Delano to Pixley 6-lane with Pavement Rehabilitation

Rehabilitate pavement and construct an additional northbound and southbound lane on State Route 99 from Delano to Pixley in Kern and Tulare counties

06-KER-56.4/57.6; 06-TUL-0.0/13.5
Project EA/ID Number 06-0W790/0617000307; 06-0W791/0621000142
State Clearinghouse Number 2020110281

Draft Environmental Impact Report/ Environmental Assessment

Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code 327 and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans.

February 2023

Caltrans

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Environmental Impact Report/Environmental Assessment, which examines the potential environmental impacts of the alternatives being considered for the proposed project in Tulare County, California. Caltrans is the lead agency under the National Environmental Policy Act (NEPA), and Caltrans is the lead agency under the California Environmental Quality Act (CEQA). The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, the potential impacts of each of the alternatives, and the proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans district office at 1352 West Olive Avenue, Fresno, California 93728, the Pixley Branch Library at 300 North Street, Pixley, California 93256, and the Delano Public Library at 925 10th Avenue, Delano, California 93215. The Caltrans district office is open to the public from 8:00 a.m. to 5:00 p.m. Monday through Friday. Pixley Branch Library will be open to the public from 9:30 a.m. to 5:00 p.m. Monday and Wednesday, from 9:30 a.m. to 8:00 p.m. on Tuesday and Thursday, from 9:30 a.m. to 3:30 p.m. on Friday, and 10:00 a.m. to 2:00 p.m. on Saturday. Delano Branch Library is open to the public from 11:00 a.m. to 7:00 p.m. Tuesday to Thursday and 9:00 a.m. to 5:00 p.m. on Saturday.
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Javier Almaguer, Senior Environmental Scientist, District 6 Environmental, California Department of Transportation, 2015 East Shields Avenue Suite 100, Fresno, California 93726. Submit comments via email to: Javier.almaguer@dot.ca.gov.
- Attend the Open House on April 5, 2023. Please visit the project website on the Caltrans page for more information.
- Submit comments by the deadline: May 8, 2023.

What happens next:

After comments are received from the public and reviewing agencies, Caltrans, as assigned by the Federal Highway Administration, may 1) give environmental approval to the proposed project, 2) do additional environmental studies, or 3) abandon the project. If the project is given environmental approval and funding is appropriated, Caltrans could design and construct all or part of the project.

Printing this document: To save paper, this document has been set up for two-sided printing (to print the front and back of a page). Blank pages occur where needed throughout the document to maintain proper layout of the chapters and appendices.

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Javier Almaguer, District 6 Environmental, 2015 East Shields Avenue, Suite 100, Fresno, California 93726; 559-287-9320 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

State Clearinghouse Number: 2020110281
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Rehabilitate pavement and construct an additional northbound and southbound lane on State Route 99 from Delano to Pixley in Kern and Tulare counties

DRAFT ENVIRONMENTAL IMPACT REPORT/ ENVIRONMENTAL ASSESSMENT

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 U.S. Code 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

Diana Gomez
District Director
California Department of Transportation
NEPA and CEQA Lead Agency

2-21-2023
Date

The following individual can be contacted for more information about this document:

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Summary

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327 for more than five years, beginning July 1, 2007 and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Barack Obama on July 6, 2012 amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding [MOU]) with the Federal Highway Administration. The NEPA Assignment MOU became effective October 1, 2012, and was renewed on May 27, 2022, for a term of 10 years. In summary, Caltrans continues to assume Federal Highway Administration responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, the Federal Highway Administration assigned, and Caltrans assumed all the U.S. Department of Transportation (U.S. DOT) Secretary’s responsibilities under NEPA. This assignment includes projects on the state highway system and Local Assistance Projects off the state highway system within the State of California, except for certain categorical exclusions that the Federal Highway Administration assigned to Caltrans under the 23 U.S. Code 326 Categorical Exclusion Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

The proposed project is a joint project by Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). Caltrans is the lead agency under the National Environmental Policy Act and the lead agency under the California Environmental Quality Act. In addition, the Federal Highway Administration’s responsibility for environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code Section 327 (23 USC 327) and the Memorandum of Understanding, which was renewed on May 27, 2022, for a term of 10 years, and executed by Federal Highway Administration and Caltrans.

Some impacts determined to be significant under the California Environmental Quality Act may not lead to a determination of significance under the National Environmental Policy Act. Because the National Environmental Policy Act is concerned with the significance of the project as a whole, often a “lower level” document is prepared for the National Environmental Policy Act. One of the most common joint document types is an Environmental Impact Report/Environmental Assessment, which this document is.

The next step in the environmental process is to circulate the Environmental Impact Report/Environmental Assessment to the public for a 45-day review period. After receiving comments from the public and reviewing agencies, a Final Environmental

Impact Report/Environmental Assessment will be prepared. Caltrans may prepare additional environmental and/or engineering studies to address comments. The Final Environmental Impact Report/Environmental Assessment will include responses to comments received on the Draft Environmental Impact Report/Environmental Assessment and will identify the preferred alternative. If the decision is made to approve the project, a Notice of Determination will be published for compliance with California Environmental Quality Act, and Caltrans will decide whether to issue a Finding of No Significant Impact or require an Environmental Impact Statement for compliance with the National Environmental Policy Act. A Notice of Availability of the Finding of No Significant Impact will be sent to the affected units of federal, state, and local government, and to the State Clearinghouse in compliance with Executive Order 12372.

Most of the project area is situated on State Route 99 within Tulare County, along with a small portion of State Route 99 within Kern County. The Kern County portion of the project area includes the five-lane highway segment located in the city of Delano, beginning at the Cecil Avenue overcrossing and continuing north to the County Line Road overcrossing at the Kern County and Tulare County line. The Tulare County portion of the project area starts at the County Line Road overcrossing and continues north on State Route 99 to just north of the community of Pixley; this segment of State Route 99 is a 4-lane highway. The project area also includes the communities of Earlimart and Teviston along with many agricultural parcels adjacent to State Route 99.

The project area is rural with a strong agricultural influence along both sides of State Route 99. The median and shoulders are typical of State Route 99, with oleander bushes in the median along with small groups of eucalyptus trees near the edge of the Caltrans right-of-way. Access to and from State Route 99 is very limited along this segment, mainly confined to just a few points in Delano, Earlimart, Teviston and Pixley. State Route 155 in Delano is the nearest east-west truck route at the southern end of the project area; its counterpart is State Route 190 in Tipton at the northern end.

