected to treat ADWFs of 1.39 mgd from Historic Lathrop in 2040 and 1.47 mgd at buildout. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

Major Wastewater System Issues and Opportunities

The City's collection system is primarily assessed against the capacity criteria, including depth to diameter (d/D) ratio in gravity mains and maximum velocity in force mains. Approximately seven% of City's existing gravity mains will not meet the capacity criteria by 2040. Approximately 43% of the City's existing gravity mains do not meet the minimum velocity and slope criteria which does not trigger an improvement unless capacity criteria are not met beyond 2040 (West Yost Associates, 2018).

The LCTF with Phase II expansion is projected to have sufficient treatment capacity for existing and new development through 2026. The City's current capacity allocation at MWQCF is projected to be sufficient to meet projected flows from Historic Lathrop through 2040 with additional capacity needed by buildout. The gravity collection system in the Mossdale Landing will not be able to accommodate the anticipated peak wastewater flow from River Islands and Central Lathrop areas by 2025. Correspondingly, an upgrade to the Central Lathrop Pump Station will be required before 2025. The River Islands Permanent Pump Station and improvements to the Woodfield Lift Station became operational in 2022. Deficiencies at the Stonebridge Lift Station are noted in multiple buildout scenarios (West Yost Associates, 2018).

REGULATORY SETTING - WASTEWATER

Federal

CLEAN WATER ACT (CWA) / NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMITS

The CWA is the cornerstone of water quality protection in the United States. The statute employs a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

The CWA regulates discharges from "non-point source" and traditional "point source" facilities, such as municipal sewage plants and industrial facilities. Section 402 of the Act creates the NPDES

regulatory program which makes it illegal to discharge pollutants from a point source to the waters of the United States without a permit. Point sources must obtain a discharge permit from the proper authority (usually a state, sometimes EPA, a tribe, or a territory). NPDES permits cover industrial and municipal discharges, discharges from storm sewer systems in larger cities, stormwater associated with numerous kinds of industrial activity, runoff from construction sites disturbing more than one acre, mining operations, and animal feedlots and aquaculture facilities above certain thresholds.

Permit requirements for treatment are expressed as end-of-pipe conditions. This set of numbers reflects levels of three key parameters: (1) biochemical oxygen demand (BOD), (2) total suspended solids (TSS), and (3) pH acid/base balance. These levels can be achieved by well-operated sewage plants employing "secondary" treatment. Primary treatment involves screening and settling, while secondary treatment uses biological treatment in the form of "activated sludge."

All so-called "indirect" dischargers are not required to obtain NPDES permits. An indirect discharger is one that sends its wastewater into a city sewer system, so it eventually goes to a sewage treatment plant. Although not regulated under NPDES, "indirect" discharges are covered by another CWA program called pretreatment. "Indirect" dischargers send their wastewater into a city sewer system, which carries it to the municipal sewage treatment plant, through which it passes before entering surface water.

State

STATE WATER RESOURCES CONTROL BOARD/REGIONAL WATER QUALITY CONTROL BOARD

In California, all wastewater treatment and disposal systems fall under the overall regulatory authority of the State Water Resources Control Board (SWRCB) and the nine California Regional Water Quality Control Boards (RWQCBs), who are charged with the responsibility of protecting beneficial uses of State waters (ground and surface) from a variety of waste discharges, including wastewater from individual and municipal systems. The City of Lathrop falls within the jurisdiction of the Central Valley Regional Water Quality Control Board.

The RWQCB's regulatory role often involves the formation and implementation of basic water protection policies. These are reflected in the individual RWQCB's Basin Plan, generally in the form of guidelines, criteria and/or prohibitions related to the siting, design, construction, and maintenance of on-site sewage disposal systems. The RWQCB's role has historically been one of providing overall direction, organizational and technical assistance, and a communications link to the State legislature.

The RWQCBs may waive or delegate regulatory authority for on-site sewage disposal systems to counties, cities or special districts. Although not mandatory, it is commonly done and has proven to be administratively efficient. In some cases, this is accomplished through a Memorandum of Understanding (MOU), whereby the local agency commits to enforcing the Basin Plan requirements or other specified standards that may be more restrictive. The RWQCBs generally

elect to retain permitting authority over large and/or commercial or industrial on-site sewage disposal systems, depending on the volume and character of the wastewater.

PORTER-COLOGNE WATER QUALITY CONTROL ACT

The Porter-Cologne Water Quality Control Act is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State is required to adopt policies, plans, and objectives that will protect the State's waters for the use by and enjoyment of Californians. In California, the State Water Resources Control Board (SWRCB) has the authority and responsibility for establishing policy related to the State's water quality. Regional authority is delegated by the SWRCB to a Regional Water Quality Control Board (RWQCB). The Porter-Cologne Act authorizes the SWRCB and RWQCB to issue NPDES permits.

Under the Central Valley Regional Water Quality Control Board (CVRWQCB) NPDES permit system, all existing and future municipal and industrial discharges to surface water within the city would be subject to regulation. NPDES permits are required for operators of municipal separate storm sewer systems, construction projects, and industrial facilities. These permits contain limits on the amount of pollutants that can be contained in each facility's discharge

Local

CITY OF LATHROP SEWER SYSTEM MANAGEMENT PLAN

The City of Lathrop Sewer System Management Plan (SSMP) was prepared in compliance with the requirements contained in the SWRCB General Order No. 2006-003-DWQ. An SSMP is a document that describes the activities the City of Lathrop uses to manage its wastewater collection system effectively. Effective management of a wastewater collection system includes: (1) Maintaining or improving the condition of the collection system infrastructure in order to provide reliable service into the future; (2) Cost-effectively minimizing infiltration/inflow (I/I) and providing adequate sewer capacity to accommodate design storm flows; and (3) minimizing the number of sanitary sewer overflows that occur. The Lathrop SSMP was originally adopted in July 2009 and was updated in 2013, 2016, and 2018.

CITY OF LATHROP WATER SYSTEM MASTER PLAN

Updates to the City's Water, Wastewater and Recycled Water Master Plans are needed for compliance with legislation, to condition development and ensure public health and safety through effective planning and management of the City's water, wastewater and recycled water systems. Collectively, these documents are referred to as the IWRMP. The IWRMP is used to plan future capital improvement projects and serves as the basis for regulatory compliance documents. The IWRMP serves as the planning document used to provide water infrastructure needed for the City to develop to its General Plan, and for the environmental determination to meet California Environmental Quality Act Requirements.

3.14 UTILITIES

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating wastewater within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 13.26 provides the City's sewer and industrial wastewater regulations. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure.

CITY OF LATHROP GENERAL PLAN

Policies: Public Facilities and Services

- PFS-3.1 Wastewater Infrastructure. Ensure adequate wastewater collection and treatment infrastructure to serve existing and future development.
- PFS-3.5 Development Review. Review new development applications in order to ensure that new growth does not exceed the availability of adequate sewage treatment capacity or predate the presence of necessary infrastructure.
- PFS-3.6 Fair Share Cost. Ensure that all new developments provide for and fund their fair share of the costs for adequate sewer collection, treatment, and disposal, including line extensions, easements, and dedications.
- PFS-3.7 Reduced System Demand. Reduce wastewater system demand by encouraging water conserving designs and equipment, encouraging water-conserving devices, and designing wastewater systems to minimize inflow and infiltration.

UTILITY MASTER PLANS

The City of Lathrop maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2020 Urban Water Management Plan (2021)*, *Recycled Water System Master Plan (2018)*, *Water System Master Plan (2018)*, *Storm Drain Master Plan (1992)*, and *Wastewater System Master Plan (2018)*.

THRESHOLDS OF SIGNIFICANCE

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

- Require or result in the relocation or construction of new or expanded wastewater facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the projects projected demand in addition to the providers existing commitments.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-1: The proposed Project would not require or result in the construction of new wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Less than Significant)

The wastewater collection and conveyance system that will serve the proposed Project will consist of engineered infrastructure consistent with the City's existing infrastructure requirements. Sewer would be extended from the Project site from the intersection of Harlan Road and Roth Road east of I-5. The sewer lines would need to be extended west under the overpass along Roth Road to the Project site. The sanitary sewer line would be constructed within the existing ROW and no additional off-site ROW would be required for Project implementation.

New wastewater collection and conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. Utility lines within the Project site and adjacent roadways would be extended throughout the Project site. The applicant will refine the wastewater collection/conveyance infrastructure design through the development of improvements plan which will undergo a review by the Public Works Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains if needed. Ultimately, the sanitary sewer collection system will be an underground collection system installed as per the City of Lathrop standards and specifications.

As noted previously, the LCTF treats the wastewater generated west of I-5 and in the Crossroads, Gateway and South Lathrop development areas. In 2016, the City generated a total average annual flow of 1.46 mgd with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the City's IWRMP. As discussed in Impact 3.14-2, the LCTF has the capacity to treat and dispose of the proposed 0.012 mgd increase in flows from the Project.

The installation of the wastewater improvements will be within the footprint of the Project site. The impacts associated with development of the Project site have been analyzed throughout this EIR. For some environmental topics it was determined that the Project would have a less than significant impact, while in other cases it was determined that development would have a significant and unavoidable impact (i.e., impacts on scenic vistas). However, because the wastewater infrastructure would be underground, the construction of these wastewater facilities would not result in a significant to scenic vistas. Therefore, installation of the wastewater distribution system infrastructure to serve the proposed Project would have a *less than significant* impact.

Impact 3.14-2: The proposed Project does not have the potential to result in a determination by the wastewater treatment and/or collection provider which serves the Project that the provider does not have adequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. (Less than Significant)

The proposed Project would require wastewater collection and treatment services. The provision of the wastewater collection services would be provided by the City of Lathrop wastewater system. As noted previously, the LCTF treats the wastewater generated west of I-5 and in the Crossroads, Gateway and South Lathrop development areas. The Project site is located west of I-5 and would, thus, be served by the LCTF.

PROJECT WASTEWATER GENERATION

According to the City's Wastewater System Management Plan, the estimated wastewater generation factor for commercial projects is 590 gallons per day per acre (City of Lathrop, 2018). Therefore, given that the proposed Project would develop approximately 19.63 acres, the estimated wastewater generation for the proposed Project would be approximately 11,581.7 gallons of wastewater per day (0.012 mgd).

The proposed Project would include a sewer line extension to the Project site. Sewer would be extended from the Project site from the intersection of Harlan Road and Roth Road east of I-5. The sewer lines would need to be extended west under the overpass along Roth Road to the Project site. The sanitary sewer line would be constructed within the existing ROW and no additional off-site ROW would be required for Project implementation.

The proposed Project would increase the amount of wastewater requiring treatment. The wastewater would be treated at the LCTF. Occupancy of the proposed Project would be prohibited without sewer allocation. As noted previously, the LCTF is City-owned but operated by a private contractor, Veolia Water NA. The LCTF's treatment capacity was expanded to 2.5 mgd, with the completion of recent recycled water disposal facilities. However, capacity is currently limited to 1.55 mgd by off-site recycled water storage and disposal capacity. The LCTF is planned to be expanded to a future permitted capacity of 6.0 mgd. The Central Valley Regional Water Quality Control Board and the IWRMP guide the long-term strategy for meeting future discharge and capacity requirements. It is anticipated that the City's total ADWF in 2040 will be 5.69 mgd, and increase to 7.07 mgd at buildout in 2050. Areas served by the LCTF have larger increases in planned development and are projected to treat ADWFs of 4.30 mgd in 2040 and 5.61 mgd at buildout.

The LCTF has the capacity to treat and dispose of the proposed 0.012 mgd increase in flows from the Project. Implementation of the proposed Project would have a ***less than significant*** impact relative to this topic.

3.14.2 WATER SUPPLIES

KEY TERMS

Acre feet: The volume of one acre of water to a depth of one foot. Each acre-foot of water is equal to approximately 325,851.4 gallons.

BGS: Below ground surface.

GPD: Gallons per day.

GPM: Gallons per minute.

Groundwater: Water that is underground and below the water table, as opposed to surface water, which flows across the ground surface. Water beneath the earth's surface fills the spaces in soil, gravel, or rock formations. Pockets of groundwater are often called "aquifers" and are the source of drinking water for a large percentage of the population in the United States. Groundwater is often extracted using wells which pump the water out of the ground and up to the surface. Groundwater is naturally replenished by surface water from precipitation, streams, and rivers when this recharge reaches the water table.

MG: Million gallons

MGD: Million gallons per day

Surface water: Water collected on the ground or from a stream, river, lake, wetland, or ocean. Surface water is replenished naturally through precipitation, but is lost naturally through evaporation and seepage into soil.

ENVIRONMENTAL SETTING

The City of Lathrop provides water service to 6,308 residential, commercial, agricultural and industrial service connections from surface and groundwater supplies. In addition, private wells are utilized by two major industrial facilities within the City. The City's surface water supply is delivered fully treated from the Stanislaus River by the South County Water Supply Project (SCWSP). The SCWSP is owned and operated by the South San Joaquin Irrigation District (SSJID).

In addition to surface water, five groundwater wells supply water to City residents, with a sixth that is currently not in operation. Groundwater from Wells 6, 7, 8, 9 and 10 are treated to state and federal drinking water standards at the Louise Avenue Water Treatment Facility (LAWTF).

The City's potable water system service area reflects the City limits with the inclusion of select industrial areas.

City of Lathrop Water Service

This section presents the City's water service area and current and projected population.

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CITY OF LATHROP WATER SERVICE AREA

The City currently provides water service to approximately 7,934 residential, commercial, industrial institutional/governmental, irrigation, agricultural, and other/construction service connections, of which approximately 196 services are dedicated for irrigation uses. The City also provides service to an agriculture customer in the Lathrop Gateway area who will be replaced by development at Lathrop Gateway. All of the City's water services are metered.

City of Lathrop Water Demand

The following topics are covered in this section:

- Existing and projected water demand; and
- Dry year water demand.

EXISTING AND PROJECTED WATER DEMAND

The City's 2020 UWMP describes the projected City water demand through 2045. Over the period of 2016 through 2020, single-family residential water use comprised approximately half of all water use in the City (48%), while multi-family water use only comprised a small portion (2%). Industrial and irrigation sectors comprised 22% and 16% of the City's water demands, respectively. Water use in the commercial (4%) and institutional/governmental (2%), agricultural (3%), and other/construction (3%) sectors was relatively minor compared to total water use. The relative percentages of the total potable water demand represented by the residential, commercial, institutional/governmental, and irrigational sectors remained relatively constant over the period 2016 through 2020. The relative percentage of the industrial sector increased from 19% in 2016 to 26% in 2019 then decreased to 21% in 2020. The relative percentage of the other/construction sector increased from 1% in 2016 to 3% in 2018 and then was stable since then. The average non-revenue water over this period was approximately 4.5%.

The existing and projected 2045 water demand for the City in 5-year increments through 2045, based on the City's 2020 UWMP, is shown in Table 3.14-2.

TABLE 3.14-2: CITY OF LATHROP EXISTING AND PROJECTED TOTAL POTABLE AND NON-POTABLE WATER DEMAND

USE TYPE	2025	2030	2035	2040	2045 (BUILDOUT)
Single Family	3,807	4,810	5,498	6,186	7,987
Multi-Family	172	383	594	805	839
Commercial	593	734	859	1,048	1,152
Industrial	1,854	1,854	1,854	2,101	2,197
Institutional/Governmental	445	464	463	471	563
Landscape (Irrigation)	196	224	242	288	401
Losses ^(A)	615	688	743	817	934
TOTAL	7,682	9,148	10,253	11,716	14,074

NOTES:

(A) LOSSES REPRESENT ALL NON-REVENUE WATER, WHICH INCLUDES APPARENT LOSS, REAL LOSS, AND UNBILLED AUTHORIZED CONSUMPTION.

(B) LATHROP'S SINGLE AGRICULTURAL CUSTOMER WILL BE REPLACED BY DEVELOPMENT AT LATHROP GATEWAY AND THUS THE CITY WILL NOT HAVE ANY AGRICULTURAL CUSTOMER.

(C) DATA PRESENT HEREIN FOR 2045 REFLECTS CONDITIONS AT BUILDOUT FOR PLANNING PURPOSES. HOWEVER, THE CITY DOES NOT ANTICIPATE ALL BUILDOUT DEVELOPMENT TO OCCUR BEFORE 2045.

(D) VOLUMES ARE IN UNITS OF AF.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 4-5.

DRY YEAR WATER DEMAND

The City has a Water Shortage Contingency Plan (WSCP) included in Chapter 8 of the 2020 UWMP. The WSCP serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level stages. The primary objective of the WSCP is to ensure that the City has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. Consistent with California Water Code (CWC) §10632, the WSCP includes six levels to address shortage conditions ranging from up to 10% to greater than 50% shortage, identifies a suite of demand mitigation measures for the City to implement at each level, and identifies procedures for the City to annually assess whether or not a water shortage is likely to occur in the coming year, among other things. A summary of the key elements of the WSCP including water shortage levels and demand-reduction actions is shown in Table 3.14-3.

TABLE 3.14-3: WATER SHORTAGE CONTINGENCY PLAN

SHORTAGE LEVEL AND	% SHORTAGE RANGE	SHORTAGE RESPONSE ACTIONS
1	Up to 10%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City may reduce water use by up to 10% due to water supply shortages or emergency. • Includes implementation of voluntary restrictions on end uses as well as agency actions.
2	Up to 20%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City must reduce water use by greater than 10% up to 20% due to water supply shortages or emergency. • Includes implementation of mandatory restrictions on end uses as well as agency actions.
3	Up to 30%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City must reduce water use by greater than 20% up to 30% due to water supply shortages or emergency. • Includes implementation of mandatory restrictions on end uses as well as agency actions.

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SHORTAGE LEVEL AND	% SHORTAGE RANGE	SHORTAGE RESPONSE ACTIONS
4	Up to 40%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City must reduce water use by greater than 30% up to 40% due to water supply shortages or emergency. • Includes implementation of mandatory restrictions on end uses as well as agency actions.
5	Up to 50%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City must reduce water use by greater than 40% up to 50% due to water supply shortages or emergency. • Includes implementation of mandatory restrictions on end uses as well as agency actions.
6	> 50%	<ul style="list-style-type: none"> • Declaration by the City Council upon the determination that one or more of the trigger mechanisms exist per LMC Sections 13.08.140 and 13.08.150 and that the City must reduce water use by greater than 50% due to water supply shortages or emergency. • Includes implementation of mandatory restrictions on end uses as well as agency actions.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 8-1.

City of Lathrop Water Supply

The City of Lathrop obtains water from both imported surface water and local groundwater sources. The City receives water system supplies from the Stanislaus River water through the SCWSP that is operated by the SSJID. As noted previously, the City also owns and operates five active groundwater production wells. Due to the relatively high cost of SCWSP water, the City has historically relied upon its groundwater wells as the primary source of supply.

Over the period 2016 through 2020, the City's annual potable water production ranged from 3,646 acre-feet (AF) in 2016 to 5,485 AF in 2020. Surface water production (i.e., SCWSP purchases) has steadily increased from 300 AF in 2016 to 3,429 AF in 2020. Groundwater production has varied from as low as 1,560 AF in 2019 to as high as 3,346 AF in 2016. During this period, the City temporarily reduced its groundwater production as a percentage of total supplies from 92% in 2016 to 37% in 2020 due to groundwater quality concerns. The City has resumed most of its historic groundwater production in 2021.

The water supplies needed to serve the Project (together with existing water demands and planned future uses) are described in the City's 2020 UWMP. Therefore, the summary description of the City's water supplies, provided below, have been taken for the most part, from the City's 2020 UWMP, which was adopted in June 2021.

WATER SUPPLY SUMMARY

The City's water supplies are documented in the 2020 UWMP and the SSJID 2020 UWMP and are summarized below. However, reliability projections presented in the SSJID 2020 UWMP do not take into consideration the impacts of the Water Quality Control Plan for the San Francisco

Bay/Sacramento-San Joaquin Delta Estuary (“Bay-Delta Plan”). If implemented, the Bay-Delta Plan would have significant impacts on the minimum projected supply amounts available for SSJID to distribute. The Bay-Delta Plan remains uncertain due to pending litigation and based on these uncertainties SSJID has opted to make no near-term planning assumptions and should conditions change, a revision to the 2020 SSJID UWMP would impact this water supply analysis.

The City’s total potable and raw water supply is shown in Table 3.15-4, below.

TABLE 3.15-4: SUMMARY OF POTABLE AND RAW WATER SUPPLY DURING HYDROLOGIC NORMAL, SINGLE-DRY AND MULTIPLE-DRY YEARS^(a)

<i>HYDROLOGIC CONDITION</i>	<i>POTABLE AND RAW WATER SUPPLY AT BUILDOUT OF THE GENERAL PLAN AREA, AFY</i>
Normal Year	15,391
Single Dry Year	13,759
Multiple Dry Year 1	15,391
Multiple Dry Year 2	15,391
Multiple Dry Year 3	13,759
Multiple Dry Year 4	13,759
Multiple Dry Year 5	15,391

SOURCE: CITY OF LATHROP GENERAL PLAN UPDATE DRAFT EIR, TABLE 3.15-4.

PURCHASED OR IMPORTED WATER

The City purchases imported surface water from SSJID through the SCWSP, which supplies Stanislaus River water. Information related to the contractual entitlements and treatment processes for the surface water source is provided below.

South San Joaquin Irrigation District Water Supply. The SCWSP is a partnership between the City, SSJID, and the cities of Manteca, Tracy, and Escalon. The SCWSP water supply is based on SSJID’s senior, pre-1914 appropriative water rights to the Stanislaus River, a tributary of the San Joaquin River, coupled with a 1988 agreement with the United States Bureau of Reclamation (USBR) to store water in the New Melones Reservoir.

The SCWSP was planned to be implemented in two phases. Phase 1 was completed in 2005 and consists of an intake facility at Woodward Reservoir, the Nick C. DeGroot Water Treatment Plant (DGWTP), and about 35 miles of pipe ending in the City of Tracy. The DGWTP is located near Woodward Reservoir in San Joaquin County, and the treatment process at the facility includes pre-chlorination, coagulation, dissolved air flotation pretreatment for removal of solids and dissolved material, chemical stabilization to minimize internal pipe corrosion, membrane filtration, and chlorination for disinfection. Phase II will increase the treatment capacity of the DGWTP. For purposes of this UWMP, implementation of Phase II is anticipated before 2040 consistent with information provided by SSJID. The total Phase I capacity of the SCWSP is approximately 31,500 acre-feet per year (AFY). Phase II is anticipated to increase the treatment capacity of the DGWTP to approximately 43,090 AFY.

Each of the four participating cities has an agreement with SSJID to receive treated water through December 2049. If SSJID and the cities do not agree to extend the contract past 2049, then the District agrees to transfer the project to a Joint Powers Authority composed of the four cities, which would then be responsible for operation and maintenance of the SCWSP.

South San Joaquin Irrigation District Water Right. The 1995 Water Supply Development Agreement between the City and SSJID provided the City with a Phase I allocation of 8,007 AFY and a total allocation of 11,791 AFY after completion of Phase II. In August 2013, the City sold 1,120 AFY of SCWSP water to the City of Tracy. Therefore, the City's remaining SSJID allocation is 6,887 AFY for Phase I and a total of 10,671 AFY after completion of Phase II.

GROUNDWATER

The City's purchase of SSJID water is supplemented by local groundwater supply wells. As discussed earlier, the City has temporarily reduced its groundwater production in recent years due to groundwater quality concerns. Approximately 37% of the City's water supply is from local groundwater supply wells in 2020. The following section includes information regarding the basin description, groundwater management, and the City's role as one of the six Groundwater Sustainability Agencies (GSAs) in the Groundwater Sustainability Plan (GSP) development process, followed by a discussion of groundwater production.

Basin Description. The City overlies the Tracy Subbasin (Department of Water Resources [DWR] 5-22.15) of the San Joaquin Valley Groundwater Basin (DWR 5-22). The Tracy Subbasin is not adjudicated, and it is not in a condition of critical overdraft.

The Tracy Subbasin is designated as a medium priority basin under DWR's 2019 Phase 2 Basin Prioritization. Under this prioritization process, basins are ranked on eight components, and if a basin is assigned between 15 and 21 total points, it is defined as "medium priority." The main factors driving the Tracy Subbasin's designation include population growth (5 out of 5 possible points), irrigated acres (5 out of 5 possible points), number of public supply wells (3 out of 5 possible points), number of total wells (3 out of 5 possible points), and documented impacts including water quality (3 out of 5 possible points).

As a DWR-designated medium priority basin, the Tracy Groundwater Subbasin is subject to the requirements of the Sustainable Groundwater Management Act (SGMA), including the requirement to be covered by one or more GSAs and to prepare and submit to DWR one or more GSPs by 31 January 2022.

Groundwater Supply Wells. The City currently operates the following municipal groundwater supply wells Wells 6, 7, 8, 9, and 10. Well 9 is currently offline and may be used in the future as an emergency well. Groundwater from Wells 6, 7, 8, 9 (when operating), and 10 is treated to remove arsenic at the LAWTF, which came online in 2012.

The City owns an additional well located on the southeast side of the water system, Well 21, which includes a treatment facility (Well 21 WTF) designed for disinfection and manganese treatment. The City last operated Well 21 between January 2012 and November 2013. Well 21 has remained

inactive since November 2013 due to sanding in the well and elevated levels of arsenic and uranium. The City does not currently plan to bring it back online due to poor water quality.

Information regarding the City’s groundwater production wells are summarized in Table 3.14-5. The combined maximum pumping capacity of the City’s wells, excluding Wells 9 and 21, is 5,850 gpm, which is lower than the treatment capacity of the LAWTF (6,250 gpm). The City’s current annual groundwater supply capacity is equivalent to approximately 4,720 AFY.

TABLE 3.14-5: HISTORICAL AND PROJECTED POPULATION FOR CITY OF LATHROP

GROUNDWATER WELLS	EXISTING MAXIMUM PUMPING CAPACITY	
	MEASURED FLOW RATE (GPM)	ESTIMATED ANNUAL YIELD ^(A) (AFY)
Well 6	1,650	1,330
Well 7	1,400	1,130
Well 8	1,100	890
Well 10	1,700	1,370
Subtotal	5,850	4,720
LAWTF Treatment Capacity^(b)	6,250	5,040
Well Capacity	5,850	4,720

NOTES: (A) ASSUMES WELLS ARE OPERATED AT 50% MAXIMUM CAPACITY ON AN ANNUAL BASIS.