The purpose of this project is to improve operational deficiencies, improve freight movement, provide for future growth, and repair and extend the service life of the existing pavement along this segment of State Route 99. Enhancement of this segment of State Route 99 is needed to improve truck freight throughput and travel time reliability. Trucks account for about 22 percent of the Annual Average Daily Traffic (AADT) within this corridor, compared to an average of 9 percent truck traffic throughout other areas of California. The 2020 California Freight Mobility Plan estimates that more than 463 million tons of goods moved into, out of, and within the region in 2010. That number is expected to grow to more than 800 million tons by 2040. The project area, which includes the three largest agriculture-producing counties in the nation, is quickly becoming a critical logistical connection with a growing number of mega-distribution centers and new manufacturing/processing facilities.

The proposed project is on State Route 99, from post miles 56.4 to 57.6 in Kern County and post miles 0.0 to 13.5 in Tulare County. State Route 99 is currently a five-lane divided highway throughout the Kern County portion of the project limits and a 4-lane divided highway throughout the Tulare County portion. The project would construct an additional lane, shoulder, and concrete barrier in the existing median throughout the project limits along with pavement rehabilitation of the existing highway. The width of the median ranges from 36 feet to 54 feet. The outside shoulder is 10 feet wide, and the inside shoulder ranges from 2 feet to 5 feet wide. The posted speed limit is 70 miles per hour.

A Build Alternative and a No-Build Alternative are under consideration for this project. The Build Alternative proposes to improve State Route 99 from a 4-lane highway to a 6-lane highway and rehabilitate the existing lanes. The additional lanes would be added within the median by constructing an inside 12-foot lane and 10-foot inside shoulder in both directions. The existing lanes and outside shoulders would be rehabilitated by removing 0.25 foot of existing asphalt concrete pavement and replacing it with 0.15 foot of hot-mix asphalt, capped with 0.10 foot of rubberized hot-mix asphalt. The on-ramps and off-ramps within the project limits would be paved with hot-mix asphalt.

The No-Build Alternative would keep the existing facility in its present condition. The No-Build Alternative would not address the deteriorating level of service of the existing facility and would make the already congested highway unable to preserve acceptable facility operation. The Caltrans Traffic Operational Analysis from March 2021 indicates that the highway northbound mainline would have insufficient capacity to accommodate the forecasted traffic demand, and delay would significantly increase by 2047.

As the lead agency for both National Environmental Policy Act and California Environmental Quality Act environmental studies, Caltrans determined an Environmental Impact Report for the California Environmental Quality Act and an Environmental Assessment for the National Environmental Policy Act were the appropriate level of documentation for this project. Both are combined in this one joint document.

The environmental studies conducted for the project area include analysis of a wide range of environmental topics. See Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization and/or Mitigation Measures for a listing of the topics studied, with broader discussion for topics where potential impacts have been identified. Chapter 3, which contains the California Environmental Quality Act Evaluation, provides the California Environmental Quality Act-specific significance determinations as well as the 3.3 Climate Change section.

The environmental process includes coordination with many public agencies having planning or resource-specific jurisdiction within the project area. See Chapter 4 Comments and Coordination for more information about Caltrans' outreach efforts. See Chapter 6 Distribution List for a list of agencies sent a copy of the Notice of Preparation for the Environmental Impact Report.

The following table summarizes the potential impacts identified for the alternatives.

S.1 Summary of Potential Impacts from the Build Alternative and No-Build Alternative

Potential Impact	Build Alternative	No-Build Alternative
Growth	Project would accommodate growth and not influence growth.	No impact
Community Character and Cohesion	An established community would not be affected.	No impact
Environmental Justice	The Build Alternative would not cause disproportionately high and adverse effects on any minority or low-income populations.	No impact
Utilities and Emergency Services	Relocate utilities. Temporary intermittent service during construction.	No impact
Vehicle Miles Traveled (VMT)	47.9 million annual Vehicle Miles Traveled would be generated by the project.	No impact
Visual/Aesthetics	Less than significant impact with replacement planting.	No impact
Hazardous Waste and Materials	Aerially deposited lead concentrations for soils along the northbound and southbound shoulder are hazardous, which means that soils can either be disposed of at a hazardous waste disposal facility or reused on-site under a clean soil cover that is at least 1-foot thick.	No impact
Air Quality	Not a Project of Air Quality Concern. Meets federal and state conformity standards for ambient air emissions in 2020 Regional Transportation Plan/ Sustainable Communities Strategies.	No impact
Noise and Vibration	Noise abatement in the form of soundwalls proposed for four locations.	No impact
Energy	There would be temporary energy consumption during construction for the use of construction equipment and on-road vehicles.	There would be no energy impacts. Congestion and other transportation inefficiencies are likely to continue and result in an increase in energy consumption.

Potential Impact	Build Alternative	No-Build Alternative
Threatened and Endangered Species	Less than significant impacts with the implementation of avoidance and minimization measures for the Swainson's hawk.	No impact
Climate Change	Less than significant impact with the implementation of greenhouse gas reduction strategies.	No impact

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, is the lead agency under the National Environmental Policy Act (known as NEPA). Caltrans is also the lead agency under the California Environmental Quality Act (known as CEQA).

Caltrans proposes to improve a segment of State Route 99 from a 4-lane highway to a 6-lane highway and rehabilitate the existing lanes. The project begins in Kern County in the City of Delano at post mile 56.4 and ends at post mile 13.5, approximately 0.2 mile north of Avenue 100 (Court Avenue) in the community of Pixley in Tulare County. See Figure 1-1 Project Vicinity Map and Figure 1-2 Project Location Map. Total length of the project is about 14 miles, and the additional northbound and southbound lanes would be constructed in the median.

This project is included in the "Route 99 Business Plan: Final Report" (March 2020), prepared by Caltrans District 6 and District 10 in coordination with the Metropolitan Planning Organizations (MPOs) within the two districts. The report was initiated in 2005 and updated in 2013. The aim of the report was to state Caltrans' and the Metropolitan Planning Organizations' long-term goals for State Route 99 and a corresponding list of categorized projects to achieve those goals—thereby streamlining funding decisions for corridor improvements. The report identified all the project improvements needed to attain the main corridor objective to better support efficient and safe transport of goods and people by achieving full highway standards on State Route 99, followed by creating a minimum 6-lane highway through the San Joaquin Valley.

South of the project limits in Kern County, State Route 99 is a 6-lane facility. North of the project, State Route 99 is a 4-lane facility from the project area to just south of the State Route 99 and State Route 198 interchange near Avenue 280. Several projects are either in construction or various planning stages that would help continue the statewide objective of eliminating 4-lane segments on State Route 99 in the San Joaquin Valley, including Tulare County. Table 1-1 below shows the remaining 4-lane segments on State Route 99 within Tulare County and the proposed actions that would lead to implementation of the 6-lane facility. The proposed project would also eliminate the existing bottleneck, improve operations, and reduce congestion.

Table 1-1 Tulare County 4-Lane Segments with Proposed Improvement Projects

Begin Post Mile/ End Post Mile	Funding Status	Proposed Open-to-Traffic Year	Project Name
0.0/13.5	Fully Funded	2027	Delano to Pixley 6-Lane with Pavement Rehabilitation
13.5/25.4	Unfunded	2030	To be Determined-Pixley to South of Tulare
25.4/30.6	Partially Funded	2027	Tulare 6-Lane and Paige Avenue Interchange
30.6/35.2	Fully Funded	2023	Tagus 6-Lane

This project is included in the new Tulare County Association of Governments Regional Transportation Plan and Federal Transportation Improvement Program.

The Delano to Pixley 6-lane with Pavement Rehabilitation project will be programmed into two separate projects due to funding. The pavement rehabilitation will be funded through the State Highway Operation and Protection Program. The construction of northbound and southbound lanes in the median of State Route 99 will be funded through Senate Bill 1, the State Transportation Improvement Program, the Regional Surface Transportation Program, and the Coronavirus Response and Relief Supplemental Appropriations Act.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to improve operational deficiencies, improve freight movement, provide for future growth, and repair and extend the service life of the existing pavement along this segment of State Route 99.

1.2.2 Need

Enhancement of this segment of State Route 99 in Tulare County is needed to improve truck freight throughput and travel time reliability. In addition, the pavement within the project limits is distressed and needs repair. Addressing the repair of the existing pavement would decrease the exposure of Caltrans maintenance crews over time and decrease the risk to their safety.

Trucks account for approximately 22 percent of the Annual Average Daily Traffic (AADT) count within the San Joaquin Valley corridor, compared with

the State average of 9 percent truck traffic. The 2020 California Freight Mobility Plan estimates over 463 million tons of goods moved into, out of, and within the region in 2010. This is expected to grow to more than 800 million tons by 2040.

The San Joaquin Valley produced $36.8 billion in agricultural commodities in 2020. The corridor includes eight of the top 10 agriculture-producing counties in California and the three largest agriculture-producing counties in the nation producing 25 percent of the nation's food supply. The San Joaquin Valley was responsible for $5.8 billion in dairy milk production alone in 2020, higher than any other state. About 250 different crops are grown in the San Joaquin Valley, and agricultural exports are shipped throughout the nation and internationally to over 100 countries. Also, the San Joaquin Valley is becoming a major logistical connection, with a growing number of mega-distribution centers and new manufacturing/processing facilities.

Traffic Volumes

State Route 99 Mainline

A Traffic Operational Analysis was completed in March 2021 along with additional traffic data prepared by the Caltrans District 6 Traffic Operations and Planning units. The studies provided estimated Annual Average Daily Traffic (AADT) volume data for the 2018 Existing year and predicted traffic volume data for the 2027 Open-to-Traffic Year and the 2047 Planning Horizon Year.

Caltrans uses Annual Average Daily Traffic volumes to measure the carrying capacity of roadway features, such as roadway segments, intersections, and interchanges. Average Daily Traffic volume numbers represent the traffic demand or the volume of traffic using a roadway in a 24-hour period. Roadways are designed to handle specific volumes of traffic. When the capacity of a roadway is exceeded, the effectiveness of the roadway is reduced.

Level of Service

Highway traffic flow is defined in terms of Level of Service (LOS). For highways, there are six defined Levels of Service, ranging from LOS A to LOS F. LOS A represents free traffic flow with low traffic volumes and high speeds. LOS F represents forced flow operations at low speeds due to traffic volumes that exceed the capacity of the facility.

Table 1-2 summarizes traffic data under the existing, future build and no-build scenarios within the proposed project limits. A comparison of the future build and no-build scenarios for both the 2027 opening and 2047 design years show the projected total and truck traffic volumes would remain the same. Traffic flow, as represented by speed and Level of Service, also shows no difference between build and no-build scenarios in the morning period for 2027 and 2047. However, the build scenario shows an improvement over the no-build scenario

in travel speed for 2027 and 2047 in the afternoon, and Level of Service for 2027 and 2047 in the afternoon.

Table 1-2 Summary of Long-Term Operational Impacts

Scenario	Total Annual Average Daily Traffic	Truck Annual Average Daily Traffic	Speed (miles per hour) Morning/ Afternoon	Level of Service Morning/ Afternoon
2018 Existing	63,000	12,052	65/65	B/C
2027 No Build	69,000	13,200	65/63	B/C
2027 Build	69,000	13,200	65/65	B/B
2047 No Build	86,000	16,452	65/56	B/E
2047 Build	86,000	16,452	65/65	B/C

Independent Utility and Logical Termini

Federal Highway Administration regulations (23 Code of Federal Regulations 771.111[f]) require that the action evaluated:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope.
- Have independent utility or independent significance (be usable and be a reasonable expenditure even if no additional transportation improvements in the area are made).
- Not restrict consideration of alternatives for other reasonably foreseeable transportation improvements.

The project has logical termini and is of sufficient length to address the deficiencies identified along the mainline freeway segment. The environmental scope of the environmental review is sufficient to address all potential impacts of this project on the environment. Traffic data show the demand for increased capacity and operational deficiencies to occur within the post mile limits of the project. The northern limits of this project at post mile 13.5 are logical because it is just beyond the community of Pixley and the on-off ramps that serve Terra Bella Avenue, Court Avenue and North Park Drive. The southern limits of the project are logical because it would tie in with the existing 6-lane facility in Kern County.