(B) MAXIMUM CAPACITY OF LAWTF IS 6,250 GPM. ESTIMATED ANNUAL YIELD ASSUMES THAT ANNUAL YIELD OF WELLS 6, 7, 8, AND 10 IS NOT LIMITED BY LAWTF CAPACITY ON AN ANNUAL BASIS.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 6-1.

Historical Groundwater Use. Groundwater production over the period of 2016 through 2020 is presented in Table 3.14-6. During this period, groundwater production varied from 1,560 AF in 2019 to 3,346 AF in 2016, with an average production of 2,563 AFY. The City temporarily reduced groundwater production between 2018 and 2020 to prevent a contaminant plume originating from the former Occidental Chemical Corporation (OCC) from impacting the City’s groundwater supply. The City shut off Wells 9 and 10 in August 2018 and Wells 6, 7, and 8 in January 2019. The City has exclusively served surface water from SSIJD for the majority of 2019. Efforts to improve the OCC groundwater extraction and treatment system were completed in March 2020. The City then restarted Wells 6, 7, 8, and 10 and the LAWTF in late April 2020, while Well 9 has remained offline due to water quality issues.

TABLE 3.14-6: GROUNDWATER VOLUME PUMPED

GROUNDWATER TYPE	BASIN NAME	2016	2017	2018	2019	2020
Alluvial Basin	Tracy Subbasin of the San Joaquin Valley Groundwater Basin	3,346	3,247	2,605	1,560	2,055
	Total	3,346	3,247	2,605	1,560	2,055

NOTE: (A) VOLUMES ARE IN UNITS OF AF.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 6-2.

Projected Future Groundwater Use. The City plans to utilize its existing groundwater wells to supply water in the future. The City’s current estimated annual groundwater yield is 4,720 AFY. The City currently has no plans to install additional groundwater wells or expand its groundwater production. However, the City is evaluation options to bring Well 9 back online and is considering

3.14 UTILITIES

groundwater-related projects that could provide additional dry year supply reliability such as expansion of groundwater treatment, groundwater-surface water conjunctive use, and/or aquifer storage and recovery (ASR).

The City's ability to utilize its existing groundwater wells within the Tracy Subbasin is not likely be affected by SGMA20. It is anticipated that the future GSP will not require the City to limit groundwater production to maintain a sustainable groundwater budget. Based on the available information, it is anticipated that 100% the City's current estimated groundwater yield is available for the planning horizon of this Plan.

SURFACE WATER

The City purchases surface water from SSIJD as its primary water supply. However, Reclamation District (RD) 2062 has constructed an irrigation system which can utilize a combination of non-potable supplies, such as recycled water, stormwater, and San Joaquin river water, to supply non-potable demands in the River Islands area. The system currently serves San Joaquin river water to public irrigation areas and will be able to convey the City's recycled water when it becomes available.

Water Supply Availability and Reliability

The City's water supply reliability as described in the City's 2020 UWMP is summarized below.

WATER SERVICE RELIABILITY – NORMAL YEAR

As shown in Table 3.14-7, the City is projected to have sufficient supplies to meet projected demands in normal years through buildout.

TABLE 3.14-7: NORMAL YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-2)

	2025	2030	2035	2040	2045 (BUILDOUT)
Supply Totals	12,604	13,150	13,617	17,863	18,001
Demand Totals	8,679	10,691	12,263	14,188	16,684
<i>Difference</i>	3,925	2,459	1,354	3,675	1,317

NOTES: (A) VOLUMES ARE IN UNITS OF AF.

(B) DATA PRESENT HEREIN FOR 2045 REFLECTS CONDITIONS AT BUILDOUT FOR PLANNING PURPOSES. HOWEVER, THE CITY DOES NOT ANTICIPATE ALL BUILDOUT DEVELOPMENT TO OCCUR BEFORE 2045. ADDITIONAL WATER SUPPLIES MAY NEED TO BE DEVELOPED TO SUPPORT BUILDOUT DEVELOPMENT.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 7-7.

WATER SERVICE RELIABILITY – SINGLE DRY YEAR

As shown in Table 3.14-8, the City is generally projected to have adequate supplies to meet projected demands in single dry years through 2040. The projected single dry year supply shortfall at buildout is 314 AFY or 2%.

TABLE 3.14-8: SINGLE DRY YEAR SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-3)

	2025	2030	2035	2040	2045 (BUILDOUT)
Supply Totals	11,495	12,591	13,606	15,609	16,370
Demand Totals	8,679	10,691	12,263	14,188	16,684
<i>Difference</i>	2,816	1,900	1,344	1,421	(314)

NOTES: (A) VOLUMES ARE IN UNITS OF AF.

(B) DATA PRESENT HEREIN FOR 2045 REFLECTS CONDITIONS AT BUILDOUT FOR PLANNING PURPOSES. HOWEVER, THE CITY DOES NOT ANTICIPATE ALL BUILDOUT DEVELOPMENT TO OCCUR BEFORE 2045. ADDITIONAL WATER SUPPLIES MAY NEED TO BE DEVELOPED TO SUPPORT BUILDOUT DEVELOPMENT.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 7-8.

WATER SERVICE RELIABILITY – FIVE CONSECUTIVE DRY YEARS

As shown in Table 3.14-9, the City is projected to have adequate supplies to meet projected demands in multiple dry years through 2040. Adequate supplies are anticipated to be available to meet project demands during the first, second and fifth year of drought at buildout. During the third and fourth year at buildout, the City’s total water demand is estimated to exceed total supply by 314 AFY (2%).

TABLE 3.14-9: MULTIPLE DRY YEARS SUPPLY AND DEMAND COMPARISON (DWR TABLE 7-4)

		2025	2030	2035	2040	2045 (BUILDOUT)
First Year	Supply Totals	12,604	13,150	13,617	17,863	18,001
	Demand Totals	8,679	10,691	12,263	14,188	16,684
	<i>Difference</i>	3,925	2,459	1,354	3,675	1,317
Second Year	Supply Totals	12,604	13,150	13,617	17,863	18,001
	Demand Totals	8,679	10,691	12,263	14,188	16,684
	<i>Difference</i>	3,925	2,459	1,354	3,675	1,317
Third Year	Supply Totals	11,495	12,591	13,606	15,609	16,370
	Demand Totals	8,679	10,691	12,263	14,188	16,684
	<i>Difference</i>	2,816	1,900	1,344	1,421	(314)
Fourth Year	Supply Totals	11,495	12,591	13,606	15,609	16,370
	Demand Totals	8,679	10,691	12,263	14,188	16,684
	<i>Difference</i>	2,816	1,900	1,344	15,609	(314)
Fifth Year	Supply Totals	12,604	13,150	13,617	17,863	18,001
	Demand Totals	8,679	10,691	12,263	14,188	16,684
	<i>Difference</i>	3,925	2,459	1,354	3,675	1,317

NOTES: (A) VOLUMES ARE IN UNITS OF AF.

(B) DATA PRESENT HEREIN FOR 2045 REFLECTS CONDITIONS AT BUILDOUT FOR PLANNING PURPOSES. HOWEVER, THE CITY DOES NOT ANTICIPATE ALL BUILDOUT DEVELOPMENT TO OCCUR BEFORE 2045. ADDITIONAL WATER SUPPLIES MAY NEED TO BE DEVELOPED TO SUPPORT BUILDOUT DEVELOPMENT.

SOURCE: CITY OF LATHROP 2020 UWMP, TABLE 7-9.

REGULATORY SETTING – WATER SUPPLIES

State

CALIFORNIA DEPARTMENT OF HEALTH SERVICES

The Department of Health Services, Division of Drinking Water and Environmental Management, oversees the Drinking Water Program. The Drinking Water Program regulates public water systems and certifies drinking water treatment and distribution operators. It provides support for small water systems and for improving their technical, managerial, and financial capacity. It provides subsidized funding for water system improvements under the State Revolving Fund (“SRF”) and Proposition 50 programs. The Drinking Water Program also oversees water recycling projects, permits water treatment devices, supports and promotes water system security, and oversees the Drinking Water Treatment and Research Fund for MTBE and other oxygenates.

CALIFORNIA CODE OF REGULATIONS

California Code of Regulations (CCR) Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminants levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

CONSUMER CONFIDENCE REPORT REQUIREMENTS

CCR Title 22, Chapter 15, Article 20 requires all public water systems to prepare a Consumer Confidence Report for distribution to its customers and to the Department of Health Services. The Consumer Confidence Report provides information regarding the quality of potable water provided by the water system. It includes information on the sources of the water, any detected contaminants in the water, the maximum contaminant levels set by regulation, violations and actions taken to correct them, and opportunities for public participation in decisions that may affect the quality of the water provided.

URBAN WATER MANAGEMENT PLANNING ACT

The Urban Water Management Planning Act has as its objectives the management of urban water demands and the efficient use of urban water. Under its provisions, every urban water supplier is required to prepare and adopt an urban water management plan. An “urban water supplier” is a public or private water supplier that provides water for municipal purposes either directly or indirectly to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually. The plan must identify and quantify the existing and planned sources of water available to the supplier, quantify the projected water use for a period of 20 years, and describe the supplier’s water demand management measures. The urban water supplier should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its

various categories of customers during normal, dry, and multiple dry years. The Department of Water Resources must receive a copy of an adopted urban water management plan.

SENATE BILL (SB) 610 AND ASSEMBLY BILL (AB) 901

The State Legislature passed SB 610 and AB 901 in 2001. Both measures modified the Urban Water Management Planning Act.

SB 610 requires additional information in an urban water management plan if groundwater is identified as a source of water available to an urban water supplier. It also requires that the plan include a description of all water supply projects and programs that may be undertaken to meet total projected water use. SB 610 requires a city or county that determines a project is subject to CEQA to identify any public water system that may supply water to the project and to request identified public water systems to prepare a specified water supply assessment. The assessment must include, among other information, an identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for the proposed Project, and water received in prior years pursuant to these entitlements, rights, and contracts.

AB 901 requires an urban water management plan to include information, to the extent practicable, relating to the quality of existing sources of water available to an urban water supplier over given time periods. AB 901 also requires information on the manner in which water quality affects water management strategies and supply reliability. The bill requires a plan to describe plans to supplement a water source that may not be available at a consistent level of use, to the extent practicable. Additional findings and declarations relating to water quality are required.

SENATE BILL (SB) 221

SB 221 adds Government Code Section 66455.3, requiring that the local water agency be sent a copy of any proposed residential subdivision of more than 500 dwelling units within five days of the subdivision application being accepted as complete for processing by the city or county. It also adds Government Code Section 66473.7, establishing detailed requirements for establishing whether a “sufficient water supply” exists to support any proposed residential subdivisions of more than 500 dwellings, including any such subdivision involving a development agreement. When approving a qualifying subdivision tentative map, the city or county must include a condition requiring availability of a sufficient water supply. The applicable public water system must provide proof of availability. If there is no public water system, the city or county must undertake the analysis described in Government Code Section 66473.7. The analysis must include consideration of effects on other users of water and groundwater.

EXECUTIVE ORDER B-37-16

In May 2016, Governor Edmund G. Brown, Junior, signed Executive Order B-37-16 (Executive Order), Making Water Conservation a California Way of Life. The Executive Order directed DWR to work with the State Water Resources Control Board (State Water Board) to develop new water use targets as part of a permanent conservation framework for urban water agencies. The targets will build upon requirements established in the 2009 Water Conservation Act, but will strengthen

standards for indoor residential per capita water use, outdoor irrigation, commercial, industrial and institutional (CII) water use, and water lost through leaks. DWR will be establishing interim water use targets by 2018, with final standards to be published by 2021. Agencies will need to demonstrate progress towards achieving final compliance in 2025 (DWR, 2017).

Local

CITY OF LATHROP URBAN WATER MANAGEMENT PLAN

The City's 2020 Urban Water Management Plan (UWMP) is an individual UWMP that describes how the current and future water resources and demands within the City's service area will be managed to provide an adequate and reliable water supply. Additionally, the City's UWMP reflects the following significant revisions to the UWMP ACT that have been made since 2015. The UWMP has been prepared in general accordance with the format suggested in DWR's 2020 *Urban Water Management Plans Guidebook for Urban Water Suppliers*.

CITY OF LATHROP WATER SYSTEM MASTER PLAN

Updates to the City's Water, Wastewater and Recycled Water Master Plans are needed for compliance with legislation, to condition development and ensure public health and safety through effective planning and management of the City's water, wastewater and recycled water systems. Collectively, these documents are referred to as the Integrated Water Resources Master Plan (IWRMP). The IWRMP is used to plan future capital improvement projects and serves as the basis for regulatory compliance documents. The IWRMP serves as the planning document used to provide water infrastructure needed for the City to develop to its General Plan, and for the environmental determination to meet California Environmental Quality Act Requirements.

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating potable and non-potable water within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 12.22 provides for rules and restrictions on water play areas in city parks. Chapter 13.08 describes the City's water conservation and rationing provisions. Chapter 13.09 describes the City's water recycling policy. Chapter 13.12 describes the cross-connection controls of the City's water system. Chapter 13.16 provides restrictions on the location of the City's sewer and water pipes. Chapter 16.28 provides that developers of subdivisions shall provide adequate water supply and fire suppression improvements to the City's water system. Chapter 17.92 provides the City's Water Efficient Landscape Ordinance.

CITY OF LATHROP GENERAL PLAN

Policies: Public Facilities and Services

- PFS-2.1 Water System and Supply. Manage the water system to ensure that the water supply is adequate to meet the needs of existing and future development and is utilized in a sustainable manner.

- PFS-2.3 Coordination with the South San Joaquin Irrigation District. Coordinate with South San Joaquin Irrigation District (SSJID) when considering land use changes in order to assist the District in planning for adequate capacity to accommodate future growth.
- PFS-2.5 Development Review. Consider the effect of incremental increases in the demands on groundwater supply and water quality when reviewing development applications.
- PFS-2.6 Fair Share Cost. Ensure that all new development provides for and funds a fair share of the costs for adequate water source, distribution, including line extensions, easements, and water treatment plant expansions.

UTILITY MASTER PLANS

The City of Lathrop maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2020 Urban Water Management Plan (2021)*, *Recycled Water System Master Plan (2018)*, *Water System Master Plan (2018)*, *Storm Drain Master Plan (1992)*, and *Wastewater System Master Plan (2018)*.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects; and/or
- Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-3: The proposed Project would not require or result in the relocation or construction of new or expanded water facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

As discussed in Chapter 2.0, Project Description, water services for the proposed Project would be extended to the Project site from existing services from the intersection of Harlan Road and Roth Road east of I-5. The water lines would need to be extended west under the overpass along Roth Road to the Project site.

New water conveyance infrastructure needed for the proposed Project will require trenching/excavation of earth, and placement of pipe within the trenches at specific locations, elevations, and gradients. Utility lines within the Project site and adjacent roadways would be extended throughout the Project site. The applicant will refine the water conveyance infrastructure design through the development of improvements plan which will undergo a review by the Public Works Department to ensure consistency with the City's engineering standards. This improvement plan process will include full engineering design (i.e. location, depth, slope, etc.) of all conveyance infrastructure as well as a review of new sewer pump stations and new force mains

if needed. Ultimately, the water conveyance system will be an underground collection system installed as per the City of Lathrop standards and specifications.

The proposed Project is on a site that would be annexed by the City of Lathrop. This area is currently in the City of Lathrop Sphere of Influence. The proposed Project would not require any additional water infrastructure other than the extension of water services to the Project site from existing infrastructure located on Roth Road, located directly south of the Project site.

The installation of the improvements will be within the footprint of the Project site. The impacts associated with development of the Project site have been analyzed throughout this EIR. For some environmental topics it was determined that the Project would have a less than significant impact, while in other cases it was determined that development would have a significant and unavoidable impact (i.e., impacts on scenic vistas). However, because the water lines would be underground, the construction of these water facilities would not result in a significant to scenic vistas. Therefore, installation of the water distribution system infrastructure to serve the proposed Project would have a *less than significant* impact.

Impact 3.14-4: The proposed Project would not result in insufficient water supplies available to serve the Project from existing entitlements and resources. (Less than Significant)

Commercial water use factors are based on the City's 2020 UWMP. According to the 2020 UWMP, commercial land uses demand 860 gallons per day per acre. Therefore, given that the proposed Project would develop approximately 19.63 acres, the estimated water demand for the proposed Project would be approximately 16,881.8 gallons of water per day (or 18.9 AFY).

Water demands for the proposed Project will be served using the City's existing portfolio of water supplies.

As shown in Table 3.14-9, the City is projected to have adequate supplies to meet projected demands in multiple dry years through 2040. Adequate supplies are anticipated to be available to meet Project demands during the first, second and fifth year of drought at buildout. During the third and fourth year at buildout, the City's total water demand is estimated to exceed total supply by 314 AFY (2%). Therefore, the proposed Project would result in a *less than significant* impact to water supplies.

3.14.3 STORMWATER

ENVIRONMENTAL SETTING

City of Lathrop Storm Drainage System

The City of Lathrop's storm drainage collection system uses pipelines, surface channels and, in some locations, detention basins that store peak flows to direct drainage to the San Joaquin River. The City's documented existing storm drain infrastructure includes approximately 916 inlets, 691 manholes, 21 pump stations, 4 outfalls to the San Joaquin River, 13 detention basins, and 36 miles of storm drain.

The City references three documents to address water quality: the General Permit for Waste Discharge Requirements for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems Order No. 2013 0001 DWQ, the Multi Agency Post Construction Stormwater Standards Manual, and the City of Lathrop Department of Public Works Design and Construction Standards. The Best Management Practices required by these documents are intended to assure that outfall discharges meet Clean Water Act National Pollutant Discharge Elimination System (NPDES) requirements. New developments within the City are also required to mitigate stormwater discharge rate increases caused by development, as noted in the City of Lathrop Design and Construction Standards.

Existing Stormwater Drainage

The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), the foundation of a previously demolished abandoned structure, and impervious area. Currently, runoff from within the Project site is either maintained onsite, or collected in a system of agricultural ditches and roadside ditches. Public storm drain facilities are currently installed along Manthey Road.

REGULATORY SETTING - STORMWATER DRAINAGE

Federal

CLEAN WATER ACT (CWA)

The Clean Water Act (CWA) regulates the water quality of all discharges into waters of the United States including wetlands, perennial and intermittent stream channels. Section 401, Title 33, Section 1341 of the CWA sets forth water quality certification requirements for “any applicant applying for a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters.” Section 404, Title 33, Section 1344 of the CWA in part authorizes the U.S. Army Corps of Engineers to:

3.14 UTILITIES

- Set requirements and standards pertaining to such discharges: subparagraph (e); Issue permits “for the discharge of dredged or fill material into the navigable waters at specified disposal sites”: subparagraph (a);
- Specify the disposal sites for such permits: subparagraph (b);
- Deny or restrict the use of specified disposal sites if “the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies and fishery areas”: subparagraph (c);
- Specify type of and conditions for non-prohibited discharges: subparagraph (f);
- Provide for individual State or interstate compact administration of general permit programs: subparagraphs (g), (h), and (j);
- Withdraw approval of such State or interstate permit programs: subparagraph (i);
- Ensure public availability of permits and permit applications: subparagraph (o);
- Exempt certain Federal or State projects from regulation under this Section: subparagraph (r); and,
- Determine conditions and penalties for violation of permit conditions or limitations: subparagraph (s).
- Section 401 certification is required prior to final issuance of Section 404 permits from the U.S. Army Corps of Engineers.

The California State Water Resources Control Board and RWQCBs enforce State of California statutes that are equivalent to or more stringent than the Federal statutes. RWQCBs are responsible for establishing water quality standards and objectives that protect the beneficial uses of various waters including the San Joaquin River, and other waters in the Lathrop Planning Area. In the Lathrop Planning Area the RWQCB is responsible for protecting surface and groundwater from both point and non-point sources of pollution. Water quality objectives for all of the water bodies within the Lathrop Planning Area were established by the RWQCB and are listed in its Basin Plan.

FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

San Joaquin County is a participant in the National Flood Insurance Program (NFIP), a Federal program administered by FEMA. Participants in the NFIP must satisfy certain mandated floodplain management criteria. The National Flood Insurance Act of 1968 has adopted as a desired level of protection, an expectation that developments should be protected from floodwater damage of the Intermediate Regional Flood (IRF). The IRF is defined as a flood that has an average frequency of occurrence on the order of once in 100 years, although such a flood may occur in any given year. Communities are occasionally audited by the Department of Water Resources to insure the proper implementation of FEMA floodplain management regulations.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

National Pollutant Discharge Elimination System (NPDES) permits are required for discharges of pollutants to navigable waters of the United States, which includes any discharge to surface waters, including lakes, rivers, streams, bays, the ocean, dry stream beds, wetlands, and storm

sewers that are tributary to any surface water body. NPDES permits are issued under the Federal Clean Water Act, Title IV, Permits and Licenses, Section 402 (33 USC 466 et seq.)

The RWQCB issues these permits in lieu of direct issuance by the Environmental Protection Agency, subject to review and approval by the Environmental Protection Agency Regional Administrator. The terms of these NPDES permits implement pertinent provisions of the Federal Clean Water Act and the Act's implementing regulations, including pre-treatment, sludge management, effluent limitations for specific industries, and anti- degradation. In general, the discharge of pollutants is to be eliminated or reduced as much as practicable so as to achieve the Clean Water Act's goal of "fishable and swimmable" navigable (surface) waters. Technically, all NPDES permits issued by the RWQCB are also Waste Discharge Requirements issued under the authority of the CWA.

These NPDES permits regulate discharges from publicly owned treatment works, industrial discharges, stormwater runoff, dewatering operations, and groundwater cleanup discharges. NPDES permits are issued for five years or less, and are therefore to be updated regularly. The rapid and dramatic population and urban growth in the Central Valley Region has caused a significant increase in NPDES permit applications for new waste discharges. To expedite the permit issuance process, the SWRCB has adopted several general NPDES permits, each of which regulates numerous discharges of similar types of wastes. The SWRCB has issued general permits for stormwater runoff from industrial and construction sites statewide. Stormwater discharges from industrial and construction activities in the Central Valley Region can be covered under these general permits, which are administered jointly by the SWRCB and RWQCB.

A new Phase II Small Municipal Separate Storm Sewer (MS4) General Permit was adopted by the State Water Resources Control Board on April 17, 2015 became effective June 1, 2015. The Permit has numerous new components and the City is required to implement these components in stages over the five-year period of the Permit.

State

DEPARTMENT OF WATER RESOURCES

The Department of Water Resources' (DWR) major responsibilities include preparing and updating the California Water Plan to guide development and management of the State's water resources, planning, designing, constructing, operating, and maintaining the State Water Resources Development System, protecting and restoring the Sacramento-San Joaquin Delta, regulating dams, providing flood protection, assisting in emergency management to safeguard life and property, educating the public, and serving local water needs by providing technical assistance. In addition, the DWR cooperates with local agencies on water resources investigations; supports watershed and river restoration programs; encourages water conservation; explores conjunctive use of ground and surface water; facilitates voluntary water transfers; and, when needed, operates a State drought water bank.

CALIFORNIA WATER CODE

California's primary statute governing water quality and water pollution issues with respect to both surface waters and groundwater is the Porter-Cologne Water Quality Control Act of 1970 (Division 7 of the California Water Code) (Porter-Cologne Act). The Porter-Cologne Act grants the State Water Resource Control Board (SWRCB) and each of the RWQCBs power to protect water quality, and is the primary vehicle for implementation of California's responsibilities under the Federal Clean Water Act. The Porter-Cologne Act grants the SWRCB and the RWQCBs authority and responsibility to adopt plans and policies, to regulate discharges to surface and groundwater, to regulate waste disposal sites and to require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

Each RWQCB must formulate and adopt a water quality control plan (Basin Plan) for its region the regional plans are to conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State water policy. The Porter-Cologne Act also provides that a RWQCB may include within its regional plan water discharge prohibitions applicable to particular conditions, areas, or types of waste.

The Water Code Section 13260 requires all dischargers of waste that may affect water quality in waters of the state to prepare and provide a water quality discharge report to the RWQCB. Section 13260a-c is as follows:

(a) Each of the following persons shall file with the appropriate regional board a report of the discharge, containing the information that may be required by the regional board:

- (1) A person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state, other than into a community sewer system.
- (2) A person who is a citizen, domiciliary, or political agency or entity of this state discharging waste, or proposing to discharge waste, outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region.
- (3) A person operating, or proposing to construct, an injection well.

(b) No report of waste discharge need be filed pursuant to subdivision (a) if the requirement is waived pursuant to Section 13269.

(c) Each person subject to subdivision (a) shall file with the appropriate regional board a report of waste discharge relative to any material change or proposed change in the character, location, or volume of the discharge.

WATER QUALITY CONTROL PLAN (BASIN PLAN) FOR THE CENTRAL VALLEY REGION

The Water Quality Control Plan for the Central Valley Region (Basin Plan) includes a summary of beneficial water uses, water quality objectives needed to protect the identified beneficial uses, and implementation measures. The Basin Plan establishes water quality standards for all the ground and surface waters of the region. The term “water quality standards,” as used in the Federal Clean Water Act, includes both the beneficial uses of specific water bodies and the levels of quality that must be met and maintained to protect those uses. The Basin Plan includes an implementation plan describing the actions by the RWQCB and others that are necessary to achieve and maintain the water quality standards.

The RWQCB regulates waste discharges to minimize and control their effects on the quality of the region’s ground and surface water. Permits are issued under a number of programs and authorities. The terms and conditions of these discharge permits are enforced through a variety of technical, administrative, and legal means. Water quality problems in the region are listed in the Basin Plan, along with the causes, where they are known. For water bodies with quality below the levels necessary to allow all the beneficial uses of the water to be met, plans for improving water quality are included. The Basin Plan reflects, incorporates, and implements applicable portions of a number of national and statewide water quality plans and policies, including the California Water Code and the Clean Water Act.

STATE WATER RESOURCE CONTROL BOARD (STATE WATER BOARD) STORM WATER STRATEGY

The Storm Water Strategy is founded on the results of the Storm Water Strategic Initiative, which served to direct the State Water Board’s role in storm water resources management. The Storm Water Strategy developed guiding principles to serve as the foundation of the storm water program; identified issues that support or inhibit the program from aligning with the guiding principles; and proposed and prioritized projects that the Water Boards could implement to address those issues. The State Water Board staff created a strategy-based document called the Strategy to Optimize Management of Storm Water (STORMS). STORMS includes a program vision, missions, goals, objectives, projects, timelines, and consideration of the most effective integration of project outcomes into the Water Board’s Storm Water Program.

200-YEAR FLOOD PROTECTION IN CENTRAL VALLEY

Both State policy and recently enacted State legislation (Senate Bill 5) call for 200-year (0.5% annual chance) flood protection to be the minimum level of protection for urban and urbanizing areas in the Central Valley. Senate Bill 5 (SB 5), signed into law on October 10, 2007, created the Central Valley Flood Protection Act of 2008. The following list identifies the requirements of the California Department of Water Resources (DWR) and the Central Valley Flood Protection Board (previously known as the State Reclamation Board) under SB 5:

- To prepare and adopt a Central Valley Flood Protection Plan by 2012.
- To establish 200-year protection as the minimum urban level of flood protection, effective with respect to specific development projects as of 2015 or 2025, as explained below.

3.14 UTILITIES

- The DWR is directed to produce preliminary (i.e. Best Available) maps for 100-year and 200-year floodplains protected by project levees, and to make them available to cities and counties in the Sacramento-San Joaquin Valley (“Central Valley”). (Water Code Section 9610[a]) These best available maps were made available on September 8, 2008, and can be found at the California Department of Water Resources
http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/best_available_maps/
- Sets deadlines for cities and counties in the Central Valley to amend their general plans and their zoning ordinances to conform to the Plan within 24 months and 36 months (i.e., approximately 2014 and 2015), respectively, of its adoption.
- Obligates Central Valley counties to develop flood emergency plans within 24 months of adoption of the Plan.
- By 2009 the Department of Water Resources (“Department”) had to propose amendments to the California Building Standards Code (“Building Code”) to protect areas with flood depths anticipated to exceed three feet for the 200-year flood event. SB 5 requires that the Building Code amendments are designed to reduce the risk of flood damage and increase safety.

No later than 2015, but potentially sooner depending on when the Central Valley Flood Protection Plan takes effect, SB 5 prohibits local governments from entering development agreements or approving entitlements or permits, including ministerial permits resulting in construction of a new residence in a flood hazard zone, which result in construction of a new residence in a flood zone unless one of three conditions are met:

- flood management facilities provide level of protection necessary to withstand 200-year flood event;
- the development agreement or other entitlements include conditions that provide protections necessary to withstand 200-year flood event; or
- the local flood management agency has made adequate progress on construction of a flood protection system that shall result in protections necessary to withstand 200-year flood event by 2025.

Adequate progress is defined as meeting all of the following:

1. The project scope, cost and schedule have been developed;
2. In any given year, at least 90% of the revenues scheduled for that year have been appropriated and expended consistent with the schedule;
3. Construction of critical features is progressing as indicated by the actual expenditure of budget funds;
4. The city or county has not been responsible for any significant delay in completion of the system; and
5. The above information has been provided to the DWR and the Central Valley Flood Protection Board and the local flood management agency shall annually report on the efforts to complete the project.

The Project area is within the 200-year flood plain.

Local

MULTI-AGENCY POST-CONSTRUCTION STANDARDS (LID)

The City of Lathrop, in collaboration with San Joaquin County, Tracy, Lodi, Manteca, and Patterson prepared a Multi-Agency Post-Construction Stormwater Standards Manual to provide consistent guidance for municipal workers, developers in implementing the requirements under the Statewide Small MS4 NPDES permit (2013-0001-DWQ). The guidance provides tools to address the following objectives:

- Establish the methodology to consider the effects of stormwater runoff from a new development or redevelopment project during the project planning phase;
- Minimize contiguously-connected impervious surfaces in areas of new development and redevelopment, and where feasible, to maximize on-site infiltration of stormwater runoff;
- Implement site design measures to preserve, create, or restore areas that provide important water quality benefits such as riparian corridors, wetlands, stream and buffers, and maintain, protect, and improve underlying soil quality;
- Provide source control measures to minimize the transport of and/or eliminate potential sources of pollution to stormwater runoff or run-on into the MS4 and receiving waters;
- Implement Low Impact Development (LID) control measures to reduce and/or eliminate the volume of stormwater runoff and pollutants leaving the project site;
- Control post-construction peak stormwater runoff discharge volumes and velocities (hydromodification) to mitigate impacts from downstream erosion and to protect downstream habitat; and
- Develop tools for effectively operating, managing, and maintaining stormwater control measures.

CITY OF LATHROP SEWER SYSTEM MANAGEMENT PLAN

The City of Lathrop Sewer System Management Plan (SSMP) (March 2018) was prepared in compliance with the State Water Resource Board (SWRCB) General Order No. 2006-0003-DWQ. This order mandated the development of an SSMP and the reporting of sewer system overflows using an electronic reporting system. The City of Lathrop SSMP was originally adopted in 2009 and was updated in 2013, 2016, and 2018. The SSMP describes the City's wastewater collection system consists of approximately 72 miles of gravity mains, 21 miles of force mains, as well as 12 lift and pump stations. The Plan describes that the City has a supervisory control and data acquisition (SCADA) system for control and monitoring of facilities.

CITY OF LATHROP SB 5 200-YEAR FLOOD PROTECTION GENERAL PLAN AMENDMENT

On March 25, 2015, the City of Lathrop drafted a General Plan Amendment to adhere to State of California Senate Bill 5, which were designed to set new flood protection standards for urban areas. SB 5 established the State standard for flood protection in urban areas as protection from the 200-year frequency flood. Under SB 5, urban and urbanizing areas must be provided with the

200-year flood protection no later than 2025. This General Plan Amendment amends the Safety Element of the City of Lathrop General Plan to comply with the provisions established under SB 5.

CITY OF LATHROP MUNICIPAL CODE

The Lathrop Municipal Code contains ordinances regulating stormwater/drainage and flood control within the City of Lathrop. Chapter 3.20 provides for the City's Impact Fee Ordinance, which requires development impact fees to be charged to fund improvements to the City's infrastructure. Chapter 3.23 provides the City's interim urban level of flood protection levee impact fee. Chapter 13.28 provides the City's Stormwater Management and Discharge Control Ordinance. Chapter 15.56 describes methods of reducing flood losses. Chapter 16.10 provides that subdivisions in flood hazard zones shall not be approved until applicable findings required in Chapter 17.17 of Lathrop Municipal Code are made. Chapter 17.17 describes the 200-year flood protection requirements for new development.

CITY OF LATHROP GENERAL PLAN

Policies: Public Facilities and Services

- PFS-4.5 Development Review. Continue to require all development projects to:
 - Demonstrate how storm water runoff will be detained or retained on-site and/or conveyed to the nearest drainage facility as part of the development review process and as required by the City's Small MS4 Phase 2 permit; and
 - Analyze their drainage and stormwater conveyance impacts and either demonstrate that the City's existing infrastructure can accommodate increased stormwater flows, or make the necessary improvements to mitigate all potential impacts.
- PFS-4.6 Stormwater Runoff. Stormwater runoff may be directed towards permeable surfaces to the greatest extent feasible to allow for more percolation of stormwater into the ground.
- PFS-4.7 Stormwater Capture. Encourage the use of professionally designed stormwater capture methods to aid in the reuse of rain water for non-potable uses in compliance with applicable State regulations.
- PFS-4.8 Stormwater Treatments. Promote Best Management Practices (BMPs) and Low Impact Development measures (LID) to treat stormwater before discharge from the site. The facilities shall be sized to meet regulatory requirements.
- PFS-4.9 Naturalized Stormwater Facilities. Maintain stormwater facilities in a naturalized condition where appropriate, incorporating recreational trails, parkway vegetation, and other amenities, minimizing grading, and ensuring that vegetation does not reduce channel capacity, and consistent with the Recreation and Resources Element.
- PFS-4.10 Dual-Use Detention Basins. Allow recreational uses in dual-use detention basins for parks, ball fields, and other uses where appropriate.

UTILITY MASTER PLANS

The City of Lathrop maintains a variety of Master Plan documents that guide the design, development, and maintenance of the utilities within the city limits. These include: *2020 Urban Water Management Plan (2021)*, *Recycled Water System Master Plan (2018)*, *Water System Master Plan (2018)*, *Storm Drain Master Plan (1992)*, and *Wastewater System Master Plan (2018)*.

THRESHOLDS OF SIGNIFICANCE

Consistent with Appendix G of the CEQA Guidelines, the proposed Project may have a significant impact on the environment associated with Utilities if it would:

- Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-5: The proposed Project would not require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects. (Less than Significant)

As discussed in Chapter 2.0, Project Description, a 7.5-foot-deep private stormwater retention basin would be located in the southern portion of the Project site, as shown in Figure 2.0-7 in Chapter 2.0. A landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin.

The development of the proposed Project would add new impervious surface to the Project site, including buildings and new parking lot. Stormwater generated on this new impervious surface would be routed through on-site pipes to the proposed drainage retention basin located in the southern portion of the Project site. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200 percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours.

The proposed storm drain system will include water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.

The proposed Project is on a site that would be annexed by the City of Lathrop. This area is currently in the City of Lathrop Sphere of Influence. The proposed Project would not require any

3.14 UTILITIES

additional stormwater or drainage infrastructure other than the extension of storm drain lines services to the Project site from existing infrastructure located on Manthey Road, located directly east of the Project site.

The installation of the improvements will be within the footprint of the Project site. The impacts associated with development of the Project site have been analyzed throughout this EIR. For some environmental topics it was determined that the Project would have a less than significant impact, while in other cases it was determined that development would have a significant and unavoidable impact (i.e., impacts on scenic vistas). However, because the majority of the stormwater improvements would be underground or at and below ground level (i.e., the retention basin), the construction of these stormwater drainage facilities would not result in a significant to scenic vistas. Therefore, installation of the stormwater distribution system infrastructure to serve the proposed Project would have a ***less than significant*** impact.

3.14.4 SOLID WASTE

Republic Services, a private garbage collection company, provides residential (single family and multi-family) and commercial garbage, recycling, and green waste collection services within the city limits. Solid waste from Lathrop is primarily landfilled at the Forward Sanitary Landfill.

KEY TERMS

Class I landfill: A landfill that accepts for disposal 20 tons or more of municipal solid waste daily (based on an annual average); or one that does not qualify as a Class II or Class III municipal solid waste landfill.

Class II landfill: A landfill that (1) accepts less than 20 tons daily of municipal solid waste (based on an annual average); (2) is located on a site where there is no evidence of groundwater pollution caused or contributed by the landfill; (3) is not connected by road to a Class I municipal solid waste landfill, or, if connected by road, is located more than 50 miles from a Class I municipal solid waste landfill; and (4) serves a community that experiences (for at least three months each year) an interruption in access to surface transportation, preventing access to a Class I landfill, or a community with no practicable waste management alternative.

Class III landfill: A landfill that is not connected by road to a Class I landfill or a landfill that is located at least 50 miles from a Class I landfill. Class III landfills can accept no more than an average of one ton daily of ash from incinerated municipal solid waste or less than five tons daily of municipal solid waste.

Transfer station: A facility for the temporary deposition of some wastes. Transfer stations are often used as places where local waste collection vehicles will deposit their waste cargo prior to loading into larger vehicles. These larger vehicles will transport the waste to the end point of disposal or treatment.

Waste Management Plan: A Waste Management Plan (WMP) is a completed WMP form, approved by the City for the purpose of compliance with Chapter 8.40 of the Municipal Code, submitted by the applicant for any covered project. Prior to project start, the WMP shall identify the types of construction and demolition (C&D) debris materials that will be generated for disposal and recycling. A completed WMP contains actual weight or volume of the material disposed recycled receipts.

WASTE COLLECTION SERVICES

The City of Lathrop has an exclusive contract with Republic Services to collect solid waste, recycling, and green waste from the residential and commercial sector. Republic Services is a private garbage collection company, provides residential (single family and multi-family) and commercial garbage, recycling, and green waste collection services within the city limits. Republic Services is the second largest provider of non-hazardous solid waste collection, transfer, disposal, recycling, and energy services in the United States, as measured by revenue. Republic Services operates in 41 states and Puerto Rico through 340 collection operations, 201 transfer stations, 193

active landfills, 67 recycling centers, 8 treatment, recovery and disposal facilities, and 12 salt water disposal wells. Republic also operated 69 landfill gas and renewable energy projects and had post-closure responsibility for 126 closed landfills. Republic Services serves 14 million customers in total (throughout the United States). Refuse, recycling, and green waste bins are picked up once per week in the City of Lathrop.

The City of Lathrop has a three (3) cart system for the collection of garbage, recycling and green waste. The three-cart system was established to enable residents to assist in reducing the amount of waste that is dumped in landfills. Garbage service is mandatory within the City of Lathrop and Republic Services provides residential garbage service to City of Lathrop residents. Recycling service is provided for newspapers, cardboard (including cereal boxes, soda boxes, etc.), glass bottles and jars, aluminum, tin, steel, plastic containers, and all junk mail and phone books.

WASTE DISPOSAL FACILITIES

The vast majority (77%) of landfill disposal from the City of Lathrop in 2016 (the latest year of information available) went to Forward Landfill. Other landfills that received relatively small amounts of waste from the City of Lathrop in 2016 included:

- Altamont Landfill & Resource Recovery;
- Azusa Land Reclamation Company Landfill;
- Fink Road Landfill;
- Foothill Sanitary Landfill;
- L and D Landfill;
- North County Landfill & Recycling Center;
- Potrero Hills Landfill;
- Recology Hay Road;
- Sacramento County Landfill (Kiefer).

Forward Landfill

The Forward Landfill is a solid waste disposal site, located at 9999 South Austin Road in Manteca. The landfill operates under Permit 39-AA-0015 (July 16, 2021). The Forward Landfill is owned and operated by Forward, Inc. (an Allied Waste North America subsidiary), and contains a total of 371.8 acres of disposal acreage. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. It has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day. The landfill has a cease operation date of 2039.

Other Landfills

The nine other landfills that received solid waste from the City of Lathrop in 2016 are shown in Table 3.14-10. Three landfills received Alternative Daily Cover (ADC) from Lathrop (Fink Road Landfill, L & D Landfill, and Vasco Road Sanitary Landfill). Alternative daily cover (ADC) means cover material other than earthen material placed on the surface of the active face of a municipal solid waste landfill at the end of each operating day to control vectors, fires, odors, blowing litter, and scavenging.

TABLE 3.14-10: LANDFILLS EXISTING DAILY CAPACITY AND ESTIMATES CLOSURE DATE

LANDFILL	DAILY CAPACITY (TONS/DAY)	ANNUAL TONNAGE DISPOSED BY LATHROP (2016)	ESTIMATED CLOSURE DATE
Altamont Landfill & Resource Recovery	11,150	227	1/01/2025
Azusa Land Reclamation Co. Landfill	8,000	1	1/01/2045
Fink Road Landfill	2,400	436	12/01/2023
Foothill Sanitary Landfill	1,500	6,456	12/31/2082
Forward Landfill, Inc.	8,668	26,228	01/01/2039
L and D Landfill	4,125	125	01/01/2023
North County Landfill & Recycling Center	825	9	12/31/2048
Potrero Hills Landfill	4,330	451	02/14/2048
Recology Hay Road	2,400	20	01/01/2077
Sacramento County Landfill (Kiefer)	No data	156	No data

SOURCE: CITY OF LATHROP GENERAL PLAN UPDATE DRAFT EIR, TABLE 3.15-7.

SOLID WASTE GENERATION RATES AND VOLUMES

The California Department of Resources Recycling and Recovery (CalRecycle) tracks and monitors solid waste generation rates on a per capita basis. Per capita solid waste generation rates and total annual solid waste disposal volumes for the City of Lathrop between 2014 and 2019 are shown in Table 3.14-11 below.

TABLE 3.14-11: SOLID WASTE GENERATION RATES IN THE CITY OF LATHROP

YEAR	WASTE GENERATION RATES (POUNDS/PERSON/DAY)		TOTAL DISPOSAL TONNAGE (TONS/YEAR)
	PER RESIDENT	PER EMPLOYEE	
2014	8.7	23.9	31,486
2015	8.0	19.8	29,691
2016	8.5	22.4	34,296
2017	6.9	18.4	29,378
2018	8.8	21.3	37,997
2019	5.9	13.7	26,778

SOURCE: CITY OF LATHROP GENERAL PLAN UPDATE DRAFT EIR, TABLE 3.15-8.

As shown in the above table, for the years 2014 through 2019 (the latest year of data available), the per capita waste generation rate in the City of Lathrop was at the lowest level in 2019; the per employee waste generation rate was at the lowest level in 2019; and the total annual disposal tonnage in Lathrop was at their lowest level (during this period) in 2019. The City of Lathrop complied with State requirements to reduce the volume of solid waste through recycling and reuse of solid waste. The City of Lathrop achieved the City’s per capita disposal target rates for 2011-2019 of 20.4 and 41.0 pounds per person per day for residents and employees, respectively, as established by CalRecycle.

REGULATORY SETTING – SOLID WASTE

Federal

RESOURCE CONSERVATION AND RECOVERY ACT

The Resource Conservation and Recovery Act (RCRA) was enacted in 1976 to address the huge volumes of municipal and industrial solid waste generated nationwide. After several amendments, the current Act governs the management of solid and hazardous waste and underground storage tanks (USTs). RCRA was an amendment to the Solid Waste Disposal Act of 1965. RCRA has been amended several times, most significantly by the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRA is a combination of the first solid waste statutes and all subsequent amendments. RCRA authorizes the Environmental Protection Agency (EPA) to regulate waste management activities. RCRA authorizes states to develop and enforce their own waste management programs, in lieu of the Federal program, if a state's waste management program is substantially equivalent to, consistent with, and no less stringent than the Federal program.

State

CALIFORNIA INTEGRATED WASTE MANAGEMENT ACT (AB 939 AND SB 1322)

The California Integrated Waste Management Act of 1989 (AB 939 and SB 1322) requires every city and county in the state to prepare a Source Reduction and Recycling Element to its Solid Waste Management Plan that identifies how each jurisdiction will meet the mandatory state waste diversion goals of 25% by 1995 and 50% by 2000. The purpose of AB 939 and SB 1322 is to “reduce, recycle, and re-use solid waste generated in the state to the maximum extent feasible.” The term “integrated waste management” refers to the use of a variety of waste management practices to safely and effectively handle the municipal solid waste stream with the least adverse impact on human health and the environment. The Act has established a waste management hierarchy, as follows: Source Reduction; Recycling; Composting; Transformation; and Disposal.

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD MODEL ORDINANCE

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (§42900-42911 of the Public Resources Code) directs the California Integrated Waste Management Board (CIWMB) to draft a “model ordinance” relating to adequate areas for collecting and loading recyclable materials in development projects. The model ordinance requires that any new development project, for which an application is submitted on or after September 1, 1994, include “adequate, accessible, and convenient areas for collecting and loading recyclable materials.” For subdivisions of single family detached homes, recycling areas are required to serve only the needs of the homes within that subdivision.

CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN)

CALGreen requires the diversion of at least 50% of the construction waste generated during most new construction projects (CALGreen Sections 4.408 and 5.408) and some additions and alterations to nonresidential building projects.

CALIFORNIA MANDATORY COMMERCIAL RECYCLING LAW (AB 341)

Assembly Bill (AB) 341 directed CalRecycle to develop and adopt regulations for mandatory commercial recycling. CalRecycle initiated formal rulemaking with a 45-day comment period beginning Oct. 28, 2011. The final regulation was approved by the Office of Administrative Law on May 7, 2012. The purpose of AB 341 is to reduce GHG emissions by diverting commercial solid waste to recycling efforts and to expand the opportunity for additional recycling services and recycling manufacturing facilities in California.

Beginning on July 1, 2012, businesses have been required to recycle, and each jurisdiction has implemented programs that include education, outreach, and monitoring. Jurisdictions were required to start reporting on their 2012 Electronic Annual Report (due August 1, 2013) on their initial education, outreach, and monitoring efforts, and, if applicable, on any enforcement activities or exemptions implemented by the jurisdiction.

In addition to Mandatory Commercial Recycling, AB 341 sets a statewide goal for 75% disposal reduction by the year 2020. This is not written as a 75% diversion mandate for each jurisdiction. The 50% disposal reduction mandate still stands for cities, counties, and State agencies (including community colleges) under AB 939. CalRecycle continues to evaluate program implementation as it has in the past through the Annual Report review process for entities subject to either AB 939.

ASSEMBLY BILL 1826 MANDATORY COMMERCIAL ORGANICS RECYCLING

In October 2014 Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses, including multifamily residential dwellings that consist of five or more units (please note, however, that multi-family dwellings are not required to have a food waste diversion program). Organic waste (also referred to as organics) means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste. This law phases in the mandatory recycling of commercial organics over time, while also offering an exemption process for rural counties. In particular, the minimum threshold of organic waste generation by businesses decreases over time, which means an increasingly greater proportion of the commercial sector will be required to comply.

Starting on January 1, 2019, businesses that generate 4 cubic yards or more of commercial solid waste per week shall arrange for organic waste recycling services. By Summer/Fall 2021, if CalRecycle determines that the statewide disposal of organic waste in 2020 has not been reduced by 50% of the level of disposal during 2014, the organic recycling requirements on businesses will

expand to cover businesses that generate 2 cubic yards or more of commercial solid waste per week. Additionally, certain exemptions may no longer be available if this target is not met.

SB 1374 (CONSTRUCTION AND DEMOLITION WASTE MATERIALS DIVERSION)

Senate Bill 1374 (SB 1374), Construction and Demolition Waste Materials Diversion Requirements, requires that jurisdictions summarize their progress realized in diverting construction and demolition waste from the waste stream in their annual AB 939 reports. SB 1374 required the CIWMB to adopt a model construction and demolition ordinance for voluntary implementation by local jurisdictions.

AB 2176 (MONTANEZ, CHAPTER 879, STATUTES OF 2004)

This law requires the largest venue facilities and events (as defined) in each city and county to plan and implement solid waste diversion programs, and annually report the progress of those upon the request of their local government. In turn, local jurisdictions must report to the CIWMB waste diversion information for the top 10% of venues and events by waste generation.

A large event is defined as:

1. Serves an average of more than 2,000 individuals per day of operation (both people attending the event and those working at it—including volunteers—are included in this number); and
2. Charges an admission price or is run by a local agency.

The bill specifically includes public, nonprofit, or privately owned parks, parking lots, golf courses, street systems, or other open space when being used for an event, including, but not limited to, a sporting event or a flea market in addition to events that meet both of the above.

A large venue is defined as:

- A permanent facility that annually seats or serves an average of more than 2,000 individuals within the grounds of the facility per day of operation (both people attending the event and those working at it—including volunteers too—are included in this number).

Venues include, but are not limited to airports, amphitheaters, amusement parks, aquariums, arenas, conference or civic centers, fairgrounds, museums, halls, horse tracks, performing arts centers, racetracks, stadiums, theaters, zoos, and other public attraction facilities.

SENATE BILL 1383 SHORT-LIVED CLIMATE POLLUTANTS: ORGANIC WASTE METHANE EMISSIONS REDUCTIONS

In September 2016, Governor Brown signed SB 1383, establishing methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants (SLCP) in various sectors of California's economy. The bill codifies the California Air Resources Board's Short-Lived Climate Pollutant Reduction Strategy, established pursuant to SB 605, in order to achieve reductions in the statewide emissions of short-lived climate pollutants. Actions to reduce short-

lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California’s most at-risk communities, and on the environment.

As it pertains to solid waste, SB 1383 establishes targets to achieve a 50% reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75% reduction by 2025. The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20% of currently disposed edible food is recovered for human consumption by 2025.

Local

LATHROP MUNICIPAL CODE, CHAPTER 8.16: GARBAGE COLLECTION AND DISPOSAL

Section 8.16 of the Lathrop Municipal Code provides rules and regulations regarding garbage collection and disposal. It includes a list of hazardous materials (8.16.050), prohibitions on the burning and burial of solid waste (8.16.060), rights of the City related to solid waste collection and transportation (8.16.090), a list of requirements for the contractor for solid waste collection and transportation (8.16.100), restrictions on solid waste collection and transportation (8.16.110), a description of billing and collection fees (8.16.160), the garbage collection rate schedule (8.16.170), permit requirements (8.16.190), and a description of fees and other requirements.

CITY OF LATHROP GENERAL PLAN

Policies: Public Facilities and Services

- PFS-9.1 Refuse Collection. Continue to require mandatory refuse collection throughout the city.
- PFS-9.2 Source Reduction and Recycling Program. Implement and enforce the provisions of the City’s Source Reduction and Recycling Program.
- PFS-9.3 Compliance with State Legislation. Continue to comply with all State regulations regarding waste diversion, source reduction, recycling, and composting.
- PFS-9.5 Waste Service Performance and Collection Facilities. Support efforts of the solid waste service provider to maintain adequate residential, commercial, and industrial solid waste and mixed recycling collection service levels and solid waste facilities in accordance with state law, and periodically review waste collection performance to verify adequacy of service.
- PFS-9.9 Hazardous Waste. Promote the proper disposal of hazardous waste—including paint, tires, medications, medical sharps, infectious waste, asbestos waste, construction waste, and electronic waste; encourage materials to be recycled or disposed of in a manner that is safe for the environment, residents, and visitors to the city consistent with the Public Safety Element.

THRESHOLDS OF SIGNIFICANCE

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

3.14 UTILITIES

- Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; and/or
- Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

IMPACTS AND MITIGATION MEASURES

Impact 3.14-6: The landfills that would serve the proposed Project have sufficient permitted capacity to accommodate the Project's solid waste disposal needs, and the proposed Project will comply with federal, State, and local statutes and regulations related to solid waste. (Less than Significant)

As previously described, permitted maximum disposal at the Forward Landfill is 8,668 tons per day. According to the City of Lathrop General Plan EIR, the Forward Landfill has a cease operation date of 2039 and has sufficient capacity to serve the City of Lathrop. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. The Forward Landfill has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day.

According to the City of Lathrop General Plan EIR, if the Forward Landfill were to close in 2039, the City can potentially utilize other landfills such as the Foothill Landfill and the North County Landfill, as locations for solid waste disposal. The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day and the North County Landfill is 825 tons per day. The remaining capacity of these landfills include 125 million cubic yards of solid waste at the Foothill Landfill, with an estimated cease operation date of 2054, and 35.4 million cubic yards of solid waste at the North County Landfill, which has an estimated cease operation date of 2035.

Solid waste generated by the proposed Project was estimated based on CalRecycle generation rates.¹ The commercial uses are estimated to generate approximately 5 pounds per day per 1,000 square feet. It is estimated that the 30,514 square feet of commercial space would generate 152.6 pounds per day of solid waste. The total annual solid waste generated by the proposed project is estimated to be 5,699 pounds per year (2.8 tons per day).