As shown in Table 1-1 above, the Delano to Pixley 6-Lane with Pavement Rehabilitation Project is one of four priority projects identified in the Tulare County Association of Governments Regional Transportation Plan. These projects would combine to close the remaining 4-lane gaps on State Route 99 in Tulare County. Currently, there are no active projects within the 12-mile gap between the Delano to Pixley 6-Lane with Pavement Rehabilitation Project and the Tulare 6-Lane and Paige Avenue Interchange Project,

however, Caltrans is working on a comprehensive multimodal corridor plan for State Route 99 through the entire San Joaquin Valley. The corridor plan will be consistent with the Caltrans corridor planning guidebook and current Caltrans policies and priorities.

The project has independent utility and is a reasonable expenditure as the improvements address the identified deficiencies, even if no other transportation improvements are made. The project would not restrict the consideration of alternatives for reasonably foreseeable transportation improvements. The Tulare County Association of Governments is working in partnership with Caltrans, local jurisdictions, and the private sector to identify transportation corridors and projects that will provide a multimodal system for Tulare County.

1.3 Project Description

The project is on State Route 99, from post miles 56.4 to 57.6 in Kern County, and post miles 0.0 to 13.5 in Tulare County. State Route 99 is currently a 4-lane divided highway throughout the Tulare County portion of the project limits. It is proposed to construct an additional lane, shoulder and concrete barrier in the existing median and rehabilitate the pavement.

Figure 1-1 Project Vicinity Map

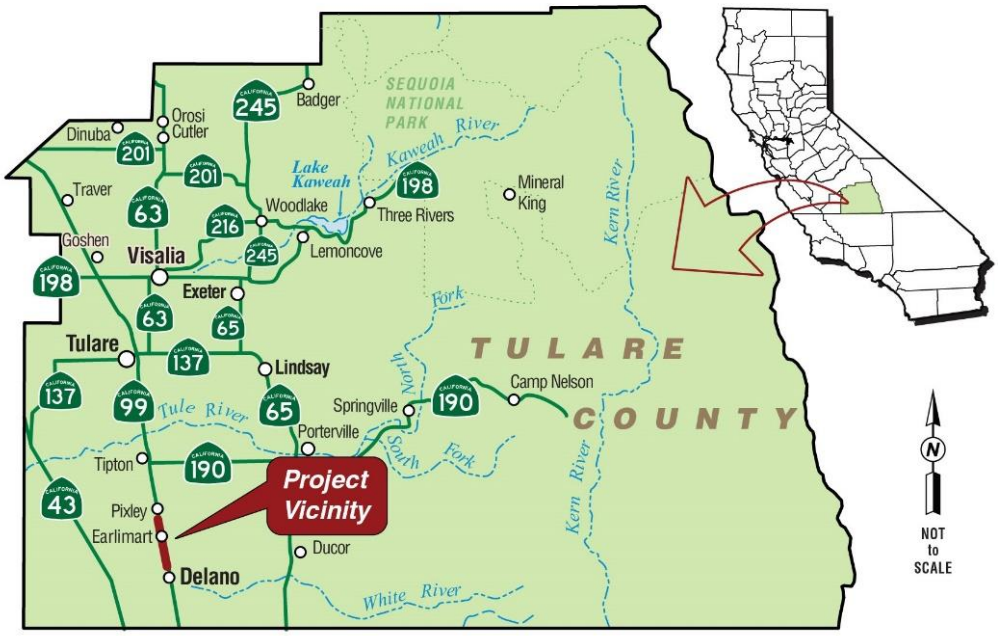
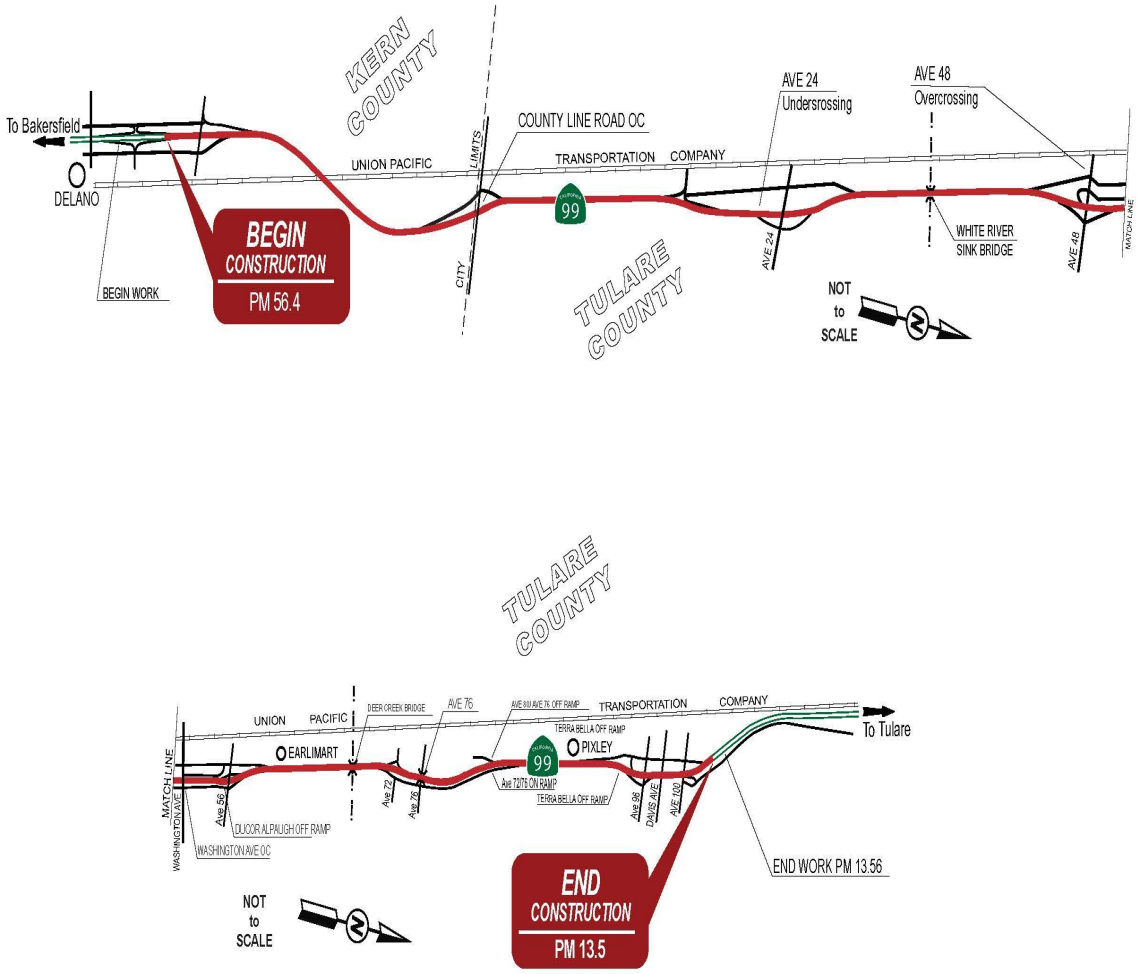


Figure 1-2 Project Location Map



1.4 Project Alternatives

A Build Alternative and No-Build Alternative are being considered for this project.