The addition of the volume of solid waste associated with the proposed Project, approximately 6.2 tons per day, would not exceed the Forward Landfill's remaining capacity. Existing landfills have permitted capacity to handle this additional waste. This is a *less than significant* impact.

¹ Available at: <https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>

The California Environmental Quality Act (CEQA) requires an Environmental Impact Report (EIR) to evaluate a project's effects in relationship to broader changes occurring, or that are reasonably foreseeable to occur, in the surrounding environment. Accordingly, this chapter presents a discussion of CEQA-mandated analysis for cumulative impacts, significant irreversible effects, significant and unavoidable impacts, and growth-inducing effects associated with the proposed Project.

4.1 CUMULATIVE SETTING AND IMPACT ANALYSIS

INTRODUCTION

CEQA requires that an EIR contain an assessment of the cumulative impacts that could be associated with the proposed Project. According to CEQA Guidelines Section 15130(a), "an EIR shall discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable." "Cumulatively considerable" is defined in CEQA Guidelines section 15065(a)(3) as meaning that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects" (as described in Section 15130). As defined in CEQA Guidelines Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. A cumulative impact occurs from:

...the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

In addition, Section 15130(b) identifies that the following three elements are necessary for an adequate cumulative analysis:

- 1) Either:
 - (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency; or,
 - (B) A summary of projections contained in an adopted local, regional or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

4.0 OTHER CEQA-REQUIRED TOPICS

- 2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available; and
- 3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project’s contribution to any significant cumulative effects.

Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable,” a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.

CUMULATIVE SETTING

The cumulative setting uses growth projections listed in the City of Lathrop General Plan Draft EIR and Department of Finance statistics. Table 4.0-1 shows growth projections for the City, County, and State.

TABLE 4.0-1: GROWTH PROJECTIONS

CALENDAR YEAR	ESTIMATED POPULATION (LATHROP)	ESTIMATED POPULATION (SAN JOAQUIN COUNTY)	ESTIMATED POPULATION (CALIFORNIA)
2025	35,475	829,426	39,024,054
2030	42,109	883,484	39,430,871
2040	58,969	1,020,862	40,106,449
2045	67,976	1,094,253	40,152,224

SOURCE: CITY OF LATHROP GENERAL PLAN EIR (2022); DEPARTMENT OF FINANCE REPORT P-1A (2023).

In addition to those cumulative growth projections listed above, this EIR uses a list of probable future projects to determine cumulative growth in the area. Development projects were identified by City of Lathrop staff. The approved and/or pending projects in the City are summarized in Table 4.0-2.

TABLE 4.0-2: CITY OF LATHROP EXISTING AND PROJECTED DEVELOPMENT (MAY 11, 2023)

PROJECT NAME	ADDRESS	APN	SF UNITS	MF UNITS	COMM. SF	IND. SF
<i>APPROVED AND CONSTRUCTED DEVELOPMENT PROJECTS</i>						
Substantial Conformance - Starbucks - Approved 2021	16538 Golden Valley Pkwy.	191-760-14	-	-	2,400	-
Substantial Conformance - Chipotle - Approved 2020	16542 Golden Valley Pkwy.	191-760-15	-	-	2,300	-
Substantial Conformance - Sprouts - Approved 2021	N/A	191-760-22	-	-	23,000	-
Mossdale Apartments (Under Construction)	18007, 18149, and 18250 S. Manthey Rd.	241-020-65, -66, and -61	-	204	-	-
Phelan Lathrop Gateway - Phase I	3458 W. Yosemite Ave. and 18755 Business Park Ct.	241-820-03, and -04	-	-	-	990,350

<i>PROJECT NAME</i>	<i>ADDRESS</i>	<i>APN</i>	<i>SF UNITS</i>	<i>MF UNITS</i>	<i>COMM. SF</i>	<i>IND. SF</i>
Phelan Lathrop Gateway - Phase II	Various	241-820-09, and -11	-	-	-	890,375
Building 1 of South Lathrop Commerce Center	5120 Glacier St.	241-030-16	-	-	-	1,135,653
Building 3 of South Lathrop Commerce Center	5150 Glacier St.	241-030-18				920,402
Building 5, 6, and 7 of South Lathrop Commerce Center	5070, 5050, and 5030 W. Yosemite Ave.	241-030-20, -21, and -22				569,912
Panda Express	15099 Old Harlan Rd.	196-110-27	-	-	2,200	-
Tru by Hilton - 79-rooms	161 E. Louise Ave.	196-270-23	-	-	38,660	-
Golden Valley Self-Storage	16000 Golden Valley Pkwy.	191-200-27, -28, -29, and -30	-	-	152,000	
Towne Centre Apartments	240 Towne Centre Dr.	191-700-14	-	62	-	-
Towne Centre Apartments Phase 2	231 and 201 Towne Centre Dr.	191-550-74 and -75	-	84	-	-
Fairfield Inn - 90 rooms	N/A	191-760-02	-	-	50,458	-
Seefried Warehouse	18284 S. Harlan Rd.	198-130-64	-	-		189,000
RAD Urban Expansion	18231 Murphy Pkwy.	198-190-30	-	-	-	87,435
CFT Phase 2	15107 and 15135 Old Harlan Rd.	196-110-29 and -30	-	-	2,470	-
Duke Lathrop	16825 Murphy Pkwy.	198-210-19	-	-	-	346,860
Kraft Heinz	500 E. Louise	198-120-14	-	-	-	649,980
Chevron and Blue Rain Car Wash (Under Construction)	16460 and 16446 Golden Valley Pkwy.	192-040-47 and -48	-	-	9,413	-
SUB-TOTALS			0	350	282,901	5,779,967
<i>APPROVED AND PENDING CONSTRUCTION</i>						
Multi-Entitlement - Lathrop Towne Centre	17100 Golden Valley Pkwy.	191-119-049	-	-	126,000	-
Multi-Entitlement - Lathrop Towne Centre - Hotel - 117 Rooms	17100 Golden Valley Pkwy.	191-119-049	-	-	60,000	-
Multi-Entitlement - North Crossroads Business Park - Remaining Buildings	500 and 1300 E. Louise Ave.	198-120-08 and 198-140-16	-	-	-	534,842
MSPR-19-52 - Lathrop Retail Building	15322 S. Harlan Rd.	196-110-19	-	-	7,848	-
Multi-Entitlement - Watt Commercial - Lathrop Market Place	N/A	191-760-02 thru -12, -16 thru 21	-	-	104,000	-
Phelan Lathrop Gateway - Phase III	Various	241-820-15	-	-	-	1,197,188
South Lathrop Commerce Center Remaining Buildings	Various	241-030-45, -19, -46, -47, and -23	-	-	-	2,125,187

4.0 OTHER CEQA-REQUIRED TOPICS

<i>PROJECT NAME</i>		<i>ADDRESS</i>	<i>APN</i>	<i>SF UNITS</i>	<i>MF UNITS</i>	<i>COMM. SF</i>	<i>IND. SF</i>
McKinley Avenue Development		16300 S. McKinley Ave.	198-100-11	-	-	14,800	-
Scannell Properties Industrial Project		1520 Lathrop Rd.	198-040-14	-	-	-	191,160
Maverik Convenience Store & Fueling Facility		980 E. Lousie Ave.	198-120-11	-	-	5,951	-
HDC Properties (Cheema)		16190 and 16200 S. McKinley Ave.	198-100-12 and -13	-	-	22,200	-
TownePlace Suites by Marriott (97 rooms)		17400 Golden Valley Pkwy.	191-190-62	-	-	53,493	-
Lathrop Crossroads Industrial		1101 D'Arcy Pkwy.	198-130-54, -55, -57, and -58	-	-	-	448,904
Wendy's Lathrop		16412 Golden Valley Pkwy.	192-040-50	-	-	5,208	-
Ono Hawaiian BBQ		16434 Golden Valley Pkwy.	192-040-49	-	-	2,350	-
Home2Suites by Hilton (94 rooms) and Future Assisted Living Facility		15800 Golden Valley Pkwy.	192-040-19	-	-	68,565	-
SUB-TOTALS				0	-	470,415	4,497,281
<i>PENDING DEVELOPMENT PROJECTS - CURRENTLY PROCESSING APPLICATION(S)</i>							
Hardeep Singh Truck Repair		18401 S. McKinley Ave.	241-400-28 and -27	-	-	7,500	-
Del Webb Community Center		Phase 2 of River Islands	-	-	-	13,829	-
River Islands Phase 1 Apartments		N/A	213-310-43	-	220	-	-
Escala at Stanford Crossing		400 Stanford Crossing	192-030-17	-	195	-	-
Ashley Furniture		14101 S. Manthey Rd.	192-020-14	-	-	-	1,486,607
SUB-TOTALS				0	415	51,843	1,486,607
<i>RESIDENTIAL DEVELOPMENT</i>							
Building Permits Issued - SFD	2014	-	-	190	-	-	-
	2015	-	-	343	-	-	-
	2016	-	-	170	-	-	-
	2017	-	-	297	-	-	-
	2018	-	-	383	-	-	-
	2019	-	-	389	-	-	-
	2020	-	-	681	146	-	-
	2021	-	-	957	172	-	-
	2022	-	-	929	29	-	-
SUB-TOTALS				4,339			

PROJECT NAME		ADDRESS	APN	SF UNITS	MF UNITS	COMM. SF	IND. SF
Projected Building Permits based on AVERAGE from 2015-2020. Not counted in TOTALS below.	2023	-	-	377	-	-	-
	2024	-	-	377	-	-	-
	2025	-	-	377	-	-	-
	2026	-	-	377	-	-	-
	2027	-	-	377	-	-	-
SUB-TOTALS				1,885			
Central Lathrop - Remaining Dwelling Units (based on the total number of dwelling units in Phase 1 (1,212) minus the total number of permits issued (as of 05.11.23).				254	-	-	-
River Islands Phase 1 - Remaining Dwelling Units (based on total number of dwelling units per Tract 3694 (4,284) minus the total number of permits issued (as of 05.11.23).				825	-	-	-
River Islands Phase 2 - Approved in June 2021 by City Council which will include development of 10,726 dwelling units. 698 Residential - High Units, 2,439 Mixed Use (Paradise Cut Village Center) and 1,821 Transit Oriented Development units assumed to be Apartments or HDR density.				5,768	5,258		
SUB-TOTALS				6,847	5,605	0	0
GRAND TOTAL				11,186	6,020	805,159	11,763,855

SOURCE: CITY OF LATHROP GENERAL PLAN EIR (2023).

CUMULATIVE EFFECTS OF THE PROJECT

Cumulative settings are identified under each cumulative impact analysis. Cumulative settings vary because the area that the impact may affect is different. For example, noise impacts generally only impact the local surrounding area because noise travels a relatively short distance, while air quality impacts affect the whole air basin as wind currents control air flow and are not generally affected by natural or manmade barriers which would affect noise. Cumulative proposed Project impacts are addressed and summarized below.

Method of Analysis

Although the environmental effects of an individual project may not be significant when that project is considered separately, the combined effects of several projects may be significant when considered collectively. State CEQA Guidelines 15130 requires a reasonable analysis of a project's cumulative impacts, which are defined as "two or more individual effects which, when considered together are considerable or which compound or increase other environmental impacts." The cumulative impact that results from several closely related projects is: the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time (State CEQA Guidelines 15355[b]). Cumulative impact analysis may be less detailed than the analysis of the project's individual effects (State CEQA Guidelines 15130[b]).

There are two approaches to identifying cumulative projects and the associated impacts. The list approach identifies individual projects known to be occurring or proposed in the surrounding area in order to identify potential cumulative impacts. The projection approach uses a summary of projections in adopted General Plans or related planning documents to identify potential cumulative impacts. This EIR uses a combination of the list approach and the projection approach for the cumulative analysis and considers the development anticipated to occur upon buildout of the various General Plans in the area in addition to the pending projects in the area.

Project Assumptions

The proposed Project's contribution to environmental impacts under cumulative conditions is based on full buildout of the Project site. See Chapter 2.0, Project Description, for a complete description of the proposed Project.

Cumulative Impacts

Some cumulative impacts for issue areas are not quantifiable and are therefore discussed in general terms as they pertain to development patterns in the surrounding region. Exceptions to this are traffic, utilities, noise, and air quality (the latter two of which are associated with traffic volumes), which may be quantified by estimating future traffic patterns, pollutant emitters, etc. and determining the combined effects that may result. In consideration of the cumulative scenario described above, the proposed Project may result in the following cumulative impacts.

AESTHETICS AND VISUAL RESOURCES

The cumulative setting for aesthetics is the City of Lathrop and surrounding areas of San Joaquin County.

Impact 4.1: Cumulative Damage to Scenic Resources within a State Scenic Highway (Less than Significant)

As described in Section 3.1, Aesthetics and Visual Resources, there are no designated State Scenic Highways in the vicinity of the Project site. Only one highway section in San Joaquin County is listed as a Designated Scenic Highway by the California Department of Transportation (Caltrans) Scenic Highway Mapping System; the segment of Interstate 580 (I-580) from Interstate 5 (I-5) to State Route (SR) 205 located approximately 16 miles southwest of the Project site. Views from this route are primarily agricultural with distant views of the Coast Range. The City of Lathrop and the Project site are not visible from this roadway segment.

Cumulative development in the city would not impact a State Scenic Highway. As such, impacts relative to scenic resources would be ***less than significant***.

Impact 4.2: Cumulative Conflicts with the Applicable Zoning and Other Regulations Governing Scenic Quality (Significant and Unavoidable and Cumulatively Considerable)

As described in Section 3.1, the proposed Project would result in a land use consistent with the land use designation of the Project site. More specifically, the Project proposes the construction of

freeway commercial services, consisting of a new travel center with multiples facilities, gasoline and diesel refueling stations, service station, and parking lots. These improvements would be aesthetically similar to service uses currently developed or anticipated within the immediate area and along I-5, such as the trucking sales and travel service centers across I-5 from the Project site. The proposed buildings and new impervious surface, in and of itself, would not substantially degrade the existing visual character or quality of the area and its surroundings, since uses would be similar to the urbanized uses near the proposed Project site. Therefore, while the Project would result in a loss of rural agricultural land, it would result in the development of commercial uses in an area of Lathrop currently planned for and developed with similarly scaled travel center amenities.

Under cumulative conditions, buildout of the General Plans for Lathrop and the surrounding jurisdictions could result in changes to the visual character and quality of the City of Lathrop through development of undeveloped areas and/or changes to the character of existing communities. Development of the proposed Project, in addition to other future projects in the area, would change the existing visual and scenic qualities of the City. It is noted that although the Project site is undeveloped and was previously used for agricultural uses, the General Plan designates the site for Freeway Commercial uses. Additionally, the surrounding areas to the north, east, and south are designated for urban uses (including Freeway Commercial and Industrial uses) by the General Plan. The proposed General Plan amendment for the western portion of the site (from Agriculture/General [County] to Freeway Commercial [City]) would be processed as part of the proposed Project entitlements. Overall, the General Plan and associated EIR anticipated development of the area to the north, south, and east of the Project site for similar uses as proposed by the Project.

Development within the City would be required to be consistent with the General Plan policies and City Municipal Code, both of which cover aesthetics and visual characteristics. Further, the Municipal Code contains development standards that address the visual character of a development project, such as building height, massing, setbacks, lighting, and landscaping. Implementation of these requirements would reduce the impacts associated with development. As such, impacts relative to scenic quality would be *less than significant*.

Impact 4.3: Cumulative Impact on Light and Glare (Less than Significant)

The Lathrop General Plan EIR determined the impact of new sources of light and glare can be minimized by incorporating design features and operating requirements into new developments that limit light and glare. Additionally, improvements such as landscape and street lighting, are subject to Site Plan and Architectural Design Review. Design Review procedures in compliance with 17.100 and 17.104 of the Lathrop Municipal Code.

Light sources from the proposed parking lot may have a significant adverse impact on the surrounding areas, by introducing nuisance light into the area and decreasing the visibility of nighttime skies. Additionally, on-site light sources may create light spillover impacts on surrounding land uses in the absence of mitigation.

Future projects within Lathrop would be subject to the light and glare standards established by the City. These regulations are designed to minimize potential light and glare impacts of new development. Implementation of these regulations would ensure that future projects minimize their potential light and glare impacts resulting in a **less than significant** cumulative impact relative to this environmental topic.

AGRICULTURAL RESOURCES

San Joaquin County has a total land area of 1,391 square miles. The total acreage of crop land in the county is approximately 772,762 acres. The gross value of agricultural production in San Joaquin County for 2021 was \$3,193,234,000 which represents a 5.0 percent increase (\$162,605,000) in value from 2020.

Data from the Department of Conservation indicates that approximately 1,858 acres of Prime Farmland in the County was developed for other uses between 2016 and 2018, resulting in an existing total of 381,934 acres of Prime Farmland (42 percent of agricultural land). The remaining agricultural land is comprised of Farmland of Statewide Importance (9 percent), Unique Farmland (9 percent), Farmland of Local Importance (7 percent), and Grazing Land (14 percent).

Impact 4.4: Cumulative Impact on Agricultural Resources (Less than Significant)

As described in Section 3.2, Agricultural Resources, development of the proposed Project would result in the permanent conversion of approximately 19.45 of Farmland of Local Importance to nonagricultural use. However, Prime Farmland, Unique Farmland, and Farmland of Statewide Importance would not be converted as none is found on-site.

The City of Lathrop General Plan EIR identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan policies to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. However, the EIR concluded that implementation of the General Plan would result in a less than significant impact as the General Plan includes policies which would reduce the impact of development resulting in the conversion of existing farmland. This includes policies which encourage agricultural land uses in areas outside of Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Influence, and within the city.

Additionally, neighboring agricultural land, including Prime Farmland and Farmland of Local Importance, are located to the north, south, and west of the Project site. The City of Lathrop Right-to-Farm Ordinance (15.48.030) of the City's Agricultural Land Disclosure Statement (15.48.040) reduces the potential for conflict between existing agricultural lands and adjacent uses. The notification procedures in the ordinance serves to inform landowners and developers of non-agricultural uses of what the expectations are in the area with regard to continued agricultural activities. This notification process is designed to reduce complaints and legal conflicts between existing agricultural operations and future development. The proposed Project would be subject to

the City of Lathrop Right-to-Farm Ordinance (15.48.030) of the City's Agricultural Land Disclosure Statement (15.48.040).

The City of Lathrop General Plan EIR (2022) identifies that the location or nature of the General Plan could result in the conversion of farmland to non-agricultural use and identified General Plan policies to support the continuation of working farmland and agricultural land to maintain agricultural use adjacent to non-agricultural uses. However, the EIR concluded that implementation of the General Plan would result in a less than significant impact as the General Plan includes policies which would reduce the impact of development resulting in the conversion of existing farmland. This includes policies which encourage agricultural land uses in areas outside of Lathrop while supporting the continuation of agricultural operations and activities on lands adjacent to the SOI and with the City's Area of Influence, and within the city. The EIR noted that adherence to the policies would ensure that projects include adequate measures to buffer project uses from adjacent agricultural uses and would reduce adverse effects on neighboring agricultural uses, while supporting ongoing agricultural operations in areas within and surrounding the city.

Implementation of these regulations would ensure that future projects minimize their potential agricultural resources impacts resulting in a ***less than significant*** cumulative impact relative to this environmental topic.

AIR QUALITY

The cumulative setting for air quality impacts is the San Joaquin Valley Air Basin (SJVAB), which consists of eight counties, stretching from Kern County in the south to San Joaquin County in the north. The SJVAB is bounded by the Sierra Nevada in the east, the Coast Ranges in the west, and the Tehachapi mountains in the south.

Impact 4.5: Cumulative Impact on the Region's Air Quality (Significant and Unavoidable and Cumulatively Considerable)

Under buildout conditions in San Joaquin County, the SJVAB would continue to experience increases in criteria pollutants. San Joaquin County has a State designation Attainment or Unclassified for all criteria pollutants except for ozone, respirable particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}). San Joaquin County has a national designation of either Unclassified or Attainment for all criteria pollutants except for Ozone and PM_{2.5}. Table 3.3-2 in Section 3.3 presents the State and Federal attainment status for San Joaquin County.

As discussed under Impact 3.3-1 in Section 3.3, Air Quality, the proposed Project would result in increased emissions. The San Joaquin Valley Air Pollution Control District (SJVAPCD) has established operations related emissions thresholds of significance and it was determined that annual emissions of the proposed Project would not exceed the SJVAPCD thresholds of significance for construction criteria pollutants. Additionally, the operational emissions shown therein would be below the SJVAPCD's significance threshold.

Further, as noted in Section 3.3, Air Quality, the maximum residential cancer risk would occur at a residence located at 11401 Manthey Road, located directly adjacent to the Project site to the

south, would have a residential cancer risk of approximately 28.6 per million. The maximum workplace cancer risk would occur within the central portion of the Project site, located around the gasoline pumps. The maximum workplace cancer risk would occur at the central portion of the Project site, around the gasoline fueling station, with a maximum risk of up approximately 5.9 per million (at the location of maximum workplace cancer risk). Although the workplace cancer risk would be below the applicable SJVAPCD threshold, the residential cancer risk would be above this threshold. As shown in Table 3.3-15 in Section 3.3, the proposed Project, in and of itself, could not result in a significant increased exposure of receptors to localized concentrations of TACs for the residential located at 11401 Manthey Road. Further detail is provided in the Health Risk Assessment provided in Appendix A.3. Therefore, implementation of the proposed Project is considered to have the potential to cause a **significant and unavoidable** impact relative to this topic.

BIOLOGICAL RESOURCES

The cumulative setting for biological resources includes the Project site and the greater San Joaquin County region. Development associated with implementation of the local General Plan(s) would contribute to the ongoing loss of natural and agricultural lands in San Joaquin County, including the Project site. Cumulative development would result in the conversion of existing habitat to urban uses. The local General Plan(s), in addition to regional, State, and federal regulations, includes policies and measures that mitigate impacts to biological resources associated with General Plan buildout.

Impact 4.6: Cumulative Loss of Biological Resources Including Habitats and Special-Status Species (Less than Significant)

Under cumulative conditions, buildout of the General Plan(s) within San Joaquin County will result in impacts to biological resources in the cumulative area through new and existing development. The General Plan(s) includes policies that are designed to minimize impacts to the extent feasible.

As described in Section 3.4, Biological Resources, construction in the Project site has the potential to result in impacts to special-status species in the region. The Project site provides potential habitat for several species, including those discussed in Section 3.4. All biological resources impacts were determined to have no impact, be less-than-significant, or less-than-significant with mitigation.

Mitigation Measures 3.4-1 and 3.4-2 require the Project applicant to conduct preconstruction surveys and avoid or minimize impacts to special status bumble bees and obtain coverage under the San Joaquin County Multi-Species Habitat Conservation and Open Space Plan (SJMSCP) to mitigate for habitat impacts to covered special status species. As part of Mitigation Measure 3.4-2, compensatory mitigation for habitat impacts on covered species through implementation of incidental take and minimization Measures (ITMMs) and payment of fees for conversion of lands that may provide habitat for covered special status species.

The Project would result in impacts to biological resources including habitats and special status species. The City has evaluated urban development in the Project area through the General Plan process, and subsequently determined that urban development in this location is appropriate. The proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts. Implementation of the regulations contained in the SJMPSCP and the various General Plans within San Joaquin County would ensure that future projects minimize their potential biological resources. For these reasons, cumulative impacts on the loss of biological resources are *less than significant*.

CULTURAL AND TRIBAL RESOURCES

The geography of cultural and tribal resources impacts can be defined by region, by political subdivision, or by the geography of the cultural resources present in an area, where sufficient inventory data is available to define it. The cumulative setting for cultural and tribal resources includes all of San Joaquin County. There are extensive cultural sites located in the region.

Impact 4.7: Cumulative Impacts on Known and Undiscovered Cultural and Tribal Resources (Less than Significant)

Cumulative development anticipated in the City of Lathrop, including growth projected by adopted future projects, may result in the discovery and removal of cultural resources, including archaeological, paleontological, historical, and Native American resources and human remains. As discussed in Section 3.5, Cultural and Tribal Resources, there are no cultural or archaeological resources recorded in or near the Project site or search radius. However, one historic site remnant was found and recorded as ML-20-06 in a 2021 field survey effort. ML-20-06 has been recorded, and is not eligible for the CRHR, and there are no significant cultural resources with the Project site.

Mitigation Measure 3.5-1 addresses the potential impacts to unknown subsurface deposits believed to be cultural, historical, archaeological, tribal, and/or human in origin. Any previously unknown cultural and/or tribal resources which may be discovered during development of the proposed Project would be required to be preserved, either through preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. With implementation of Mitigation Measure 3.5-1 provided in Section 3.5, the proposed Project is not anticipated to considerably contribute to a significant reduction in cultural resources in the region.

All future projects in the regional vicinity would be subject to the General Plan, which has policies and measures that are designed to ensure protection of undiscovered cultural resources. However, not every cultural or tribal cultural resources can be protected. For example, circumstances may arise where present and probable future projects contain historical resources that are part of the built environment, historical resources of an archaeological nature, and/or tribal cultural resources that cannot be preserved in place. As such, there would be substantial adverse changes in the significance of historical resources or tribal cultural resources on the cumulative level. Such impacts are significant by statute. (Pub. Resources Code, §§ 21084.1,

21084.2.). The cumulative impacts of development anticipated in the City of Lathrop, including growth projected by adopted future projects, would therefore be significant.

All future projects in the regional vicinity would be subject to their respective General Plans (i.e., City of Lathrop and San Joaquin County), each of which have policies and measures that are designed to ensure protection of undiscovered cultural resources. In addition, all discretionary projects in these jurisdictions would require environmental review per regulations established in CEQA. As such, impacts related to cultural resources would result in a *less than significant* impact.

GEOLOGY AND SOILS

Impacts related to geology and soils are not inherently cumulative. Geology and soils concerns are related to risks, hazards or development constraints that are largely site-specific. However, seismic hazards are regional, and management of seismic hazards is vested with the local planning and building authority. For these reasons, the potential for cumulative geology and soils impacts are considered in the context of the City of Lathrop and vicinity.

Impact 4.8: Cumulative Impact on Geologic and Soils Resources (Less than Significant)

As discussed in Section 3.6, Geology and Soils, the Project site does not have a significant risk of becoming unstable as a result of landslide, subsidence, soil collapse, liquefaction, liquefaction induced settlement, or lateral spreading. Nevertheless, while the Geotechnical Engineering Investigation concludes that construction of the Project is feasible from a geotechnical standpoint provided the site preparation, grading and building recommendations in the Investigation are incorporated. However, mitigation measures provided in Section 3.6 ensure that this impact will be less than significant. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. Seismic activity could come from a known active fault such as the San Joaquin fault, or any number of other faults in the region. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Additionally, the City of Lathrop has incorporated numerous policies relative to seismicity to ensure the health and safety of all people. Design in accordance with these standards and policies would ensure that any potential for the proposed Project to exacerbate existing geological hazards would be avoided. All impacts would be less-than-significant or less-than-significant with mitigation.

Additionally, two of the closest known faults classified as active by the California Geological Survey are the Greenville fault, located approximately 23 miles to the west, and the Foothills Fault System, located approximately 33 miles to the east. While the City is not within an area known for its seismic activity, there will always be a potential for groundshaking caused by seismic activity anywhere in California, including the Project site. In order to minimize potential damage to the buildings and site improvements, all construction in California is required to be designed in accordance with the latest seismic design standards of the California Building Code. Design in accordance with the Building Code and recommendations included in the Geotechnical

Engineering Investigation for Singh Petroleum Investments Percolation (CTE CAL, Inc., 2022) would reduce any potential impact to a less than significant level.

Geologic and soils impacts tend to be site-specific and Project-specific. With the mitigation measure presented in Section 3.6, implementation of the proposed Project would not result in increased risks or hazards related to geologic conditions in the cumulative area, nor would it result in any off-site or indirect impacts. Overall, impacts related to geologic and soil resources would result in a ***less than significant*** impact.

GREENHOUSE GASES, CLIMATE CHANGE, AND ENERGY

As the California Supreme Court has reasoned, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself. The challenge for CEQA purposes is to determine whether the impact of the project’s emissions of greenhouse gases is cumulatively considerable, in the sense that ‘the incremental effects of [the] individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.’” (*Center for Biological Diversity v. California Department of Fish and Wildlife* (2015) 62 Cal.4th 204, 219.) “‘With respect to climate change, an individual project’s emissions will most likely not have any appreciable impact on the global problem by themselves, but they will contribute to the significant cumulative impact caused by greenhouse gas emissions from other sources around the globe. The question therefore becomes whether the project’s incremental addition of greenhouse gases is “cumulatively considerable” in light of the global problem, and thus significant.’” (*Ibid.*)

The cumulative setting for analysis of greenhouse gas emissions and climate change impacts for this analysis is San Joaquin County, which is the boundary for the California Air Resources Board’s regional greenhouse gas emissions reduction targets.

Impact 4.9: Cumulative Impact on Climate Change from Increased Project-Related Greenhouse Gas Emissions (Less than Significant)

GHG emissions from a single Project will not cause global climate change; however, GHG emission from multiple projects throughout a region or state could result in a cumulative impact with respect to global climate change.

The California Legislature has enacted a series of statutes in recent years addressing the need to reduce GHG emissions across the State. These statutes can be categorized into four broad categories: (i) statutes setting numerical statewide targets for GHG reductions, and authorizing CARB to enact regulations to achieve such targets; (ii) statutes setting separate targets for increasing the use of renewable energy for the generation of electricity throughout the State; (iii) statutes addressing the carbon intensity of vehicle fuels, which prompted the adoption of regulations by CARB; and (iv) statutes intended to facilitate land use planning consistent with statewide climate objectives.

Between AB 32 (2006) and SB 32 (2016), the Legislature has codified some of the ambitious GHG reduction targets included within certain high-profile State Executive Orders issued by the last two

4.0 OTHER CEQA-REQUIRED TOPICS

Governors. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Arnold Schwarzenegger’s 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code Section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Jerry Brown issued Executive Order, B-30-15, which created a “new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050.” SB 32 codified this target.

In 2018, the Governor issued Executive Order B-55-18, which established a statewide goal to “achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter.” The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

Notably, the Legislature has not yet set a 2045 or 2050 target in the manner done for 2020 and 2030 through AB 32 and SB 32, though references to a 2050 target can be found in statutes outside the Health and Safety Code. Senate Bill 350 (Stats. 2015, ch. 547) added to the Public Utilities Code language that essentially puts into statute the 2050 GHG reduction target already identified in Executive Order S-3-05, albeit in the limited context of new state policies (i) increasing the overall share of electricity that must be produced through renewable energy sources and (ii) directing certain State agencies to begin planning for the widespread electrification of the California vehicle fleet. Section 740.12(a)(1)(D) of the Public Utilities Code now states that “[t]he Legislature finds and declares [that] ... [r]educing emissions of [GHGs] to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050 will require widespread transportation electrification.” Furthermore, Section 740.12(b) now states that the California Public Utilities Commission (PUC), in consultation with CARB and the California Energy Commission (CEC), must “direct electrical corporations to file applications for programs and investments to accelerate widespread transportation electrification to reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases to 40 percent below 1990 levels by 2030 and to 80 percent below 1990 levels by 2050.”

As presented in Table 3.7-2 in Section 3.7, short-term construction emissions of GHGs are estimated to be a total of approximately 497.4 metric tons of carbon dioxide equivalents (MTCO₂e) per year. As shown in Table 3.7-3, the annual operational GHG emissions associated with the proposed Project would be approximately 5.238 MT CO₂e. The proposed Project would not conflict with the 2022 Scoping Plan. The proposed Project incorporates a wide array of construction- and

operation-related Project features that reduce Project emissions, as provided previously (see the list of Project features under the *Project Sustainability Features* discussion, above). Therefore, the Project would be considered consistent with the 2022 Scoping Plan. Since the proposed Project would be consistent with the CARB's 2022 Scoping Plan, buildout of the proposed Project would not interfere with the main programs the CARB has identified to support its conclusions that the State is on a trajectory to meet the 2045 GHG target. Overall, the proposed Project would not impede the 2022 Scoping Plan and would help the State to progress towards this target.

Overall, a ***less than significant*** cumulative impact relative to this environmental topic would result.

HAZARDS AND HAZARDOUS MATERIALS

The cumulative context for the analysis of cumulative hazards and human health impacts is San Joaquin County, including all cumulative growth therein, as represented by full implementation of each respective General Plan (i.e., Lathrop, Stockton, San Joaquin County, etc.).

Impact 4.10: Cumulative Impact Related to Hazards and Hazardous Materials (Less than Significant)

The following was identified during the course of the Phase I Environmental Site Assessment (ESA):

- Several drums of waste oil, oil, oil filters, and paint were dumped and impacted the soil on the eastern portion of the Project site in early March 2023. In mid-March 2023, 5.1 cubic yards of soil were excavated for disposal. Only visual observations were utilized to determine the extent of the excavation. On April 5, 2023, a follow-up inspection of the Project site was conducted. No obvious petroleum staining or odors were observed in soils remaining within the excavation area. Any residual petroleum contamination (if any) will likely be minimal and not of significant concern to the Project site. Confirmation soil-sampling was not conducted during the March 2023 clean-up. While the soil visually appears clean, confirmation soil samples should be considered to validate the successful removal of the impacted soil. This is a potentially significant impact.
- The Project site is currently and has historically been used for agricultural purposes since the late 1930s. As such, agricultural-related chemicals such as pesticides, herbicides, insecticides, and fertilizers have been used and stored onsite. This is a potentially significant impact.
- An abandoned water well is centrally located on the west boundary of the Project site. If the well will not be rehabilitated for future use, the well should be destroyed under permit. This is a potentially significant impact.

Section 3.8 includes Mitigation Measure 3.8-1 to addresses these potentially hazardous conditions.

The operational phase of the Project will occur after construction is completed and business operators/employees move in to occupy the structures and facilities on a day-to-day basis. Each of these uses will likely use a variety of hazardous materials commonly found in urban areas including: paints, cleaners, and cleaning solvents. If handled appropriately, these materials do not pose a significant risk. These facilities will store and use these materials. There will be a risk of

release of these materials into the environment if they are not stored and handled in accordance with best management practices approved by the San Joaquin County Environmental Health Department and the Lathrop-Manteca Fire Protection District (LMFD). The uses in the 16,668-sf building are not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste beyond the common materials described above. However, the proposed fueling facility and truck and automobile repair shop would require the use of hazardous and flammable materials.

The proposed Project, in conjunction with cumulative development in the region, would include areas designated for a variety of urban, agricultural, and open space uses as defined by the City's General Plan. Cumulative development would include continued operation of, or development of, new facilities as allowed under each land use designation. New development would inevitably increase the use of hazardous materials within the region, resulting in potential health and safety effects related to hazardous materials use. For the most part, potential impacts associated with new and future development would be confined to commercial and industrial areas and would not involve the use of hazardous substances in large quantities or that would be particularly hazardous. Incidents, if any, would typically be site specific and would involve accidental spills or inadvertent releases. Associated health and safety risks would generally be limited to those individuals using the materials or to persons in the immediate vicinity of the materials and would not combine with similar effects elsewhere (i.e., construction workers), as hazard-related impacts tend to be site-specific and Project-specific.

Implementation of the proposed Project, in combination with and past, present, and probable future projects, would not result in significant increased risks of hazards in the cumulative area, nor would it result in any significant off-site or indirect impacts. Mitigation measures have been included to reduce the risk of on-site hazards associated with the use of on-site hazardous materials. For these reasons, cumulative impacts associated with hazards and hazardous materials would be ***less than significant***.

HYDROLOGY AND WATER QUALITY

Potential cumulative issues associated with surface waters can be addressed on a watershed basis, or in the case of groundwater, in the context of a groundwater basin. Because water resources are highly interconnected, the cumulative setting is based on San Joaquin County which is located in the San Joaquin River Hydrological Region. Cumulative development in this region, including the proposed Project, would impact the water quality and hydrological features of the San Joaquin River Hydrologic Region. The City of Lathrop and much of the surrounding area is located in the San Joaquin Valley Groundwater Basin. The Project site is located in the San Joaquin River watershed.

Impact 4.11: Cumulative Increases in Peak Stormwater Runoff from the Project Site (Less than Significant)

Implementation of the proposed Project would increase the amount of impervious surfaces in the Project site, which could increase peak stormwater runoff rates and volumes on and downstream

of the Project site. However, the proposed Project includes an extensive system of on-site stormwater collection facilities to accommodate the increased stormwater flows that would originate in the Project site.

The proposed stormwater collection system functions through storm drainage collection, treatment, detention, and discharge. As discussed in Chapter 2.0, development of the proposed Project would include construction of a new storm drainage system, including a drainage collection system, and a private storm water retention basin. A 7.5-foot-deep private storm water retention basin would be located in the southern portion of the Project site, and a landscape strip would surround the retention basin, along a 3:1 slope. Storm drain lines for the proposed Project would be extended throughout the Project site to the retention basin. The final design of all onsite and offsite storm drain infrastructure improvements is subject to the review and approval of the City of Lathrop. The storm drain infrastructure has been designed with surface areas and volumes in compliance with City standards. The same is true of other foreseeable development in the County, which would similarly be bound to comply with strict federal, state, and local laws and regulations. For example, present and probable future development projects in the City would be required to comply with the City's stormwater runoff regulations, including but not limited to those found in the Municipal Code. With the design and construction of improvements included in the proposed storm drainage system, the proposed Project would not increase peak stormwater runoff. The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts given that mitigation measures would control peak stormwater runoff. The proposed Project would not have cumulatively considerable impacts associated with stormwater runoff.

With the design and construction of flood control improvements, the proposed Project would not increase peak stormwater runoff. Overall, a ***less than significant*** cumulative impact relative to this environmental topic would occur.

Impact 4.12: Cumulative Impacts Related to Degradation of Water Quality (Less than Significant)

The proposed Project, along with several of the related projects within the City of Lathrop, would ultimately discharge stormwater runoff to on-site detention basins, irrigation canals, the San Joaquin River, or the groundwater basin. This would potentially degrade the water quality of the system. There are many areas within the San Joaquin County which are considered Section 303(d) impaired waterbodies. Those areas in the city and in the regional vicinity of the Planning Area that are impaired are referred to as Delta Waterways (Southern Portion) by the Water Quality Control Monitoring Council. This includes 3,125 acres listed as early as 1996 for Chlorpyrifos (Agriculture, Urban Runoff/Storm Sewers), DDT (Agriculture), Diazinon (Agriculture, Urban Runoff/Storm Sewers), Electrical Conductivity (Agriculture), Group A Pesticides (Agriculture), Invasive Species (Source Unknown), Mercury (Resource Extraction), and Unknown Toxicity (Source Unknown).

Construction of the proposed Project would contribute to a cumulative increase in urban pollutant loading, which could adversely affect water quality. Cumulative development in the Lathrop area,

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including the proposed Project, would also result in increased impervious surfaces that could increase the rate and amount of runoff, thereby potentially adversely affecting existing surface water quality through increased erosion and sedimentation. The primary sources of water pollution include: runoff from roadways and parking lots; runoff from landscaping areas; non-stormwater connections to the drainage system; accidental spills; and illegal dumping. Runoff from roadway and parking lots could contain oil, grease, and heavy metals; additionally, runoff from landscaped areas could contain elevated concentrations of nutrients, fertilizers, and pesticides.

The proposed Project will be required to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP will include BMPs to regulate stormwater quality for the Project site which will be designed in accordance with the National Pollutant Discharge Elimination System Permit (NPDES) Stormwater Program. The overall design of the drainage infrastructure will be required to comply with the *Multi-Agency Post-Construction Stormwater Standards Manual* (2015), which ensures development projects comply with the NPDES permit requirements, facilitates review of applications, and promotes integrated Low Impact Development (LID) design. The Manual also ensures proposed storm drains and infiltration/detention system have been designed to convey the required flow rates and will comply with the flood protection and storm water quality requirements of the City of Lathrop and San Joaquin County.

While the Project Area's soils have a range of low to moderately high infiltration rates, much of the groundwater recharge in the basin occurs from irrigation followed by precipitation. Precipitation in the region is 12.2 inches, most of which falls between late October and early May. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into irrigation canals and the San Joaquin River. While there are no assurances that other projects in the County would incorporate the same degree or methods of treatment as the proposed Project, several of the projects within the City of Lathrop would phase out existing agricultural runoff discharges from their respective sites and, similar to the proposed Project, could provide some level of water quality improvement. Also, each related Project that would discharge stormwater runoff would be required to comply with NPDES discharge permits from the Regional Water Quality Control Board (RWQCB), which adjusts requirements on a case-by-case basis to avoid significant degradation of water quality.

Compliance with City and County water quality protection regulations, approval from the RWQCB, and implementation of a SWPPP would ensure that the proposed Project minimizes impacts to surface water quality. Overall, a ***less than significant*** cumulative impact relative to this environmental topic would occur.

Impact 4.13: Cumulative Impacts Related to Degradation of Groundwater Supply or Recharge (Less than Significant)

The proposed Project would result in new impervious surfaces and could reduce rainwater infiltration and groundwater recharge. Infiltration rates vary depending on the overlying soil types. In general, sandy soils have higher infiltration rates and can contribute to significant amounts of ground water recharge; clay soils tend to have lower percolation potential; and impervious

surfaces such as pavement significantly reduce infiltration capacity and increase surface water runoff.

The Project Area has soils with hydrologic ratings of “A” and “C”. Group “A” soils have low runoff potential when thoroughly wet, and Group “C” soils have moderately high runoff potential when thoroughly wet. Development of the Project area with impervious surfaces could reduce rainwater infiltration and groundwater recharge further. The collection of rainwater for those areas of impervious surfaces will be routed into the proposed Project’s storm drainage system and eventually flow into the San Joaquin River or other downstream aquatic facilities.

As detailed in the City’s 2020 UWMP and mentioned previously in this section, the City’s groundwater wells are located in the Tracy Subbasin and the City is part of Tracy Subbasin GSA. The City was a part of the development of the GSP for the Tracy Subbasin in 2021. Based on the GSP for the Tracy Subbasin, and statements in the 2020 UWMP, the City’s groundwater supplies are expected to be highly reliable.

As detailed in the GSP, the Sustainability Goal of the Tracy Subbasin GSP is to provide reliable and sustainable groundwater resources for existing and future needs of all beneficial users in the Subbasin that does not degrade or decrease over-time and will continue to be sustained through continued local adaptive management of the resources. Measures to be implemented in the Subbasin to ensure its sustainability include:

- Routine monitoring and analysis of groundwater levels and quality along with a comparison to minimum thresholds and measurable objectives;
- Regular meetings with GSAs to discuss monitoring findings and, as necessary, adaptively adjust management activities to resolve adverse or undesirable groundwater conditions;
- Implementation of necessary projects and management actions, as necessary, based on physical measurements of groundwater conditions at representative monitoring wells;
- Continued implementation of conjunctive use programs.

To achieve the sustainability goals for the Tracy Subbasin by 2042, and to avoid undesirable results over the remainder of a 50-year planning horizon, as required by SGMA regulations, multiple Projects and Management Actions (PMAs) have been identified and considered by the Groundwater Sustainability Agencies (GSAs) in this GSP.

Further, as detailed in the City’s 2020 UWMP and mentioned previously in this section, the City’s groundwater wells are located in the Tracy Subbasin and the City is part of Tracy Subbasin GSA. The City was a part of the development of the GSP for the Tracy Subbasin in 2021. Based on the GSP for the Tracy Subbasin, and statements in the 2020 UWMP, the City’s groundwater supplies are expected to be highly reliable.

As discussed in Section 3.15, Utilities and Service Systems, of the City’s General Plan Draft EIR, the City’s 2020 UWMP documents current and projects future water demands and supplies through 2040. Water supplies to meet future demands include surface water purchased from SSIID, City produced groundwater and recycled water. The City’s water supply is projected to increase by

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about 54 percent from 2020 to 2040, primarily due to implementation of the City's UMWP. Future City groundwater pumping is estimated based on the safe yield for all groundwater pumping within the City's planning area which is not predicted to experience any additional restrictions as a result of the City's GSP.

The City plans to utilize its existing groundwater wells to supply water in the future. As discussed in the City's UWMP the current estimated annual groundwater yield is 4,720 AFY and the City currently has no plans to install additional groundwater wells or expand its groundwater production. Additionally, as described in the UWMP the City's ability to utilize groundwater wells will not be impacted by groundwater levels within the Tracy groundwater basin, and would not require the City to limit groundwater production to maintain a sustainable groundwater budget. Based on the available information, it is anticipated that 100% the City's current estimated groundwater yield is available for the planning horizon.

The proposed Project would not be required to build new municipal water wells to increase capacity of available water.

While the Project area's soils have low and high infiltration rates, much of the groundwater recharge in the basin occurs from irrigation followed by precipitation. Precipitation in the region is 12.2 inches, most of which falls between late October and early May. A portion of this annual rainfall infiltrates the soil and groundwater basin, while a portion is discharged downstream into irrigation canals and the San Joaquin River.

Much of the Project area would be maintained as pervious surface. According to the landscaping plan for the Project, approximately 6.05 acres (approximately 27 percent of the site) of landscaping would be provided on-site. These landscaped areas could maintain groundwater recharge areas. While the proposed Project would reduce the amount of pervious surfaces within the Project area, much of the site would be converted to impervious surface. This would result in opportunities for groundwater recharge after the Project area is fully developed.

For the reasons mentioned above, the proposed Project would not cause the substantial depletion of groundwater supplies or interfere substantially with groundwater recharge. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a *less than significant* impact relative to this topic.

Impact 4.14: Cumulative Impacts Related to Flooding (Less than Significant)

As shown on Figure 3.9-2, the Project site is not within the 100- or 500-year flood hazard zones. The entire Project site is within the 200-year flood zone. However, pursuant to the City Municipal Code, the proposed Project would be required to comply with regulations contained in Chapter 17.17 (200-Year Flood Protection) of the City Municipal Code.

The proposed development, including water quality BMPs and detention basins, is designed to minimize or eliminate increases in runoff from these new impervious surfaces entering surface water courses and storm drains.

Future development projects in the area could result in additional discharges of stormwater during storm events. When combined, these future development projects could, in theory, lead to an incremental increase in peak stormwater runoff, and potential incremental increases in downstream flood elevations. However, in order to ensure that future development projects in San Joaquin County do not increase downstream flood elevations, the County provides restrictions and regulations that govern the use of floodplains, to include development in the floodplain, issuing of development permits, and reviewing of subdivision proposals to ensure the project is safe from flooding and provides for adequate drainage.

Future development within the City of Lathrop must be sited and designed in accordance with the aforementioned City flood damage regulations (i.e., Chapter 17.17 of the City Municipal Code and/or Chapter 13.28 of the City Municipal Code). The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts given that mitigation measures for new development projects require designs that ensure structures are outside the base flood elevation and that storm water flows are maintained to prevent downstream flooding.

Through compliance with these existing regulations, implementation of the proposed Project would have a ***less than significant*** cumulative impact relative to this environmental topic.

LAND USE

The cumulative setting for land use impacts is the City of Lathrop.

Impact 4.15: Cumulative Impact on Communities and Local Land Uses (Less than Significant)

Cumulative land use impacts, such as the potential for conflicts with adjacent land uses and consistency with adopted plans and regulations, are typically site- and Project-specific. Prior to Project authorization, City approval of the proposed Project would require approval of a General Plan amendment to change land uses in the Project Area to very specifically fit the design concept.

The Project site is currently designated Freeway Commercial (FC) by the City of Lathrop General Plan Land Use Map. The proposed Project would require a General Plan Amendment to the City's Land Use Map to change land uses on the Project site. Changes to the Land Use Map would include changing the designation for APN 191-250-06 from A/G (County) to FC (City).

The Project is consistent with most of the applicable General Plan policies that aim to avoid or mitigate an environmental effect. Approval of the General Plan amendment would ensure that the proposed Project would be substantially consistent with the Lathrop General Plan land use requirements and would have a ***less than cumulatively considerable*** impact relative to the Lathrop General Plan. It is noted that consistency with Lathrop General Plan policies and programs related to environmental topics other than land use (aesthetics, agricultural resources, biological resources, cultural resources, geology/soils, hazards, hydrology/water quality, noise, public services, transportation, and utilities) are discussed in the relevant sections of this EIR.

The Lathrop Zoning Code implements the General Plan. The Project site is currently within the jurisdiction of San Joaquin County. The San Joaquin LAFCO will require the Project site to be pre-zoned by the City of Lathrop in conjunction with the proposed annexation. The City's pre-zoning will follow the land use designation intent of General Plan Land Use Map (Freeway Commercial), as such the site will be zoned Highway Commercial (CH). The pre-zoning would go into effect upon annexation into the City of Lathrop.

The City will review each component of the proposed Project as plans (improvement plans, building plans, site plans, etc.) are submitted for final approval to ensure that they are consistent with the City's Zoning ordinance. Overall, the proposed Project, in combination with and past, present, and probable future projects, will have a *less than significant* impact relative to this topic.

NOISE

The cumulative setting for noise impacts consists of the existing and future noise sources that could affect the Project site or surrounding uses.

Impact 4.16: Cumulative Exposure of Existing and Future Noise-Sensitive Land Uses to Increased Noise Resulting from Cumulative Development (Less than Significant)

Traffic Noise: Cumulative noise impacts would occur primarily as a result of increased traffic on local roadways due to the proposed Project, including on-site activities resulting from operation of the proposed Project, as well as operational noise from other development projects in the local and regional vicinity. Table 3.11-10 in Section 3.11, Noise, shows cumulative traffic noise levels with and without the proposed Project. According to Table 3.11-10, the ambient noise environment in the Project vicinity as defined by the analyzed road segments does not exceed 60 dBA L_{dn} at the existing sensitive receptors. Therefore, the significance criterion for all segments is +5.0 dBA. As shown in the table, the greatest increase due to traffic from the proposed Project in the cumulative condition is +0.9 dBA, which is less than the threshold of +5.0 dBA. Therefore, impacts resulting from increased traffic noise would be considered *less-than-significant*.

Construction Noise: Noise generated by construction would be temporary, and would not add to the permanent noise environment or be considered as part of the cumulative context. It is expected that activities involved in construction would generate maximum noise levels ranging from 76 to 90 dB at a distance of 50 feet from the construction area. Noise would also be generated during the construction phase by increased truck traffic on area roadways. A significant Project-generating noise source would be truck traffic associated with transport of heavy materials and equipment to and from construction sites. This noise increase would be of short duration and would likely occur primarily during daytime hours, consistent with the City's Noise Ordinance.

The proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause significant cumulative construction noise impacts. Mitigation Measure 3.11-2 requires that construction activities are limited to certain hours, construction equipment is properly maintained, equipment idling is limited, and stationary equipment is located away from

noise-sensitive uses. Implementation of Mitigation Measure 3.11-2 will reduce this impact to a less than significant level and creates a less than cumulatively considerable contribution toward construction noise associated with the project. The proposed Project would have a ***less than cumulatively considerable*** contribution to this cumulatively considerable impact associated with construction noise.

Cumulative Conclusion: The traffic noise from the proposed Project and other reasonably foreseeable development would not produce noise levels that would exceed City standards for existing sensitive receptors. Project related traffic noise level increases would not exceed the FICON substantial increase criteria. Consequently, the proposed project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative impacts. The proposed project would not have cumulatively considerable impacts associated with noise. Implementation of the proposed project would have a ***less than significant cumulative impact*** and ***less than cumulatively considerable*** incremental contribution to cumulative impacts on noise.

PUBLIC SERVICES AND RECREATION

The cumulative setting would include all areas covered in the service areas of the City of Lathrop, as well as the Lathrop Police Department, Lathrop-Manteca Fire Protection District (LMFD), and the Manteca Unified School District (MUSD). This geographic area was chosen because these service providers would be required to serve the proposed Project and contains those service providers that have the potential to bear a cumulative impact from the proposed project, when the proposed Project is considered together with all past, present, and probably future projects within these providers' service areas.

Impact 4.17: Cumulative Impact on Public Services (Less than Significant)

Under cumulative conditions future local and regional growth will result in increased demand for schools, police protection, fire protection, schools, parks/recreation, and library services. The City and its associated service providers must continue to evaluate the levels of service desired and the funding sources available to meet increases in demand.

The General Plan EIR analyzed impacts to public services (including police protection, fire and emergency services, schools, parks, and libraries), and found that General Plan policies addressed the public services needs of future development resulting from implementation of the General Plan. The specific environmental impact of constructing new facilities could not be determined at the time, but the EIR found that construction and operation of such facilities could potentially cause significant impacts. These potential impacts, however, were addressed and mitigated to the greatest extent feasible by the General Plan policies and mitigation measures included in the EIR.