1.4.1 Build Alternatives

The Build Alternative proposes to improve State Route 99 from a 4-lane highway to a 6-lane highway and rehabilitate the existing lanes. The additional lanes would be added within the median by constructing an inside 12-foot lane and 10-foot inside shoulder in both directions. The existing lanes and outside shoulders would be rehabilitated by removing 0.25 foot of existing asphalt concrete and replacing it with 0.15 foot of hot-mix asphalt, capped

with 0.10 foot of rubberized hot-mix asphalt. The on-ramps and off-ramps within the project limit would be paved with hot-mix asphalt.

The roadway profile under the structures would be modified to provide standard vertical clearance where required between the following post miles: 57.53 to 0.05, 6.05 to 6.25, 6.53 to 6.73, 7.07 to 7.27, and 12.0 to 13.0. The existing drainage system, pumping systems, and Transportation Management Systems would be upgraded within the project limit. Drainage system upgrades to culvert facilities would include entire replacement of the culvert, relining of the barrel section of the culvert, repairing culverts joints, replacing end sections or replacing culvert headwalls.

Existing bridges at the Avenue 76 undercrossing for the northbound and southbound directions would have an interior median added to connect the two bridges together.

All the oleanders within the project limits would be removed from the median to accommodate the additional lanes. Therefore, replanting of vegetation would be required after the project is completed. Replanting would occur along the right-of-way fence at either side of State Route 99.

During construction, two lanes would remain open for both the southbound and northbound directions. Construction would be completed in a total of four stages as described below; the first, second and third stages of construction would each require two phases. The fourth stage of construction would require only one phase.

The first stage of construction would reconstruct the outside shoulder to allow it to carry traffic, and construct the inside lane, shoulder and median barrier. The second stage would shift traffic to the median and the median crossover detour, and continually reinforced concrete pavement lanes would be constructed on both the northbound and southbound directions. The third stage of construction would place an overlay of hot-mix asphalt on both the northbound and southbound lanes. Finally, the fourth stage of construction would reconstruct the inside lane and shoulder within the Kern County portion of the project limits. The project is slated to start in the fall of 2024 and finish in the fall of 2026.

This project contains a number of standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project. These measures are addressed in more detail in the Environmental Consequences sections found in Chapter 2.

1.4.2 No-Build (No-Action) Alternative

This alternative would keep the existing facility in its present condition. The No-Build Alternative would not address the deteriorating Level of Service of the existing facility and would not help the already congested highway operate more effectively. The Caltrans Traffic Operational Analysis from March 2021 indicates that the highway northbound mainline would have insufficient capacity to accommodate the forecasted traffic demand, and delay would significantly increase by 2047.

1.5 Alternatives Considered But Eliminated From Further Discussion

Alternatives for reducing Vehicle Miles Traveled were discussed by the Project Development Team. One alternative considered directing funding toward an investment in rail projects within the region. The funding would have helped facilitate the transfer of freight, which would normally be moved on State Route 99 using large trucks, over to the rail system. The main benefits of such investment would have been the improvement of freight movement along this section of State Route 99 and removal of a large percentage of traffic from the road system. The Project Development Team had the following concerns with this alternative, however, and chose not to move forward with the alternative:

1. The railroads are privately owned entities; it would be improper for Caltrans, as a State department, to invest in their operations.
2. Senate Bill 743 does not require mitigation for truck traffic and, yet, the purpose and need for this project is to relieve freight-related congestion. Freight vehicles take up more space on the roadway than other vehicles, which magnifies the rate of congestion in locations where freight volumes as a percentage of total traffic volumes are high. A State Route 99 Comprehensive Multimodal Corridor Plan for the Central Valley would be prepared in accordance with the 2019 Corridor Planning Guidebook to develop a shared vision and implementation plan for the State Route 99 corridor that aligns with state goals and policies while meeting the needs of agency partners, stakeholders, and the traveling public.
3. A feasibility study conducted for the Central Valley region points to high costs when moving freight by rail, which does not provide an economic incentive to make this switch. Southern California and San Diego are the top origins and destinations for Central Valley goods. The two regions make up 56 percent of California’s population, 87 percent of containerized port traffic in California, and more than 30 percent of national container traffic. Still, while there are out-of-state rail services in the Central Valley, there are almost no rail freight services between the Central Valley and Southern California. Perishable goods such as dairy products and fresh

fruit and vegetables bound for Southern California and San Diego aren't feasible to transport by rail as travel times increase significantly compared to trucks.

4. Thirty miles northwest of Tejon Pass, along the Sierra, is the Tehachapi Pass gateway. The pass features the only rail corridor connecting the Central Valley and Southern California. Nearly all rail freight shipments on this route are connecting to out-of-state destinations in the Midwest. If a rail freight shuttle from the Central Valley could connect to this service, at a competitive rate, the potential for a diversion of Central Valley truck freight to rail might be possible. In addition, the early operating segment of the High-Speed Rail project may free up capacity on the rail mainline between Merced and Bakersfield, providing an opportunity for containerized freight shuttle services from Merced, with possible stops at container loading ramps in Fresno and Shafter, then eventually connecting to the Midwest. This long-term rail strategy would not meet the purpose and need for this project.

1.6 Permits and Approvals Needed

The following permits, licenses, agreements, and certifications are required for project construction:

Agency	Permits, Licenses, Agreements, and Certifications	Status
San Joaquin Valley Unified Air Pollution Control District	National Emissions Standards for Hazardous Air Pollutants Notification	The contractor would be required to notify the San Joaquin Valley Unified Air Pollution Control District 10 days before construction starts.
Tulare County Regional Transit Agency	Cooperative Agreement	To be determined prior to the final environmental document.
Kings County Regional Transit Agency	Cooperative Agreement	To be determined prior to the final environmental document.
Kings Area Regional Transit	Cooperative Agreement	To be determined prior to the final environmental document.