As noted previously, the Project site has been identified in the City of Lathrop's General Plan for future growth. The General Plan has designated lands within the Project site for development and urban uses on its Land Use Map. The General Plan currently designates the Project site for Freeway

Commercial (FC) uses. Infrastructure needed to support development of the Project area, and the subsequent population, housing and employment increases expected through implementation of the proposed Project, have already been planned and evaluated. Additionally, all lands within the General Plan jurisdiction have been planned to accommodate growth within the City have been evaluated in the General Plan EIR and the City's Municipal Service Review.

Implementation of the proposed Project would contribute toward an increased demand for public services and facilities within the City of Lathrop. It has been determined that future development of the Project site would not directly trigger the need for new facilities for the Lathrop Police Department, LMFD or, or the MUSD. This EIR analyzes the physical environmental effects that may occur as a result of development and introduction of new urban land uses within the Project site. The proposed Project and other past, present, and probable future projects would be subject to all fees that are paid toward the enhancement of public services within the region. Payment of the applicable impact fees by the proposed Project applicant, other project applicants, and ongoing revenues that would come from property taxes, sales taxes, and other revenues generated by the proposed Project and other past, present, and probable future projects, would assist in maintaining existing fire, police, schools, and park services.

Under cumulative conditions, past, present, and probable future projects would result in increased demand for public services and recreational facilities. The impact fees developed and reviewed by the City will recover future development's proportionate share of City-related capital asset costs. Fees, as applied only to new development, represent future development's proportionate share of public services and facilities capital costs. It is important to note that impact fees may not be used to correct existing deficiencies, but may be used to pay for increased demand for public facilities or increased demand upon existing capital facilities provided that those facilities are needed to serve additional development and have the capacity to do so, given relevant level-of-service standards. The construction of public facilities to serve past, present, and probably future projects may be required, which could cause substantial adverse physical environmental impacts. The construction and operation of future public facilities required to serve cumulative development could potentially cause cumulatively significant impacts, but such physical impacts cannot be fully defined at this time because the exact facilities are not proposed or known. Any future public facility would undergo its own environmental review to determine physical environmental impacts once it is contemplated, and proposed for construction.

Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a ***less than significant*** cumulative impact relative to this environmental topic.

TRANSPORTATION AND CIRCULATION

This section considers the impacts of the Project within the context of long-term traffic conditions that may accompany the development of regional circulation system improvements and regional residential and non-residential development. See Section 3.13, Transportation and Circulation, for more information.

Impact 4.18: Under Cumulative conditions, the proposed Project would conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (Less than Significant)

Table 3.13-1 in Section 3.13 presents the established city-wide VMT and the Project generated VMT under baseline and cumulative conditions. VMT generated by the Project is compared to the baseline city-wide average VMT per employee. The proposed Project would result in a combination of net new, pass-by, and diverted vehicle trips and associated VMT per employee.

As shown in Table 3.13-1, under Existing (Baseline) Conditions, based on the type of Project that includes a combination of net new, pass-by, and diverted vehicle trips, the proposed Project would generate an estimated average of 27.8 VMT per employee, which is 79.5% below the baseline city-wide average.

The City's Adopted (September 2022) General Plan Update includes a substantial increase in both employment and retail land uses, which would allow residents to travel shorter distances to access jobs and local services without the need to travel outside of the City of Lathrop. To complement this increase in employment, the City of Lathrop General Plan also includes a substantial increase in residential projects (single-family and multi-family dwelling units) that would complement the employment and retail land uses by supplying workers (employees) and patrons (shoppers) to businesses. The improved jobs-housing balance under the cumulative scenario is consistent with the City's vision for future development of providing local services for a growing population.

Under Cumulative Adopted General Plan Buildout conditions, based on the type of project that includes a combination of net new, pass-by and diverted vehicle trips, the Project would generate an estimated average of 43.1 VMT per employee, which is 79.6% below the cumulative city-wide average.

Therefore, because the proposed Project would generate VMT per employee that is less than existing city-wide VMT by employee or cumulative city-wide VMT by employee, the VMT impact of the proposed Singh Petroleum Investments Project would be ***less than significant***.

Impact 4.19: Under Cumulative conditions, the proposed Project would not adversely affect transit, pedestrian or bicycle facilities (Less than Significant)

The proposed Project would not be expected to noticeably increase bus ridership. The Project would not disrupt or interfere with existing or planned public transit services or facilities. It would not create an inconsistency with policies concerning transit systems set forth in a General Plan or in the local plans.

A detailed review of the facility design of the safety improvement projects confirmed that the proposed Project would improve on the non-existent multi-modal facility by providing sidewalks along the Project frontage on Roth Road and Manthey Road. The City of Lathrop Bicycle Transportation Plan establishes the City's goals and objectives for bicycle travel. The Bicycle Transportation Plan also establishes standards for bicycle facilities and identifies planned bicycle

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network facilities to address the City's bicycle needs. The Circulation Element developed as part of the General Plan contains Policy CIR-2.1 and Implementation Actions CIR-2a and CIR-2g, which support bicycle and pedestrian routes and facilities and creating an active transportation plan supporting the development and funding of bicycle and pedestrian networks.

The City of Lathrop is currently (as of August 2023) preparing an Active Transportation Plan that will identify pedestrian, bicycle and transit improvements in the vicinity of the proposed Singh Petroleum Investments Project site. Based on the location of the future active transportation facilities, Mitigation Measure 3.13-1 in Section 3.13 is recommended.

Overall, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility. The Project, in combination with and past, present, and probable future projects, would not cause a degradation in transit service such that service does not meet performance standards established by the transit operator. The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the various General Plans within San Joaquin County), would not be expected to cause any significant cumulative pedestrian or bicycle facilities impacts. Cumulative impacts to pedestrian and bicycle facilities would be *less than significant*.

UTILITIES

The cumulative setting includes all areas covered in the service areas of the City's wastewater system, water system, stormwater system, and the solid waste collection and disposal services. Under General Plan buildout conditions, the City would see an increased demand for water service, sewer service, solid waste disposal services, and stormwater infrastructure needs.

Impact 4.20: Cumulative Impact on Wastewater Utilities (Less than Significant)

Wastewater service is provided by Lathrop via their network of collection infrastructure and the Manteca Water Quality Control Facility (MWQCF) and the Lathrop Consolidated Treatment Facility (LCTF). In 2016, the City generated a total average annual flow of 1.46 mgd with 0.92 mgd treated at the MWQCF and 0.54 mgd treated at the LCTF as documented in the City's IWRMP.

The project applicant(s) will be required to install/connect and/or fund the necessary collection/transmission infrastructure to ensure the appropriate treatment of all wastewater.

The City of Lathrop owns 14.7% of the MWQCF capacity by contract with the City of Manteca. The City does not participate in the operation of the facility, nor does it receive recycled water from the facility. As discussed in the City's *Municipal Service Review and Sphere of Influence Plan*, and as listed in Table 3.14-1, the City is allocated 1.45 mgd of the total 9.87 mgd facility capacity. The MWQCF is permitted for future expansions of up to 26.97 mgd, of which the City would be allocated a maximum of 14.7% capacity or 3.97 mgd. Treatment at the MWQCF consists of primary sedimentation followed by roughing biotowers, conventional activated sludge, secondary clarification, tertiary filtration, and ultraviolet disinfection. Disinfected tertiary effluent is discharged to the San Joaquin River. A portion of the secondary effluent is not disinfected and is used to irrigate medians and agricultural fields.

Because each project coming on line is required to fund any capacity increase needed to treat its wastewater, and because the existing WDRs allow for substantial increases in capacity without any need for additional Regional Water Quality Control Board approvals, the cumulative impacts of the project, together with past, present, and probable future projects, are less than significant.

The Project by itself does not exceed the existing capacity of the wastewater treatment plant. The Project and any future cumulative projects would be required to secure adequate wastewater treatment capacity/allocation prior to occupancy of any building which would require wastewater treatment services. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a **less than significant** impact relative to this topic.

Impact 4.21: Cumulative Impact on Water Utilities (Less than Significant)

Water demand from past and present development and from agricultural production activities within the boundary of the groundwater basin has contributed to groundwater decline in the region. Future urban development within the groundwater basin has potential to increase groundwater pumping within the groundwater basin. However, where new urban development occurs on land in active agricultural use, the potential exists for urban uses to reduce demand for groundwater relative to agricultural uses, as urban uses often demand less water than is required for agricultural irrigation.

The proposed project would convert agricultural land to urban use. Commercial water use factors are based on the City's 2020 UWMP. According to the 2020 UWMP, commercial land uses demand 860 gallons per day per acre. Therefore, given that the proposed Project would develop approximately 19.63 acres, the estimated water demand for the proposed Project would be approximately 16,881.8 gallons of water per day (or 18.9 AFY).

Water demands for the proposed Project will be served using the City's existing portfolio of water supplies. As shown in Table 3.14-10 in Section 3.14, the City is projected to have adequate supplies to meet projected demands in multiple dry years through 2040. Adequate supplies are anticipated to be available to meet Project demands during the first, second and fifth year of drought at buildout. During the third and fourth year at buildout, the City's total water demand is estimated to exceed total supply by 314 AFY (2%).

There would be sufficient water resources available to provide supply for buildout of the cumulative scenario, so that no significant cumulative effect on the overall water supply would result. Implementation of the proposed Project would have a **less than significant** and **less than cumulatively considerable** impact relative to this topic.

Impact 4.22: Cumulative Impact on Stormwater Facilities (Less than Significant)

Past, pending, and probable future development projects in the area could result in additional discharges of stormwater during storm events. When combined, these future development projects could, in theory, could lead to an incremental increase in peak stormwater runoff and potential incremental increases in downstream flood elevations. However, these past, pending, and probable future development projects in the area would be subject to the Multi-Agency Post-

4.0 OTHER CEQA-REQUIRED TOPICS

Construction Stormwater Standards Manual, the City's Stormwater Management and Discharge Control Ordinance (Chapter 13.28 of the Code), and the City's Impact Fee Ordinance (Chapter 3.20 of the Code) as applicable.

The proposed Project includes storm drainage improvements. Onsite storm drainage would be installed to serve the proposed Project. Stormwater generated on this new impervious surface would be routed through on-site pipes to the proposed drainage retention basin located in the southern portion of the Project site. The drainage retention basin has been sized to accommodate runoff from a 100-year, 24-hour storm event. According to the Phase II Pond Volume Calculations prepared for the Project (Wong Engineers, Inc., September 2022), the pond is designed to take 200 percent of the required volume. Per the engineering design, 100 percent of the volume would percolate within 25 hours and 39 hours, which meets the requirement of maximum detention of 48 hours.

The proposed storm drain system will include water quality features designed in conformance with the standards of the Regional Water Quality Control Board for the Central Valley Region and the City of Lathrop. Stormwater regulations for construction projects using Best Management Practices will be incorporated into the design.

The proposed Project, when considered alongside all past, present, and probable future projects (inclusive of buildout of the Lathrop General Plan), would not be expected to cause any significant cumulative stormwater impacts. The proposed Project would not have cumulatively considerable impacts associated with stormwater. Implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a *less than significant* impact relative to this topic.

Impact 4.23: Cumulative Impact on Solid Waste Facilities (Less than Significant)

The cumulative context for cumulative impacts on solid waste facilities includes the Republic Services service area.

Solid waste generated in the City is disposed at the Forward Landfill. The permitted maximum disposal at the Forward Landfill is 8,668 tons per day. According to the City of Lathrop General Plan EIR, the Forward Landfill has a cease operation date of 2039 and has sufficient capacity to serve the City of Lathrop. Forward Landfill has a remaining landfill capacity of over 22,100,000 tons, and has a current maximum permitted throughput of 8,668 tons per day. The Forward Landfill has a total maximum capacity of 59,160,000 cubic yards. The landfill has a permitted traffic volume of 620 vehicles per day.

According to the City of Lathrop General Plan EIR, if the Forward Landfill were to close in 2039, the City can potentially utilize other landfills such as the Foothill Landfill and the North County Landfill, as locations for solid waste disposal. The permitted maximum disposal at the Foothill Landfill is 1,500 tons per day and the North County Landfill is 825 tons per day. The remaining capacity of these landfills include 125 million cubic yards of solid waste at the Foothill Landfill, with an

estimated cease operation date of 2054, and 35.4 million cubic yards of solid waste at the North County Landfill, which has an estimated cease operation date of 2035.

Solid waste generated by the proposed Project was estimated based on CalRecycle generation rates.¹ The commercial uses are estimated to generate approximately 5 pounds per day per 1,000 square feet. It is estimated that the 30,514 square feet of commercial space would generate 152.6 pounds per day of solid waste. The total annual solid waste generated by the proposed project is estimated to be 5,699 pounds per year (2.8 tons per day). The addition of the volume of solid waste associated with the proposed Project would not exceed the Forward Landfill's remaining capacity.

The proposed Project would be required to comply with applicable state and local requirements including those pertaining to solid waste, construction waste diversion, and recycling. In conclusion, implementation of the proposed Project, in combination with and past, present, and probable future projects, would have a *less than significant* cumulative impact relative to this environmental topic.

4.2 SIGNIFICANT IRREVERSIBLE EFFECTS

LEGAL CONSIDERATIONS

EIRs for certain kinds of projects, as set forth in CEQA Guidelines section 15127, must discuss significant irreversible environmental changes. These projects include those involving (i) the adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency, (ii) the adoption by a Local Agency Formation Commission of a resolution making determinations, or (iii) the parallel preparation of an environmental impact statement under the federal National Environmental Policy Act.

Here, the proposed Project falls into two of these categories, in that it requires the adoption or amendments of plans, policies, and ordinances, and will require actions and determinations by the San Joaquin LAFCO. Irreversible environmental effects are described as:

- The project would involve a large commitment of nonrenewable resources;
- The primary and secondary impacts of a project would generally commit future generations to similar uses (e.g., a highway provides access to previously remote area);
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The phasing of the proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Determining whether the proposed Project would result in significant irreversible effects requires a determination of whether key resources would be degraded or destroyed such that there would

¹ Available at: <https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>

be little possibility of restoring them. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Analysis

Implementation of the proposed Project would result in the conversion of land currently used for agricultural and rural residential uses for the development of commercial uses. Development of the proposed Project would constitute a long-term commitment to these uses. It is unlikely that circumstances would arise that would justify the return of the land to its original condition as agricultural or vacant rural land.

A variety of resources, including land, energy, water, construction materials, and human resources, would be irretrievably committed for the initial construction, infrastructure installation and connection to existing utilities, and their continued maintenance. Construction of the proposed Project would require the commitment of a variety of other non-renewable or slowly renewable natural resources such as lumber and other forest products, sand and gravel, asphalt, petrochemicals, and metals.

Additionally, a variety of resources would be committed to the ongoing operation and life of the proposed Project. The introduction of commercial uses to the Project site will result in an increase in area traffic over existing conditions. Fossil fuels are the principal source of energy and the proposed Project will increase consumption of available supplies, including gasoline and diesel. These energy resource demands relate to initial Project construction, Project operation and site maintenance and the transport of people and goods to and from the Project site.

4.3 SIGNIFICANT AND UNAVOIDABLE IMPACTS

CEQA Guidelines Section 15126.2(b) requires an EIR to discuss unavoidable significant environmental effects, including those that can be mitigated but not reduced to a level of insignificance. The following significant and unavoidable impacts of the proposed Project are discussed in Sections 3.1 through 3.14 and previously in this chapter (cumulative-level). Refer to those discussions for further details and analysis of the significant and unavoidable impact identified below:

- Impact 3.3-1: Project operation could conflict with or obstruct implementation of the District's air quality plan
- Impact 3.3-3: The proposed Project could expose sensitive receptors to substantial pollutant concentrations
- Impact 4.5: Cumulative Impact on the Region's Air Quality

4.4 GROWTH-INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines requires an EIR to "discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which

would remove obstacles to population growth...” In general terms, a project may result in a significant growth inducing impact if it individually or cumulatively with other projects results in any of the actions described in the following examples:

- The project removes an obstacle to growth, such as: the establishment of an essential public service, the provision of new access to an area, or a change in zoning or general plan designation.
- The project results in economic expansion, population growth or the construction of additional housing occurs in the surrounding environment in response to the project, either directly or indirectly.

Existing storm drain, sewer, water, and gas lines/pipes are currently located along Roth Road and Harlan Road. The Project would be served by existing sewer, water and other utility services that have been established on the Project site and in the Project area. The existing utility lines/pipes along Harlan Road would be extended to serve the proposed Project. The proposed utility infrastructure would serve the proposed Project only. Access to the Project would be provided by proposed access points along the existing roads in the vicinity. Therefore, the proposed Project would not require an extension of public services that have the potential to result in or facilitate unplanned growth in the Project area.

Although Manthey Road would be realigned in the future, and Phase II of the proposed Project would accommodate the realignment, the realignment is not a direct result of the proposed Project. Instead, the realignment would occur with or without the proposed Project as part of the Roth Road / I-5 Interchange improvements.

The proposed Project would provide employment opportunities for City and County residents on a site that has been planned for development of freeway commercial uses by the City of Lathrop General Plan and associated EIR. Overall, the additional commercial uses in the City would not have the long-term effect of inducing population growth.

The Project would result in an increase in employment opportunities by creating full-time and part-time job positions. The Project would also generate short-term construction employment opportunities, but these opportunities would not result in substantial population growth in the project region. Therefore, the proposed Project would not result in significant growth inducing impacts.

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5.1 CEQA REQUIREMENTS

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) analyze a reasonable range of feasible alternatives that would feasibly attain most of the basic objectives of the project while reducing or avoiding one or more significant environmental effects of the project. The range of alternatives required in an EIR is governed by a “rule of reason” that requires an EIR to set forth only those alternatives necessary to permit a reasoned choice (CEQA Guidelines Section 15126.6[f]). Where a potential alternative was examined but not chosen as one of the range of alternatives, the CEQA Guidelines require that the EIR briefly discuss the reasons the alternative was dismissed.

Alternatives that are evaluated in the EIR must be potentially feasible alternatives. However, not all possible alternatives need to be analyzed. An EIR must “set forth only those alternatives necessary to permit a reasoned choice.” (CEQA Guidelines, Section 15126.6(f).) The CEQA Guidelines provide a definition for a “range of reasonable alternatives” and, thus limit the number and type of alternatives that need to be evaluated in an EIR.

First and foremost, alternatives in an EIR must be potentially feasible. In the context of CEQA, “feasible” is defined as:

... capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors. (CEQA Guidelines 15364)

The inclusion of an alternative in an EIR is not evidence that it is feasible as a matter of law, but rather reflects the judgment of lead agency staff that the alternative is potentially feasible. The final determination of actual feasibility will be made by the lead agency decision-making body through the adoption of CEQA Findings at the time of action on the Project. (*California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 999-1001 (CNPS); *Mira Mar Mobile Community v. City of Oceanside* (2004) 119 Cal.App.4th 477, 489; see also CEQA Guidelines, §§ 15091(a) (3) [findings requirement, where alternatives can be rejected as infeasible]; 15126.6 [(an EIR) must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation].) The following factors may be taken into consideration in the assessment of the feasibility of alternatives: site suitability, economic viability, availability of infrastructure, general plan consistency, other plan or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (Section 15126.6 (f) (1)).

In addition, agency decisionmakers, in assessing actual feasibility, may legitimately consider whether particular alternatives, compared with a proposed project, represent an undesirable balance of competing policy considerations or fail to attain project objectives to the same degree as a proposed project. (See *City of Del Mar v. City of San Diego* (1982) 133 Cal.App.3d 410, 417 [“feasibility’ under CEQA encompasses ‘desirability’ to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, and technological factors”];

CNPS, supra, 177 Cal.App.4th at p. 1001[same]; *San Diego Citizenry Group v. County of San Diego* (2013) 219 Cal.App.4th 1, 17 [same]; *Sierra Club v. County of Napa* (2004) 121 Cal.App.4th 1490, 1506-1509 [upholding CEQA findings rejecting alternatives in reliance on applicant's project objectives]; *Citizens for Open Government v. City of Lodi* (2012) 296 Cal.App.4th 296, 314-315 [court upholds agency action where alternative selected "entirely fulfill" a particular project objective and "would be 'substantially less effective' in meeting" the lead agency's "goals"]; and *In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Cal.4th 1143, 1165, 1166 (Bay-Delta) ["feasibility is strongly linked to achievement of each of the primary program objectives"; "a lead agency may structure its EIR alternative analysis around a reasonable definition of underlying purpose and need not study alternatives that cannot achieve that basic goal"].)

Special considerations come into play where a project proposes housing. Government Code section 65589.5, subdivision (j), provides that "[w]hen a proposed housing development project complies with applicable, objective general plan, zoning, and subdivision standards and criteria, including design review standards, in effect at the time that the application was deemed complete," the local lead agency may not "disapprove the project or ... impose a condition that the project be developed at a lower density" unless the agency can issue "written findings supported by a preponderance of the evidence on the record" both (a) that "[t]he housing development project would have a specific, adverse impact upon the public health or safety unless the project is disapproved or approved upon the condition that the project be developed at a lower density" and (b) that "[t]here is no feasible method to satisfactorily mitigate or avoid the adverse impact" on public health and safety "other than the disapproval of the housing development project or the approval of the project upon the condition that it be developed at a lower density." In this context, "a "specific, adverse impact" means a significant, quantifiable, direct, and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete."

An earlier version of section 65589.5, subdivision (j), came into play in *Sequoyah Hills Homeowners Assn. v. City of Oakland* (1993) 23 Cal.App.4th 704, 715-716. In that case, the court upheld a lead agency decision making body's rejection, in findings adopted at the time of project approval, of an EIR alternative that would have provided fewer housing units than the proposed project. The city council found the alternative to be infeasible because it "would defeat the project objective of providing the 'the least expensive single-family housing for the vicinity.'" This conclusion was supported by market surveys indicating that the houses constructed under the alternative "would be necessarily more expensive than those of the proposed project." The court also invoked Government Code section 65589.5, subdivision (j), noting that the city council found that there was no substantial evidence that the proposed project would cause any public health or safety impact, and that the agency's record contained no evidence any such impact. The court agreed with the respondent agency that "this enactment is not a legislative will-o'-the-wisp" but rather "is based on a legislative finding that 'The lack of affordable housing is a critical problem which threatens the economic, environmental, and social quality of life in California.'"

In considering the approval of a proposed housing project, local agency decisionmakers must also be cognizant of Government Code section 66300, created by Senate Bill 330 from 2019 (also known as the Housing Crisis Act of 2019). Subdivision (b)(1)(A) of section 66300 generally prevents a city from changing an existing residential general plan, specific plan, and zoning designation predating January 1, 2018, to “a less intensive use” or to reduce the intensity of the designation below what was allowed on January 1, 2018. An exception to this prohibition exists, however, where the city “concurrently changes the development standards, policies, and conditions applicable to other parcels within the jurisdiction to ensure that there is *no net loss* in residential capacity.” (Gov. Code, § 65300 (h)(2)(i)(1) [italics added].)

Finally, a third statute that limits agencies’ discretion to reduce the densities of proposed housing projects is Public Resources Code section 21159.26, which states that, “[w]ith respect to a project that includes a housing development, a public agency may not reduce the proposed number of housing units as a mitigation measure or project alternative for a particular significant effect on the environment if it determines that there is another feasible specific mitigation measure or project alternative that would provide a comparable level of mitigation.”

Equally important to the formulation of a reasonable range of alternatives in an EIR is the need for alternatives to substantially lessen one or more of the significant effects of a proposed project. Although the law does not require agencies to exclusively focus in this context on the significant unavoidable effects of a proposed project, doing so is certainly an effective way to meet this requirement. Here, the following significant and unavoidable impacts of the proposed Project are discussed in Sections 3.1 through 3.3 (project-level) and Chapter 4.0 (cumulative-level):

- Impact 3.3-1: Project operation could conflict with or obstruct implementation of the District’s air quality plan
- Impact 3.3-3: The proposed Project could expose sensitive receptors to substantial pollutant concentrations
- Impact 4.5: Cumulative Impact on the Region's Air Quality

The following analysis of alternatives focuses on significant impacts of the proposed Project, including both those that can be mitigated to a less-than-significant level and those that would remain significant even if mitigation is applied or for which no feasible mitigation is available.

A Notice of Preparation (NOP) was circulated to the public to solicit recommendations for a reasonable range of alternatives to the proposed project. Additionally, a public scoping meeting was held during the public review period to solicit recommendations for a reasonable range of alternatives to the proposed project. No specific alternatives were recommended by commenting agencies or the general public during the NOP public review process.

PROJECT OBJECTIVES

The principal objective of the proposed Project is the approval of the proposed Project that includes development of the 19.63-acre Development Area for regional travel serving uses.

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

Implementation of the Project would involve the development of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators.

The proposed Project identifies the following objectives:

- To develop a property of sufficient size to accommodate all of the following: a travel center that consists of a truck and auto repair shop, convenience store, adjoining fast food restaurants, restrooms, and auto and truck fuel dispensing area able to accommodate cars and semi-trucks per day;
- To provide visitor-serving facilities that maximize the benefits of the Project site's proximity to I-5 for all buildings and tenants and thereby minimize traffic generation on local streets by visitors exiting and reentering the freeway;
- To construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations;
- To accommodate the planned Roth Road / I-5 interchange improvements and realignment of Manthey Road;
- To create new jobs that can be filled wholly or partly by local residents; and
- To maximize tax revenues to the City of Lathrop.

5.2 ALTERNATIVES CONSIDERED IN THIS EIR

Four alternatives to the proposed Project were developed based on input from City staff, and the technical analysis performed to identify the environmental effects of the proposed Project. The alternatives analyzed in this EIR include the following four alternatives in addition to the proposed Project:

- **No Project (No Build) Alternative:** Under this alternative, development of the Project site would not occur, and the Project site would remain in its current existing condition.
- **Reduced Project Size and Intensity Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would reduce the project size and overall intensity of commercial activity and circulation patterns. Changes include: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I.
- **Revised Circulation Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road.

- **Phase II Only Alternative:** Under this alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the Phase I circulation, access and parking portions of the plan would not be approved. Changes include: 1) eliminating Phase I circulation, access and parking from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II.

NO PROJECT (NO BUILD) ALTERNATIVE

Under the No Project (No Build) Alternative development of the Project site would not occur, and the Project site would remain in its current existing condition. The Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), a foundation from a previously demolished abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 square feet (sf) and the impervious area is approximately 2,500 sf. Under this alternative, the Project site would not be annexed to the City and would remain subject to County planning indefinitely. The San Joaquin County General Plan designates the Project site as Agriculture/General (A/G) by the San Joaquin County General Plan Land Use Map.

It is noted that this alternative would fail to meet the majority of the Project objectives.

See Figure 5.0-1.

REDUCED PROJECT SIZE AND INTENSITY ALTERNATIVE

Under the Reduced Project Size and Intensity Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would reduce the project size and overall intensity of commercial activity and circulation patterns. Changes include: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I.

Under this alternative, the Project site would decrease from 22.42 acres to 19.42 acres, with the excess three acres remaining in its current condition. The excess three acres would provide an additional buffer between the residence at 11401 Manthey Road and the proposed uses under this alternative under Phase I. The Phase I interim site access under this alternative would be shifted to the north, which would shift traffic away from the residence at 11401 Manthey Road. These modifications are intended to reduce air quality, noise, and traffic impacts to neighboring properties, by reducing commercial intensity and changing the circulation patterns. Similar to the

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

proposed Project, the circulation improvements for this alternative would be altered during Phase II once Manthey Road is realigned.

It is noted that this alternative would fail to meet all of the Project objectives.

See Figure 5.0-2.

REVISED CIRCULATION ALTERNATIVE

Under the Revised Circulation Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road. This alternative is like the Reduced Project Size and Intensity Alternative, except that it does not eliminate three acres from the footprint of the Project and it also adds the extension of Roth Road with ingress/egress to the Project site.

Under this alternative, the Phase I interim site access would be shifted to the north, which would shift traffic away from the residence at 11401 Manthey Road. Additionally, Roth Road would be extended further west under Phase I, adding a truck ingress/egress to the Project site which would reduce the use of the Manthey Road by trucks during Phase I. These modifications are intended to reduce air quality, noise, and traffic impacts to neighboring properties, by changing the circulation patterns for truck traffic during Phase I. Like the proposed Project, the circulation improvements for this alternative would be altered during Phase II once Manthey Road is realigned.

It is noted that this alternative would fail to meet all of the Project objectives.

See Figure 5.0-3.

PHASE II ONLY ALTERNATIVE

Under the Phase II Only Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the circulation, access and parking Phase I portions of the plan would not be approved. Changes include: 1) eliminating Phase I from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II.

Under this alternative the defined Phase II would be fully constructed. This includes: (1) the realignment of Manthey Road from the existing configuration to run along the western boundary of the Project site with a new connection to Roth Road, (2) improvement of Roth Road to the north of the Project site, and (3) improvements of the interchange for I-5. Because no new buildings are

proposed as part of the Phase II development, all buildings constructed in Phase I would be constructed as part of this alternative as a first and only phase. Also, because there would be no interim improvements, there would be no removal of any interim circulation-related improvements. These modifications are intended to reduce air quality, noise, and traffic impacts to neighboring properties, by changing the circulation patterns.

It is noted that this alternative would fail to meet all of the Project objectives.

See Figure 5.0-4.

5.3 ENVIRONMENTAL ANALYSIS

The alternatives analysis provides a summary of the relative impact level of significance associated with each alternative for each of the environmental issue areas analyzed in this EIR. Following the analysis of each alternative, Table 5.0-1 summarizes the comparative effects of each alternative.

NO PROJECT (NO BUILD) ALTERNATIVE

Aesthetics and Visual Resources

The No Project (No Build) Alternative would leave the Project site in its existing agricultural state and would not result in increases in daytime glare or nighttime lighting. The visual character of the Project site would not change under this alternative compared to existing conditions.

The No Project (No Build) Alternative would avoid the impacts related to aesthetics which would result from the proposed Project altogether. As such, this impact would be reduced when compared to the proposed Project.

Agricultural Resources

The No Project (No Build) Alternative would not result in development of the Project site and agricultural uses could be introduced to the site. As such, this alternative would have no impact on agricultural land, no potential for conflicts with existing agricultural resources, and no potential for conflict with regulations and plans intended to protect those resources. As such, this impact would be reduced when compared to the proposed Project.

Air Quality

Under the No Project (No Build) Alternative, the Project site would not be developed. As described previously within this EIR (Chapter 2.0: Project Description), the Project site is comprised of flat land with ruderal grasses, fallow ground, several trees (located primarily along the northern and eastern boundary of the Project site), an abandoned structure, and impervious area. The footprint of the abandoned structure is approximately 1,430 sf and the impervious area is approximately 2,500 sf. Criteria air pollutant emissions are not currently generated on-site.

Under the No Project (No Build) Alternative, there would be no net change in current levels of emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Biological Resources

Under the No Project (No Build) Alternative, the proposed Project would not be constructed and no habitat would be removed. Zero acres of habitat would be converted under this alternative. Overall, this impact would be reduced when compared to the proposed Project.

Cultural and Tribal Resources

The No Project (No Build) Alternative would result in no additional ground disturbing activities beyond those associated with the occasional mowing of the ruderal grasses on-site. The ground disturbance associated with the occasional mowing would not have the potential to disturb or destroy cultural, tribal, historic, and archaeological resources, or paleontological resources, because the depth of disturbance under the No Project (No Build) Alternative would be significantly less compared to the depths required for utility placement, grading, and overall construction activities associated with the proposed project. While the proposed Project is not anticipated to result in significant impacts to cultural or tribal resources with mitigation, the No Project (No Build) Alternative would result in less potential for impacts to cultural and tribal resources as the entire Project site would continue to be used for agriculture production. As such, this impact would be reduced when compared to the proposed Project.

Geology and Soils

The No Project (No Build) Alternative would result in the Project site remaining in its existing condition. There are no structures subject to seismic or geologic risks, including earthquakes, liquefaction, subsidence, etc. The No Project (No Build) Alternative would not involve new construction that could be subject to seismic, geologic or soils hazards, thus this alternative would have no potential for impact. As such, this impact would be reduced when compared to the proposed Project.

Greenhouse Gases, Climate Change, and Energy

Under the No Project (No Build) Alternative, the Project site would not be developed. Emissions are not currently generated on-site. Under the No Project (No Build) Alternative, there would be no net change in emissions and no potential for a conflict with any adopted plans or policies related to air quality. As such, this impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

Under the No Project (No Build) Alternative, no new land uses would be introduced to the Project site. Additionally, hazardous materials that are currently stored on site would continue to be stored. Because new land uses or significant ground disturbance (outside of the normal agricultural operations) would not occur under this alternative, the potential for hazardous material release on the Project site would be eliminated. For all of these reasons, this impact would be reduced when compared to the proposed Project.

Hydrology and Water Quality

Under the No Project (No Build) Alternative, potential water quality impacts from construction and operation of the proposed Project would be eliminated. While groundwater recharge is not considered a significant impact under the proposed Project, under this alternative, the land will be kept in its present state with the majority of the Project site being used for agricultural purposes. The Project Area has soils with hydrologic ratings of "A" and "C". Group "A" soils have low runoff potential when thoroughly wet, and Group "C" soils have moderately high runoff potential when thoroughly wet.

Surface water pollution is also caused by erosion resulting from agricultural operations. Excessive and improperly managed grading, vegetation removal, quarrying, logging, and agricultural practices all lead to increased erosion of exposed earth and sedimentation of watercourses during rainy periods. In slower moving water bodies these same factors often cause a buildup of siltation, which ultimately reduces the capacity of the water system to percolate and recharge groundwater basins, as well as adversely affecting both aquatic resources and flood control efforts.

The No Project (No Build) Alternative would have a greater chance of groundwater recharge because it would not introduce large areas of impervious surfaces as would the proposed Project. Overall, potential impacts related to hydrology and water quality would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

Land Use

The No Project (No Build) Alternative would not result in changes to on-site land uses and would not result in development of the site. Under this alternative, the Project site would not be annexed to the City and would remain subject to County planning indefinitely. The existing uses are consistent with the existing County land use designation. Because the No Project (No Build) Alternative would not change land use patterns, impacts related to land use would be reduced when compared to the proposed Project.

Noise

Under the No Project (No Build) Alternative, the Project site would not be developed and there would be no potential for new noise sources. As such, this impact would be reduced when compared to the proposed Project.

Public Services and Recreation

Under the No Project (No Build) Alternative, the Project site would remain undeveloped and there would be no increased demand for public services or recreation. The No Project (No Build) Alternative would have a reduced impact when compared to the proposed Project because demand on public services and recreation would be reduced with compared to the proposed Project.

Transportation and Circulation

Table 3.13-1 in Section 3.13 presents the established city-wide vehicle-miles-traveled (VMT) and the Project generated VMT under baseline and cumulative conditions. VMT generated by the Project is compared to the baseline city-wide average VMT per employee. The proposed Project would result in a combination of net new, pass-by, and diverted vehicle trips and associated VMT per employee. As shown in Table 3.13-1, under Existing (Baseline) Conditions, based on the type of Project that includes a combination of net new, pass-by, and diverted vehicle trips, the proposed Project would generate an estimated average of 27.8 VMT per employee, which is 79.5% below the baseline city-wide average. Additionally, the Project would not interfere with the implementation of a planned bicycle facility, pedestrian facility, or transit service/facility.

Under the No Project (No Build) Alternative, no vehicle trips would be generated and, as such, the impacts related to vehicle-miles-traveled (VMT) would be avoided. The No Project (No Build) Alternative would have a reduced traffic impact when compared to the proposed Project.

Utilities

Under the No Project (No Build) Alternative, the Project site would not increase the demand for any utilities, including wastewater services, potable water supplies, or solid waste disposal. There would be no need to construct stormwater drainage infrastructure. Overall, the demand for utilities would be reduced under the No Project (No Build) Alternative when compared to the proposed Project.

REDUCED PROJECT SIZE AND INTENSITY ALTERNATIVE

Aesthetics and Visual Resources

The impacts related to changes to the visual character would be similar with the Reduced Project Size and Intensity Alternative as this alternative is located on the same site and would have similar uses. This alternative would result in a reduced amount of development, a slightly reduced development footprint, and the same types of commercial/retail uses. The impacts of light and glare would still occur. The impacts to the existing visual quality would be similar to the proposed Project as the majority of the Project site would be developed with the same uses as under the proposed Project, just at a reduced density. However, under this alternative, the Project site would decrease from 22.42 acres to 19.42 acres, with the excess three acres remaining in its current condition. The excess three acres would provide additional buffer between the residence at 11401 Manthey Road and the proposed uses under this alternative under Phase I. In addition to an air emissions buffer, this buffer could alleviate aesthetics impacts to the adjacent residence. As such, the Reduced Project Size and Intensity Alternative would have a slightly reduced impact on visual resources when compared to the proposed Project.

Agricultural Resources

Under the Reduced Project Size and Intensity Alternative, the total development footprint would be reduced by three acres compared to the proposed project. As such, a slightly reduced amount of the Project site would be converted from agricultural use to urban use. As such, this alternative

would have slightly reduced impacts to agricultural lands when compared to the proposed Project. Overall, the Reduced Project Size and Intensity Alternative would have slightly reduced impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under the Reduced Project Size and Intensity Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would reduce the project size and overall intensity of commercial activity and circulation patterns. Changes include: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I. Additionally, the Project site would decrease from 22.42 acres to 19.42 acres, with the excess three acres remaining in its current condition. The excess three acres would provide additional buffer between the residence at 11401 Manthey Road and the proposed uses under this alternative under Phase I.

Because construction emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be slightly reduced under this alternative when compared to the proposed Project.

The total operational development, including the fueling stations and building square footage, would be reduced compared to the proposed Project. Trip generation is calculated using a trip generation rate and development size (i.e., number of fueling stations and building square footage). Therefore, the amount of traffic generated from the Project site would be reduced under this alternative compared to the proposed Project. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the decreased trip volume would result in an decreased amount of the mobile source emissions. Because the drive-thru quick service restaurant would be eliminated, the emissions resulting from vehicle idling would be reduced under this alternative. Additionally, the excess three acres that would not be developed under this alternative would provide additional buffer between the residence at 11401 Manthey Road and the proposed uses under this alternative under Phase I. This would further reduce emissions of toxic air contaminants in the vicinity of this existing residence.

Overall, the Reduced Project Size and Intensity Alternative would result in reduced air emissions when compared to the proposed Project.

Biological Resources

The Reduced Project Size and Intensity Alternative would result in development of three fewer acres than the proposed project and the intensity of the developed uses would be decreased. Under this alternative, the Project site would decrease from 22.42 acres to 19.42 acres, with the excess three acres remaining in its current condition. The increase in undeveloped areas could continue to provide habitat (i.e., trees and grass fields) for species. As such, the Reduced Project

Size and Intensity Alternative would result in reduced impacts to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

The Reduced Project Size and Intensity Alternative would result in development of three fewer acres than the proposed project and the intensity of the developed uses would be decreased. Under this alternative, the Project site would decrease from 22.42 acres to 19.42 acres, with the excess three acres remaining in its current condition. This would result in a slightly reduced potential to disturb or destroy cultural, tribal, historic, and archaeological resources. The proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation; the Reduced Project Size and Intensity Alternative would result in slightly reduced potential for impacts to cultural resources.

Geology and Soils

Under the Reduced Project Size and Intensity Alternative, the amount of developed area would be reduced by three acres compared to the Project, and a reduced amount of developed uses would be subject to hazardous geological conditions. Because this alternative would have a slightly reduced disturbance area compared to the proposed Project, this alternative would result in a slightly reduced potential for loss of topsoil and soil erosion compared to the Project. The proposed Project is not anticipated to result in significant impacts from geology and soils with mitigation; the Reduced Project Size and Intensity Alternative would result in a slightly reduced potential for impacts related to geology and soils when compared to the proposed Project.

Greenhouse Gases, Climate Change, and Energy

Under the Reduced Project Size and Intensity Alternative, the Project site would be developed with the same types of uses and structures as the proposed Project, but the intensity would decrease and the amount of developed area would decrease by three acres. As noted previously, the amount of traffic generated from the Project site would be reduced under this alternative compared to the proposed Project. The decreased traffic would result in a decrease in mobile emissions.

The decreased intensity in developed uses would result in a decreased level of operational greenhouse gas emissions when compared to the proposed Project. Because construction greenhouse gas emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be slightly reduced under this alternative when compared to the proposed Project. As such, the greenhouse gas emissions impact would be reduced when compared to the proposed Project.

Hazards and Hazardous Materials

Under the Reduced Project Size and Intensity Alternative, the types of uses on the site would not change when compared to the proposed Project, but the intensity would decrease. This alternative would still use the hazardous materials identified under the proposed Project. As such, this

alternative would have equal impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

Under the Reduced Project Size and Intensity Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be comparable to the proposed Project. However, this alternative would decrease the amount of developed area compared to the proposed Project by three acres. The slight decrease in development area under this alternative would remain pervious to precipitation, which would facilitate groundwater recharge and the natural biofiltration of stormwater. This alternative would still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be slightly reduced under the Reduced Project Size and Intensity Alternative when compared to the proposed Project.

Land Use

Under this alternative, the Project site would be annexed to the City and would remain subject to the same City land use regulations as the project. The Reduced Project Size and Intensity Alternative would require the same land use entitlements as the proposed project. Because the types of uses would be the same as the project, the land use impacts would be the same as the project. Therefore, impacts relating to land use would be equal under this alternative.

Noise

The Reduced Project Size and Intensity Alternative would result in the same type of uses as the project, but the intensity would be reduced compared to the Project; therefore, the vehicular and operational noise impacts associated with this alternative would be reduced compared to the proposed Project. All noise issues would be mitigated, as appropriate, through noise attenuation and best management practices; therefore, under this alternative, noise impacts would be reduced when compared to the proposed Project.

Public Services and Recreation

Under the Reduced Project Size and Intensity Alternative, the majority of the site would be developed with the same types of uses as described in the Project Description, but the size and intensity of the buildings and uses would be reduced. Due to the similar type of uses, the demand for fire protection, police protection, schools, and recreational facilities would be similar to the Project. As such, public services and recreation impacts would be equal when compared to the proposed Project.

Transportation and Circulation

Under the Reduced Project Size and Intensity Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would reduce the project size and overall intensity of commercial activity and circulation patterns.

Changes include: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I. Due to the reduced number of fueling stations, reduction in building size, and elimination of the drive-thru quick service restaurant, the amount of traffic generated from the Project site, and thus total VMT, would be reduced under this alternative. It is also noted that the changes in the site access points under this alternative could reduce potential impacts related to visibility and hazards to pedestrians identified under the proposed project. Overall, under this alternative, transportation and circulation impacts would be reduced when compared to the proposed Project.

Utilities

Under the Reduced Project Size and Intensity Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the following changes would occur: 1) reducing the number of truck and automobile fueling stations by four stations (elimination of two truck and two automobile stations), 2) reducing the 16,688-sf building to 13,000-sf, 3) eliminating the drive-thru quick service restaurant, 4) eliminating one of the proposed dog runs, and 5) shifting the interim site access on Manthey Road to the north under Phase I. Because this alternative would decrease the amount of fueling stations and building square footage compared to the proposed Project, the associated solid waste generation would decrease. As such, solid waste generation from this alternative would decrease.

Water demand and wastewater generation factors are based on building sizes and urban intensity. Similar to solid waste, because this alternative would decrease the amount of fueling stations and building square footage compared to the proposed Project, the associated water demand and wastewater generation would decrease. As such, the water demand and wastewater generation would be reduced compared to the proposed Project.

Overall, this alternative would have decreased wastewater treatment demand, water demand, and solid waste generated.

REVISED CIRCULATION ALTERNATIVE

Aesthetics and Visual Resources

The impacts related to changes to the visual character would be similar with the Revised Circulation Alternative as this alternative is located on the same site, would have similar uses, and would have the same size development area. The impacts of light and glare would still occur. The impacts to the existing visual quality would be similar to the proposed Project as the majority of the Project site would be developed with the same uses as under the proposed Project, just with a reduced building size and shifted site access points. Overall, the Revised Circulation Alternative would have an equal impact on visual resources when compared to the proposed Project.

Agricultural Resources

Under the Revised Circulation Alternative, the total development footprint would be equal to the proposed project. As such, an equal amount of the Project site would be converted from agricultural use to urban use. Overall, the Revised Circulation Alternative would have equal impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under the Revised Circulation Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road. This alternative is like the Reduced Project Size and Intensity Alternative, except that it does not eliminate three acres from the footprint of the Project and it also adds the extension of Roth Road with ingress/egress to the Project site.

Because construction emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be equal under this alternative when compared to the proposed Project.

The total operational development would be similar compared to the proposed Project, but the 16,688-sf building would be reduced to 13,000-sf and the drive-thru quick service restaurant would be removed. Trip generation is calculated using a trip generation rate and development size (i.e., building square footage). Therefore, the amount of traffic generated from the Project site would be slightly reduced under this alternative compared to the proposed Project. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the slightly decreased trip volume would result in a slightly decreased amount of the mobile source emissions. Because the drive-thru quick service restaurant would be eliminated, the emissions resulting from vehicle idling would be reduced under this alternative. Additionally, the Phase I interim site access would be shifted to the north, which would shift traffic away from the residence at 11401 Manthey Road. As such, this alternative would increase the distance between the residence at 11401 Manthey Road and the automobile and truck access area under this alternative under Phase I. This would further reduce emissions of toxic air contaminants in the vicinity of this existing residence.

Overall, the Revised Circulation Alternative would result in reduced air emissions when compared to the proposed Project.

Biological Resources

The Revised Circulation Alternative would result in development of the same site as the proposed project. Under this alternative, all habitat (i.e., trees and grass fields) for species would be converted from rural to urban, similar to the proposed Project. As such, the Revised Circulation

Alternative would result in equal impacts to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

The Revised Circulation Alternative would result in development of the same site as the proposed project. This would result in an equal potential to disturb or destroy cultural, tribal, historic, and archaeological resources. The proposed Project is not anticipated to result in significant impacts to cultural resources with mitigation; the Revised Circulation Alternative would result in equal potential for impacts to cultural resources.

Geology and Soils

Under the Revised Circulation Alternative, the amount of developed area would be the same as the Project, but a slightly reduced amount of developed uses would be subject to hazardous geological conditions. Because this alternative would have an equal disturbance area compared to the proposed Project, this alternative would result in an equal potential for loss of topsoil and soil erosion compared to the Project. The proposed Project is not anticipated to result in significant impacts from geology and soils with mitigation; the Revised Circulation Alternative would result in an equal potential for impacts related to geology and soils when compared to the proposed Project.

Greenhouse Gases, Climate Change, and Energy

Under the Revised Circulation Alternative, the Project site would be developed with the same types of uses and structures as the proposed Project, but the intensity would decrease. As noted previously, the amount of traffic generated from the Project site would be reduced under this alternative compared to the proposed Project. The decreased traffic would result in a decrease in mobile emissions.

The decreased intensity in developed uses would result in a decreased level of operational greenhouse gas emissions when compared to the proposed Project. Because construction greenhouse gas emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be equal under this alternative when compared to the proposed Project. As such, the greenhouse gas emissions impact would be slightly reduced when compared to the proposed Project.

Hazards and Hazardous Materials

Under the Revised Circulation Alternative, the types of uses on the site would not change when compared to the proposed Project. This alternative would still use the hazardous materials identified under the proposed Project. As such, this alternative would have equal impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

Under the Revised Circulation Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be

comparable to the proposed Project. This alternative would still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be equal under the Revised Circulation Alternative when compared to the proposed Project.

Land Use

Under this alternative, the Project site would be annexed to the City and would remain subject to the same City land use regulations as the project. The Revised Circulation Alternative would require the same land use entitlements as the proposed project. Because the types of uses would be the same as the project, the land use impacts would be the same as the project. Therefore, impacts relating to land use would be equal under this alternative.

Noise

The Revised Circulation Alternative would result in the same type of uses as the project, but the following changes would occur. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road. Eliminating the drive-thru restaurant, eliminating one of the dog runs, and reducing the building size would reduce the vehicular and operational noise impacts associated compared to the proposed Project. All noise issues would be mitigated, as appropriate, through noise attenuation and best management practices; therefore, under this alternative, noise impacts would be reduced when compared to the proposed Project.

Public Services and Recreation

Under the Revised Circulation Alternative, the site would be developed with the same types of uses as described in the Project Description, but the size and intensity of the buildings and uses would be reduced. Due to the similar type of uses, the demand for fire protection, police protection, schools, and recreational facilities would be similar to the Project. As such, public services and recreation impacts would be equal when compared to the proposed Project.

Transportation and Circulation

Under the Revised Circulation Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road. This alternative is like the Reduced Project Size and Intensity Alternative, except that it does not eliminate three acres from the footprint of the Project and it also adds the extension of Roth Road with ingress/egress to the Project site. Due to the reduction in building size and elimination of the drive-thru quick service restaurant, the amount of traffic generated from

the Project site, and thus total VMT, would be reduced under this alternative. It is also noted that the changes in the site access points under this alternative could reduce potential impacts related to visibility and hazards to pedestrians identified under the proposed project. Overall, under this alternative, transportation and circulation impacts would be reduced when compared to the proposed Project.

Utilities

Under the Revised Circulation Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but several changes would occur that would change the commercial activity and circulation patterns on the Project site. Changes include: 1) reducing the 16,688-sf building to 13,000-sf, 2) eliminating the drive-thru quick service restaurant, 3) eliminating one of the proposed dog runs, 4) shifting the interim site access on Manthey Road to the north, and 5) extending Roth Road further west, adding a truck ingress/egress to the Project site from Roth Road. Because this alternative would decrease the building square footage compared to the proposed Project, the associated solid waste generation would slightly decrease. As such, solid waste generation from this alternative would slightly decrease.

Water demand and wastewater generation factors are based on building sizes and urban intensity. Similar to solid waste, because this alternative would decrease the building square footage compared to the proposed Project, the associated water demand and wastewater generation would slightly decrease. As such, the water demand and wastewater generation would be slightly reduced compared to the proposed Project.

Overall, this alternative would have slightly decreased wastewater treatment demand, water demand, and solid waste generated.

PHASE II ONLY ALTERNATIVE

Aesthetics and Visual Resources

The impacts related to changes to the visual character would be similar with the Phase II Only Alternative as this alternative is located on the same site, would have the same uses, and would have the same size development area. The impacts of light and glare would still occur. The impacts to the existing visual quality would be similar to the proposed Project as the Project site would be developed with the same uses as under the proposed Project, just with revised circulation improvements and shifted site access points. Overall, the Phase II Only Alternative would have an equal impact on visual resources when compared to the proposed Project.

Agricultural Resources

Under the Phase II Only Alternative, the total development footprint would be equal to the proposed project. As such, an equal amount of the Project site would be converted from agricultural use to urban use. Overall, the Phase II Only Alternative would have equal impacts on agricultural resources when compared to the proposed Project.

Air Quality

Under the Phase II Only Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the circulation, access and parking Phase I portions of the plan would not be approved. Changes include: 1) eliminating Phase I from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II.

Because construction emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be equal under this alternative when compared to the proposed Project.

The total operational development would be identical to the proposed project. Trip generation is calculated using a trip generation rate and development size (i.e., number of fueling stations and building square footage). Therefore, the amount of traffic generated from the Project site would be equal under this alternative compared to the proposed Project. Mobile source air emissions are directly correlated to traffic volume; therefore, it is estimated that the equal trip volume would result in an equal amount of the mobile source emissions.

Under this alternative the defined Phase II would be fully constructed. This includes: (1) the realignment of Manthey Road from the existing configuration to run along the western boundary of the Project site with a new connection to Roth Road, (2) improvement of Roth Road to the north of the Project site, and (3) improvements of the interchange for I-5. As such, this alternative would increase the distance between the residence at 11401 Manthey Road and the automobile and truck access area under this alternative. This would reduce emissions of toxic air contaminants in the vicinity of this existing residence.

Overall, the Phase II Only Alternative would result in slightly reduced air emissions when compared to the proposed Project.

Biological Resources

The Phase II Only Alternative would result in development of the same site as the proposed project. Under this alternative, all habitat (i.e., trees and grass fields) for species would be converted from rural to urban, similar to the proposed Project. As such, the Phase II Only Alternative would result in equal impacts to biological resources when compared to the proposed Project.

Cultural and Tribal Resources

The Phase II Only Alternative would result in development of the same site as the proposed project. This would result in an equal potential to disturb or destroy cultural, tribal, historic, and archaeological resources. The proposed Project is not anticipated to result in significant impacts to

cultural resources with mitigation; the Phase II Only Alternative would result in equal potential for impacts to cultural resources.