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis done for the project, the following environmental issues were considered, but no adverse impacts were identified. So, there is no further discussion of these issues in this document.

- Coastal Zone—The project is not within the coastal zone boundary as defined by the California Coastal Act of 1976, and Public Resources Code Division 20, Section 30103(b) defining the coastal zone boundary.
- Community Character and Cohesion—An established community would not be affected because the project would not be taking right-of-way. The project would be constructing additional northbound and southbound lanes in the median and therefore not impacting community character and cohesion.
- Farmland—The project would not impact farmland because the project limits are completely within the Caltrans right-of-way.
- Geology/Soils/Seismic/Topography—No project impacts related to geology, soils, seismicity or topography are anticipated. There are no major topographic or geologic features within the project area. (U.S. Geological Survey Website, January 2022, Updated Paleontological Identification Report, August 2021)
- Hydrology and Floodplain—A Location Hydraulic Study was prepared for the project. The project does not consist of a longitudinal encroachment or a significant encroachment on the base floodplain as defined in Section 650 105q of the Code of Federal Regulations 23. (Location Hydraulic Study, June 2021)
- Invasive Species—Multiple invasive species were found within the project area. As a result of the project, these invasive species would likely be removed in some areas of occurrence within the project footprint. However, to prevent the further spread of the plant species, a noxious weed special provision would be followed during construction. (Updated Natural Environment Study-Minimal Impacts, January 2022)
- Natural Communities—A California Natural Diversity Database query did not identify any natural communities of special concern that could occur within the project area. So, no potential impacts on natural communities of special concern are expected, and further discussion is not warranted. (Updated Natural Environment Study-Minimal Impacts, January 2022)
- Paleontology—According to the October 2020 Paleontological Identification Report completed for the project, the extent and intensity of the proposed excavation

would be limited to shallow soils. As a result, discovery of scientifically significant fossils is unlikely. (Updated Paleontological Identification Report, August 2021)

- Plant Species—Due to the high level of current and historic disturbance and habitat modification, the project area does not support appropriate conditions for any rare or special-status plant species, and no further discussion is warranted. (Natural Environment Study-Minimal Impacts, January 2022)
- Relocations and Real Property Acquisition—There would be no property acquisitions or relocations because the additional northbound and southbound lanes on State Route 99 would be within Caltrans' existing right-of-way. (Updated Caltrans Draft Project Report, June 2022)
- Timberland—There are no timber resources in the project vicinity. (Updated Caltrans Draft Project Report, June 2022)
- Water Quality and Storm Runoff—Deer Creek is the only natural water body that crosses State Route 99 at post mile 8.7, but there would be no in-channel or bridge work. The construction activities are not expected to cause long-term water quality impacts on surface and groundwater. Appropriate best management practices would be selected during the Design and Construction phase to address all potential water quality impacts that could occur during construction. (Water Quality Compliance Memorandum, August 2021)
- Wetland and Other Waters—No impacts to wetland and other waters are anticipated. The project would not involve work in the waterways. There are no wetlands within the project limits. (Natural Environment Study-Minimal Impacts, January 2022)
- Wild and Scenic Rivers—There is no federal- or state-designated Wild and Scenic River within or near the project limits. (National Wild and Scenic Rivers Website, January 2022)
- Wildfire—The project is not considered to be in an area identified as vulnerable to wildfires. (Caltrans District 6 Climate Change Vulnerability Map, January 2022)

2.1 Human Environment

2.1.1 Existing and Future Land Use

This section describes the current and planned land use within the project limits. Land use planning within the project limits is mostly a function of the Tulare County and Kern County General Plans. State law requires seven elements to be addressed in the general plan: land use, circulation, housing, natural resources, noise, open space, and public safety. Land use plans and zoning are the main methods of managing local land use. These mechanisms govern the type and density of development in accordance with the Tulare County General Plan.

Affected Environment

The project lies in Kern and Tulare counties. The project starts in the City of Delano at post mile 56.4 in Kern County and continues to post mile 13.5 in Tulare County about 0.2 mile north of Avenue 100 (Court Avenue) in the community of Pixley. State Route 99 is a north-south travel route through the Central Valley and serves the local population and provides a throughway for public travel.

Existing Land Use

Within the project area, in the City of Delano, the zoning map classifies the land use surrounding the proposed project as Industrial, General Commercial, Single-Family Residential, and Light Multiple-Family Residential (Delano General Plan). Outside the city limits heading north, the land use is mostly agricultural with scattered rural residences. Through the unincorporated community of Earlimart, the zoning is Low-Density Residential, General Commercial, and Highway Commercial (Earlimart Community Plan). The project ends in the unincorporated community of Pixley where the zoning is Light and Heavy Manufacturing, General Commercial, and Multiple-Family Residential (Pixley Community Plan). The Union Pacific Railroad runs on the west side of State Route 99 throughout the project limits.

Future Land Use

Future land use in the area is expected to remain agricultural in the rural parts of the project. In the unincorporated communities of Pixley, Teviston, and Earlimart, construction of new development has been steady. According to the Pixley Community Plan, 1,000 acres of vacant parcels are available for development; out of that number,160 acres are proposed for residential uses. Pixley's forecast of the 2015 population was 3,531, with an estimated increase of 982 from 2015 to 2034. The community is anticipated to have 246 new residential units to meet the forecasted population demand. Pixley has available land for the projected housing demand, but no timetable has been set. In the upper north portion of Pixley, 664.4 acres of planned industrial and commercial land use have been set aside to encourage the development of a sub-regional industrial-commercial corridor. Pixley has no planned or proposed development currently.

The Tulare County General Plan describes the unincorporated community of Teviston as a hamlet that shares many of the characteristics of a community, but on a smaller scale. Teviston has no planned or proposed development at this time.

Earlimart has a proposed development of single-family homes on 44.95 acres at the intersection of Avenue 48 and Road 128, approximately 1.4 miles from the project area. The parcel is currently zoned as agricultural, and there is no anticipated construction date at this time.