Geology and Soils

Under the Phase II Only Alternative, the amount of developed area would be the same as the Project; as such, the same amount of developed uses would be subject to hazardous geological conditions. Because this alternative would have an equal disturbance area compared to the proposed Project, this alternative would result in an equal potential for loss of topsoil and soil erosion compared to the Project. The proposed Project is not anticipated to result in significant impacts from geology and soils with mitigation; the Phase II Only Alternative would result in an equal potential for impacts related to geology and soils when compared to the proposed Project.

Greenhouse Gases, Climate Change, and Energy

Under the Phase II Only Alternative, the Project site would be developed with the same types of uses and structures as the proposed Project, but circulation and site access would be revised. The amount of traffic would be equal to the Project; as such, this alternative would result in an equal amount of mobile emissions. The developed uses would result in an equal level of operational greenhouse gas emissions when compared to the proposed Project. Because construction greenhouse gas emissions are directly correlated to the size of the construction footprint, the construction-related emissions would be equal under this alternative when compared to the proposed Project. As such, the greenhouse gas emissions impact would be equal when compared to the proposed Project.

Hazards and Hazardous Materials

Under the Phase II Only Alternative, the types of uses on the site would not change when compared to the proposed Project. This alternative would still use the hazardous materials identified under the proposed Project. As such, this alternative would have equal impacts from hazards and hazardous materials impacts when compared to the proposed Project.

Hydrology and Water Quality

Under the Phase II Only Alternative, potential construction-related and long-term operational impacts to water quality or waste discharge related to stormwater runoff would be comparable to the proposed Project. This alternative would still include stormwater detention/basins, and provide natural BMPs to reduce pollutants in stormwater runoff. As such, potential impacts related to hydrology and water quality would be equal under the Phase II Only Alternative when compared to the proposed Project.

Land Use

Under this alternative, the Project site would be annexed to the City and would remain subject to the same City land use regulations as the project. The Phase II Only Alternative would require the same land use entitlements as the proposed project. Because the types of uses would be the same as the project, the land use impacts would be the same as the project. Therefore, impacts relating to land use would be equal under this alternative.

Noise

Under the Phase II Only Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the circulation, access and parking Phase I portions of the plan would not be approved. Changes include: 1) eliminating Phase I from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II. All noise issues would be mitigated, as appropriate, through noise attenuation and best management practices; therefore, under this alternative, noise impacts would be equal to the proposed Project.

Public Services and Recreation

Under the Phase II Only Alternative, the site would be developed with the same types of uses as described in the Project Description, but the circulation and site access would be modified. Due to the same type of uses, the demand for fire protection, police protection, schools, and recreational facilities would be similar to the Project. As such, public services and recreation impacts would be equal when compared to the proposed Project.

Transportation and Circulation

Under the Phase II Only Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the circulation, access and parking Phase I portions of the plan would not be approved. Changes include: 1) eliminating Phase I from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project, except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II. Due to the equal building size and uses as the proposed Project, the amount of traffic generated from the Project site, and thus total VMT, would be equal under this alternative compared to the Project.

It is also noted that the potential impacts related to visibility and hazards to pedestrians identified under the proposed project would occur under Phase I only (not Phase II). As such, these potential visibility and hazards to pedestrians would be avoided by this alternative. Overall, under this alternative, transportation and circulation impacts would be slightly reduced when compared to the proposed Project.

Utilities

Under the Phase II Only Alternative, the same types of fueling facilities, traveler amenities, and parking facilities for passing motorists and commercial truck operators as described in the Project Description would be developed, but the circulation, access and parking Phase I portions of the plan would not be approved. Changes include: 1) eliminating Phase I from the Project, and 2) full construction of all onsite and offsite improvements. This alternative is like the proposed Project,

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

except that it does not allow for a two phase development process with interim improvements (specifically it would not allow access on the existing Manthey Road), and instead would require full buildout of Phase II. Because this alternative would result in the same building square footages and uses compared to the proposed Project, the associated solid waste generation would be equal to the Project. As such, solid waste generation from this alternative would be equal.

Water demand and wastewater generation factors are based on building sizes and urban intensity. Similar to solid waste, because this alternative would have equal building square footage compared to the proposed Project, the associated water demand and wastewater generation would be equal. As such, the water demand and wastewater generation would be equal compared to the proposed Project.

Overall, this alternative would have equal wastewater treatment demand, water demand, and solid waste generated.

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA requires that an environmentally superior alternative be identified among the alternatives that are analyzed in the EIR. If the No Project (No Build) Alternative is the environmentally superior alternative, an EIR must also identify an environmentally superior alternative among the other alternatives (CEQA Guidelines Section 15126.6(e)(2)). The environmentally superior alternative is that alternative with the least adverse environmental impacts when compared to the proposed Project.

Table 5.0-1 presents a comparison of the impacts from the proposed Project relative to the Alternatives. As shown in the table, the No Project (No Build) Alternative is the environmentally superior alternative. However, as required by CEQA, when the No Project (No Build) Alternative is the environmentally superior alternative, the environmentally superior alternative among the others must be identified. The Reduced Project Size and Intensity Alternative would reduce or slightly reduce impacts related to 11 environmental issues and would have equal impacts related to three environmental issues. The Revised Circulation Alternative would reduce or slightly reduce impacts related to five environmental issues and would have equal impacts related to nine environmental issues. The Phase II Only Alternative would result slightly reduced impacts to two environmental issues and would have equal impacts related to 12 environmental issues. Therefore, the Reduced Project Size and Intensity Alternative would be the next environmentally superior alternative.

See Section 5.4 for a comparative evaluation of the objectives for each alternative.

TABLE 5.0-1: COMPARISON OF ALTERNATIVE PROJECT IMPACTS TO THE PROPOSED PROJECT

<i>ENVIRONMENTAL ISSUE</i>	<i>NO PROJECT (NO BUILD) ALTERNATIVE</i>	<i>REDUCED PROJECT SIZE AND INTENSITY ALTERNATIVE</i>	<i>REVISED CIRCULATION ALTERNATIVE</i>	<i>PHASE II ONLY ALTERNATIVE</i>
Aesthetics and Visual Resources	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Agricultural Resources	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Air Quality	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Slightly Less (4 th Best)
Biological Resources	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Cultural and Tribal Resources	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Geology and Soils	Less (Best)	Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Greenhouse Gases, Climate Change and Energy	Less (Best)	Less (2 nd Best)	Slightly Less (3 rd Best)	Equal (4 th Best)
Hazards and Hazardous Materials	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Hydrology and Water Quality	Less (Best)	Slightly Less (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Land Use and Population	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Noise	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Equal (4 th Best)
Public Services and Recreation	Less (Best)	Equal (2 nd Best)	Equal (3 rd Best)	Equal (4 th Best)
Transportation and Circulation	Less (Best)	Less (2 nd Best)	Less (3 rd Best)	Slightly Less (4 th Best)
Utilities	Less (Best)	Less (2 nd Best)	Slightly Less (3 rd Best)	Equal (4 th Best)

GREATER = GREATER IMPACT THAN THAT OF THE PROPOSED PROJECT

LESS = LESS IMPACT THAN THAT OF THE PROPOSED PROJECT

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

5.4 COMPARATIVE EVALUATION OF THE ALTERNATIVES' ABILITY TO SATISFY PROJECT OBJECTIVES

This section examines how each of the alternatives selected for more detailed analysis meets the Project objectives.

1. *To develop a property of sufficient size to accommodate all of the following: a travel center that consists of a truck and auto repair shop, convenience store, adjoining fast food restaurants, restrooms, and auto and truck fuel dispensing area able to accommodate cars and semi-trucks per day.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not be developed to accommodate all of the following: a travel center that consists of a truck and auto repair shop, convenience store, adjoining fast food restaurants, restrooms, and auto and truck fuel dispensing area able to accommodate cars and semi-trucks per day. Both the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative would meet this objective, but to a lesser extent than the proposed Project as both alternatives would reduce the building size and eliminate the drive-thru quick service restaurant. Because the Phase II Only Alternative is identical to Phase II of the proposed Project and would include the same uses as the proposed Project, this alternative would meet this objective.

5.0 ALTERNATIVES TO THE PROPOSED PROJECT

- 2. To provide visitor-serving facilities that maximize the benefits of the Project site's proximity to I-5 for all buildings and tenants and thereby minimize traffic generation on local streets by visitors exiting and reentering the freeway.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not provide visitor-serving facilities that maximize the benefits of the Project site's proximity to I-5 for all buildings and tenants and thereby minimize traffic generation on local streets by visitors exiting and reentering the freeway. Both the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative would meet this objective as both would provide visitor-serving facilities that maximize the benefits of the Project site's proximity to I-5 for all buildings. Because the Phase II Only Alternative is identical to Phase II of the proposed Project and would include the same uses as the proposed Project at the same location, this alternative would meet this objective.

- 3. To construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations.*

The No Project (No Build) Alternative would not satisfy this Project objective because under this alternative, the Project site would remain in its current existing condition and would not construct a facility with access to adequate existing or anticipated utility infrastructure to support planned operations. Both the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative would meet this objective as both would construct a facility with access to utility infrastructure. The Phase II Only Alternative would meet this objective because a facility with access to adequate existing or anticipated utility infrastructure to support planned operations would be constructed.

- 4. To accommodate the planned Roth Road / I-5 interchange improvements and realignment of Manthey Road.*

The No Project (No Build) Alternative would satisfy this objective because the planned Roth Road / I-5 interchange improvements and realignment of Manthey Road could be accommodated with a vacant site. Both the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative would meet this objective as both would be able to accommodate the interchange and realignment improvements. Because the Phase II Only Alternative is identical to Phase II of the proposed Project, this alternative would meet this objective.

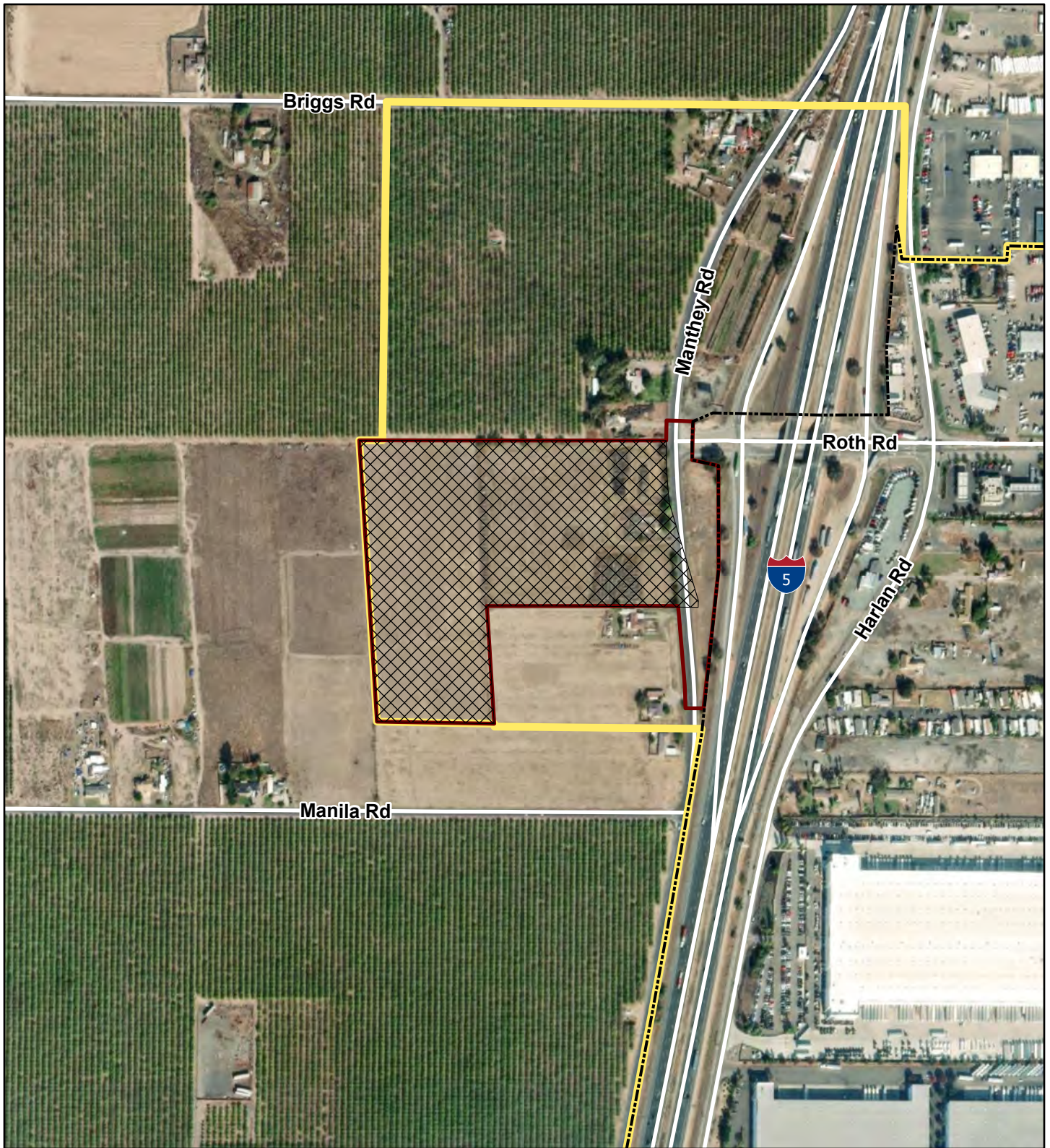
- 5. To create new jobs that can be filled wholly or partly by local residents.*

The No Project (No Build) Alternative would not satisfy this objective because this alternative would not create jobs. All of the remaining alternatives would meet this objective; however, due to the reduction in size and intensity of the proposed uses included in the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative, these two alternatives would meet this objective to a lesser extent than the proposed Project.

6. *To maximize tax revenues to the City of Lathrop.*

The No Project (No Build) Alternative would not result in any tax revenues for the City as the site would not be developed as part of this alternative. All of the remaining alternatives would meet this objective; however, due to the reduction in size and intensity of the proposed uses included in the Reduced Project Size and Intensity Alternative and the Revised Circulation Alternative, these two alternatives would meet this objective to a lesser extent than the proposed Project.

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SINGH PETROLEUM INVESTMENTS PROJECT

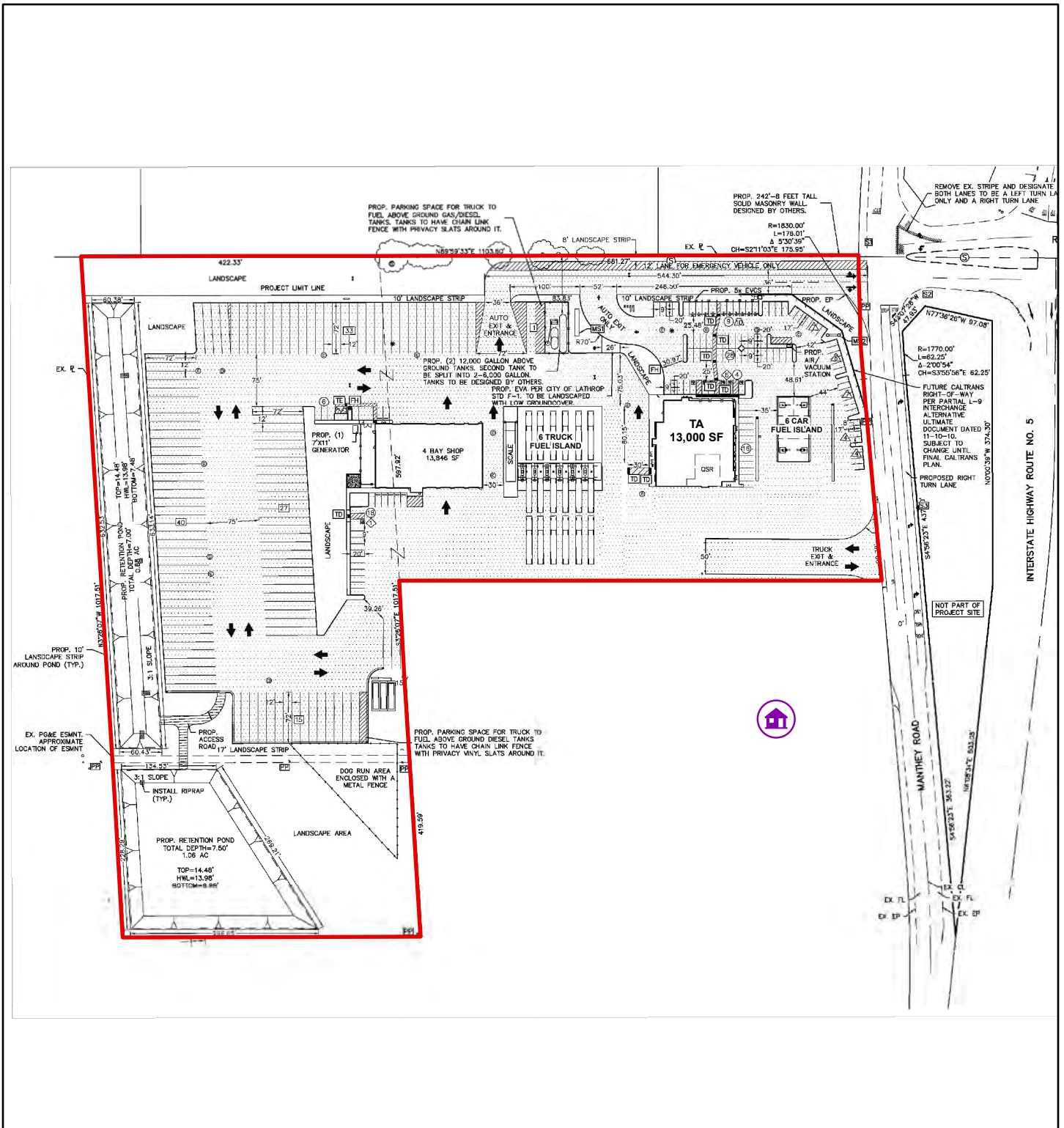
Figure 5.0-1. No Project (No Build) Alternative

Legend

- Project Site / Annexation Area
- Development Area
- Lathrop City Limits
- Lathrop Sphere of Influence



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SINGH PETROLEUM INVESTMENT PROJECT

Legend



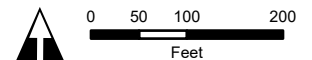
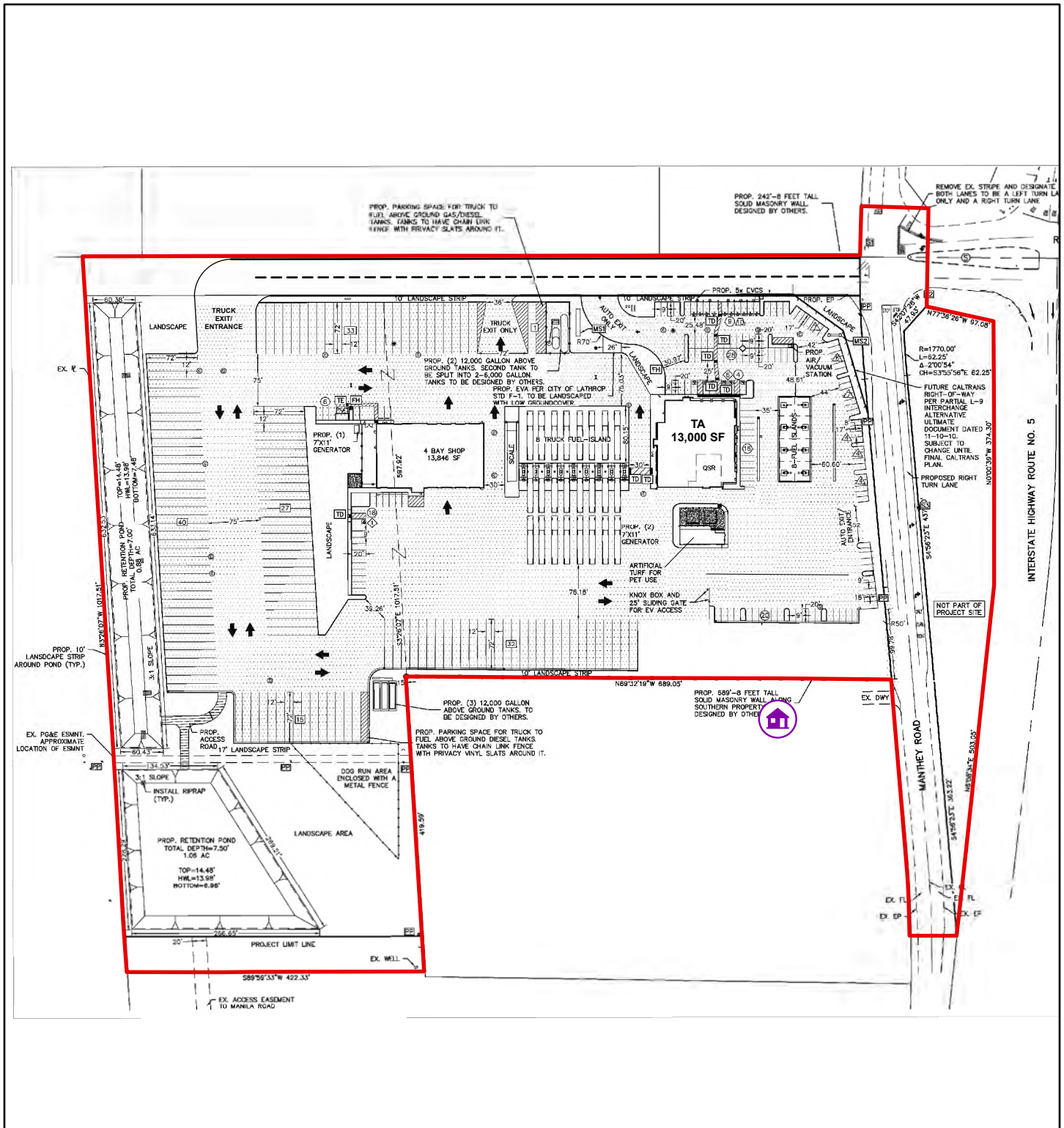
-  Reduced Project Alternative Project Boundary
-  Existing Home (11401 S Manthey Rd, Lathrop)

Figure 5.0-2. Reduced Project Size and Intensity Alternative



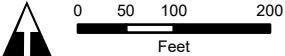
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SINGH PETROLEUM INVESTMENT PROJECT

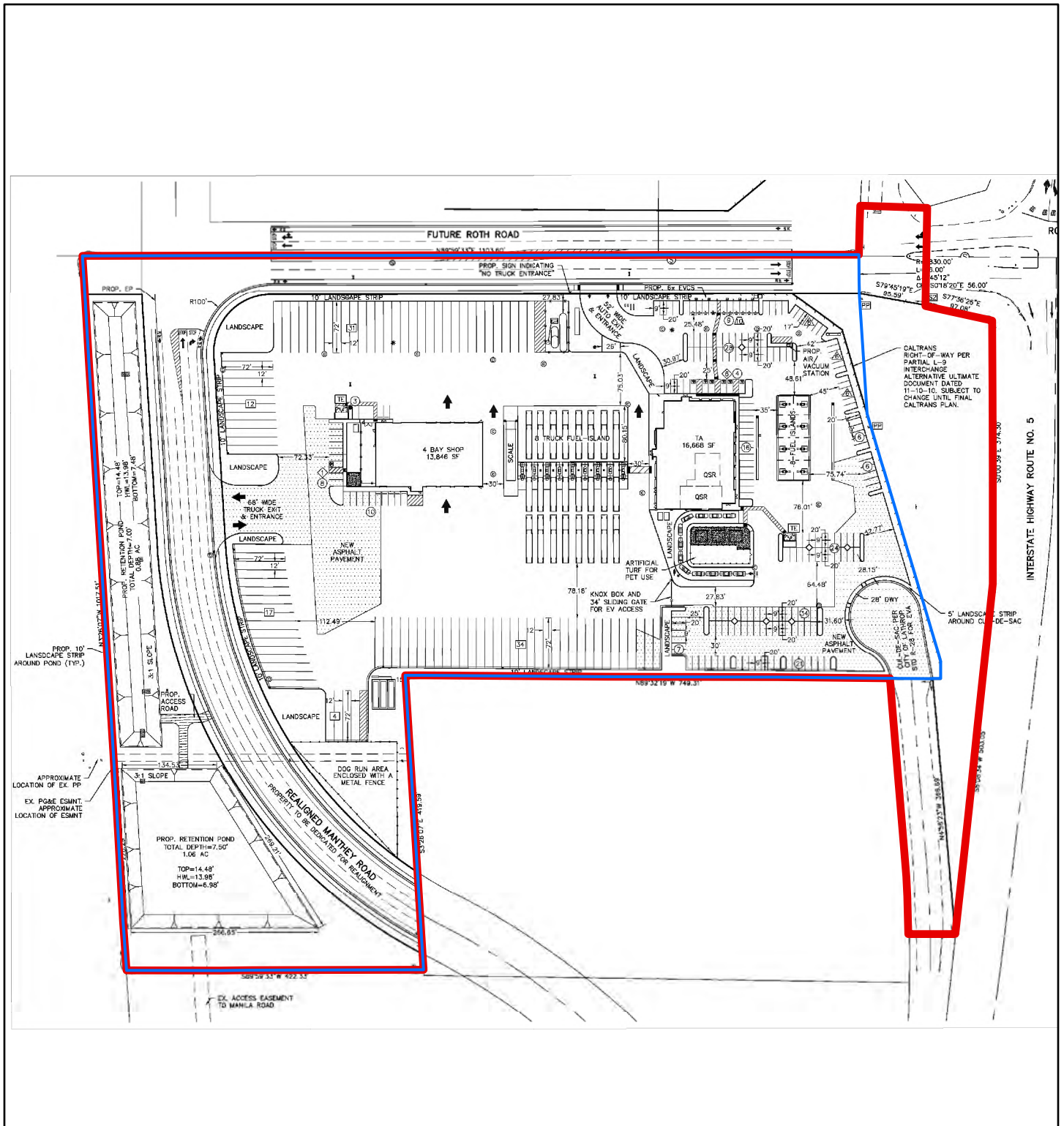
Figure 5.0-3. Revised Circulation Alternative

- Legend**
- Revised Circulation Alternative Project Boundary
 - Existing Home (11401 S Manthey Rd, Lathrop)



Sources: WONG ENGINEERS, April 14, 2023, edited by De Novo Planning Group to show approximate locations of Alternative 3 project features. Map date: January 30, 2024.

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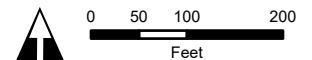


SINGH PETROLEUM INVESTMENT PROJECT

Figure 5.0-4. Phase II Only Alternative

Legend

- Development Area
- Project Area/Annexation Area



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