The City of Delano is in the process of updating the City General Plan, to be completed in 2023. The City of Delano General Plan Update identifies prioritizing opportunity sites for development within the city limits or within the sphere of influence. Opportunity sites are used as part of an economic development strategy to create

jobs, stimulate economic activity and jump-start projects within a community. Opportunity sites can help individuals to realize capital gains and invest in certain low low-income areas through tax deferrals and reductions. Opportunity sites can support commercial and retail land use, industrial land use, multi-family and single-family land use among several other land use designations.

The City of Delano Economic Development Department has identified six “Priority Projects” that comprise about 230 acres throughout the city of Delano. The “Priority Projects” include but are not limited to: retail shops, restaurants, office space, entertainment, manufacturer facilities, wholesale facilities, shipping facilities, industrial facilities and automobile related facilities. The “Priority Projects” are at various stages of development.

Environmental Consequences

The project would be built within the existing highway right-of-way. The Build Alternative would not directly affect existing homes and businesses along State Route 99. However, constructing additional northbound and southbound lanes on State Route 99 would accommodate the anticipated growth that may occur in the surrounding unincorporated communities and cities (see Section 2.1.4, *Growth*).

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.2 Parks and Recreational Facilities

Regulatory Setting

The Park Preservation Act (California Public Resources Code Sections 5400-5409) prohibits local and state agencies from acquiring any property that is in use as a public park at the time of acquisition, unless the acquiring agency pays sufficient compensation or land, or both, to enable the operator of the park to replace the park land and any park facilities on that land.

Affected Environment

Pixley Park sits just north of Pixley on the east side of State Route 99 and encompasses about 22 acres. The park is open to the public, and activities include birdwatching, disc golf, dog walking (on leash), photography, picnicking, soccer and softball/baseball. The park also has a playground set among many large trees and grass areas. Pixley Park is a public park administered by the Tulare County Parks and Recreation Division and is protected by the Park Preservation Act.

Environmental Consequences

There are parks and recreational facilities within the project vicinity that are protected by Section 4(f) of the Department of Transportation Act of 1966, including Pixley Park. However, this project would not “use” those facilities as defined by Section 4(f). Please refer to Chapter 2, Section 2.2.3, Noise, for more details.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.3 Consistency with State, Regional and Local Plans and Programs

Affected Environment

Land use and zoning are guided by general plans and other agency plans for the cities and the unincorporated areas of the project corridor. The following plans contain guidelines for developing the study area: State Route 99 Business Plan, Tulare County General Plan, Kern County General Plan, and Tulare County Regional Transportation Plan.

Caltrans Plan

The State Route 99 corridor is a critical goods movement corridor, with trucks accounting for 22 percent of the total traffic. The project is consistent with the goals and objectives stated in the Caltrans State Route 99 Business Plan, first conceived in 2005. The 2005 Route 99 Business Plan documents the intent to expand the remaining 4-lane sections of State Route 99 to 6 lanes. The business plan provided the first comprehensive corridor management document with consensus agreement between Caltrans Districts 6 and 10 and all eight Metropolitan Planning Organizations (MPOs) along State Route 99. The business plan and its 2013 update outlined a strategic approach to achieving the functional goals of transforming the route into a safe and efficient trade corridor. In alignment with current Caltrans priorities, the Metropolitan Planning Organizations would work with Caltrans to develop the State Route 99 Caltrans Multimodal Corridor Plan.

Regional

The Tulare County General Plan, adopted in 1964, was last updated in August 2012. According to the general plan, the safe and efficient transport of people and goods within the county is of critical importance to the well-being of residents and the economic viability of the county; and the mobility of people and goods would continue to be one of the important issues the county has to face in the future (Transportation and Circulation Section, 2030 Update Tulare County General Plan).

Development of the Tulare County transportation system is guided by the Regional Transportation Plan. This plan is a 25-year planning document required by state and federal law that is comprehensively updated every four years and includes programs to better maintain, operate and expand transportation. The Tulare County Regional Transportation Plan would be amended to include the project before the final environmental document. The Tulare County Regional Transportation Plan/Federal Transportation Improvement Plan covers the entirety of the project because the project originates in Tulare County; the additional project area in Kern County is included for Logical Termini, and the improvements (restriping) would not trigger the need for air quality conformity.

Environmental Consequences

The project would be included in the Tulare County Regional Transportation Plan as a capacity-increasing project. The project would consist of constructing an additional northbound and southbound lane on State Route 99 from post miles 56.4 to 57.6 in Kern County and post miles 0.0 to 13.5 in Tulare County. The project would also be listed in the Tulare County Federal Transportation Improvement Program as a 4-lane to 6-lane improvement. Air quality conformity would be covered under the Tulare County Federal Transportation Improvement Plan, based on where the project originates.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.4 Growth

Regulatory Setting

The Council on Environmental Quality regulations, which established the steps necessary to comply with the National Environmental Policy Act of 1969, require evaluation of the potential environmental effects of all proposed federal activities and programs. This includes a requirement to examine indirect effects, which may occur in the areas beyond the immediate influence of a proposed action and at some time in the future. The Council on Environmental Quality regulations (40 Code of Federal Regulations 1508.8) refer to these consequences in land use, economic vitality, and population density, which are all elements of growth.

The California Environmental Quality Act also requires the analysis of a project's potential to induce growth. The California Environmental Quality Act Guidelines (Section 15126.2[d]) require that environmental documents "…discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment…"

Affected Environment

A "first-cut screening" was completed for the project. The screening is the first phase of the evaluation of the project and asks specific questions to identify potential growth-related impacts that would result from the project. The screening analyzed the area of the City of Delano and the communities of Pixley, Teviston and Earlimart.

The project would construct an additional northbound and southbound lane on State Route 99 through mostly rural areas of Tulare and Kern counties; however, the project area is not remote. The project's post miles begin within the Delano city limits. The project proposes to construct an additional lane in each direction of State Route 99 to meet the needs of planned growth next to and surrounding the project area.

Environmental Consequences

Caltrans conducted a preliminary analysis to determine whether there would be potential for project-related growth. Caltrans considered the interrelated factors of accessibility, project type, project locations, and growth pressure. The screening process took into consideration the General Plans for Tulare County and the City of Delano.

For the following reasons, based on the first-cut screening, no further analysis is required: The Build Alternative would not change access to State Route 99. The project would construct an additional lane in each direction to relieve congestion, enhance operational efficiency, and improve the level of service. This type of project is consistent with accommodating growth and not influencing growth. The area is within the jurisdiction of Tulare and Kern counties, with strong policies that ensure the continuation of intensive agricultural activity.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.5 Environmental Justice

Regulatory Setting

All projects involving a federal action (funding, permit, or land) must comply with Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, signed by President William J. Clinton on February 11, 1994. This order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law. Low income is defined based on the Department of Health and Human Services poverty guidelines. For 2018, this was 25,900 for a family of four.

All considerations under Title VI of the Civil Rights Act of 1964, and related statutes, have also been included in this project. Caltrans' commitment to upholding the mandates of Title VI is demonstrated by Caltrans' Title VI Policy Statement, signed by the Director (see Appendix A).

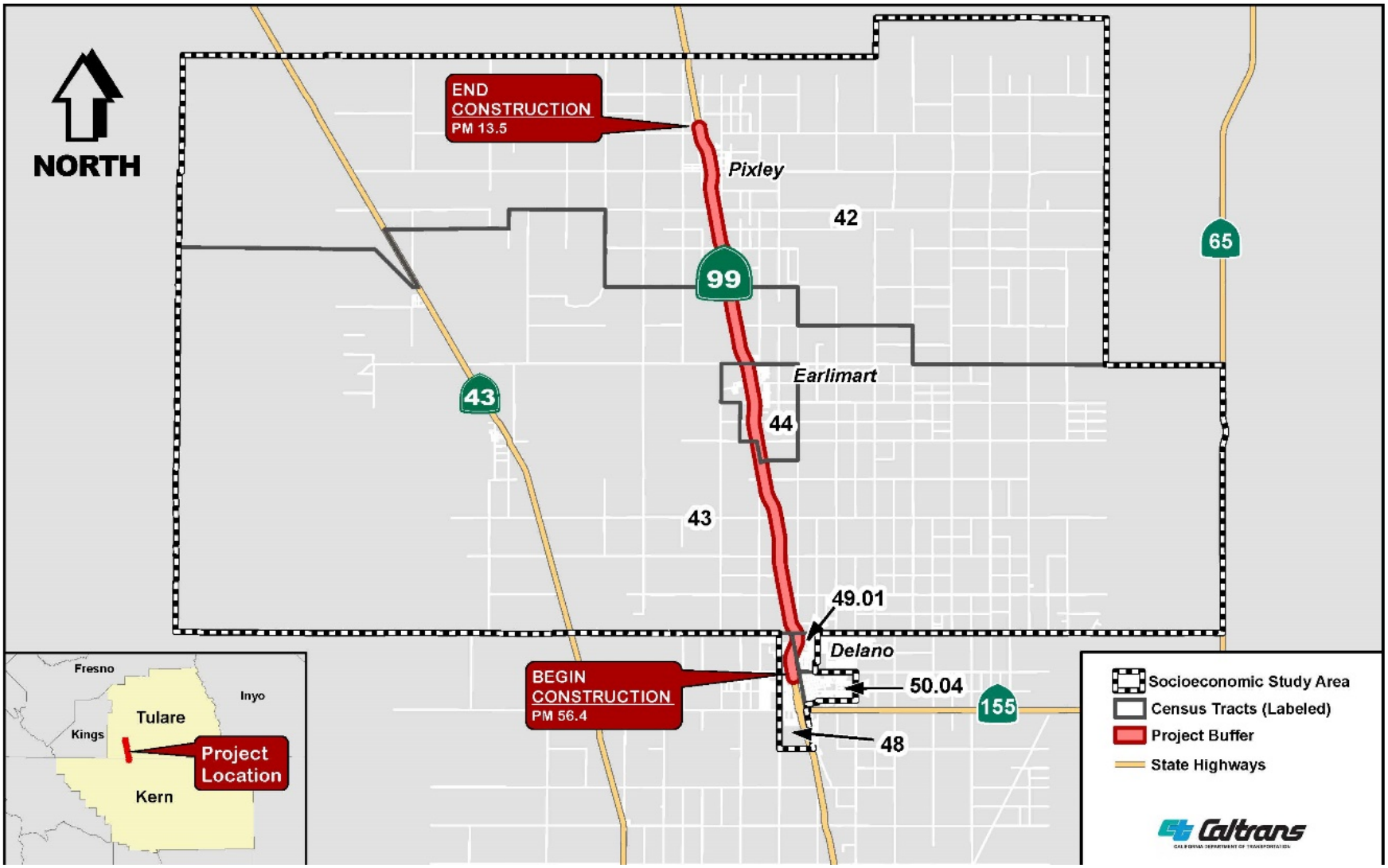
Affected Environment

Analysis of environmental justice impacts can be a two-step process. The first step is determining the presence of protected populations (minority or low-income populations), and, if found to be the case, the second step is determining whether the project has a disproportionate adverse impact on those protected populations. According to the guidance provided in *Caltrans Standard Environmental Reference, Community Impact Assessment*, environmental justice and equity are determined based on comparison of impacts on minority and low-income groups to impacts on non-minority or higher income populations. Impacts are considered disproportionate if these impacts are more severe or greater in magnitude for minority and low-income populations. Impacts to populations can include noise, air quality, water quality,

hazardous waste, community cohesion, aesthetics, economic vitality accessibility, safety, and construction activities.

The study area for environmental analysis consists of the census tracts within 500 feet of the proposed project. Census tracts were used to provide a more detailed look at the area to determine if environmental justice communities are present. To determine if environment justice communities exist within the study area, a demographic profile of the study area census tracts was developed to identify low-income and minority populations present in the study area. Figure 2-1 shows the census tracts within the socioeconomic study area.

Figure 2-1 Census Tracts Within the Socioeconomic Study Area



For purpose of this analysis, a census tract was considered to contain an environmental justice population if:

- The total minority population of the census tract is more than 50 percent of the total population or is substantially higher than the city or county where it is located.
- The proportion of the census tract population is below the federal poverty level or exceeds that of the city or county in which it is located.

The socioeconomic study area has a higher percentage of minority populations than the City of Delano and Tulare County. Residents in the socioeconomic study area also have lower median household incomes than the countywide and citywide average apart from Census Tract 50.04 in the City of Delano. Census tracts in the area have higher percentages of the population below the federal poverty level, apart from Census Tract 50.4.

As shown in Tables 2-1 and 2-2, every census tract study area has a minority population percentage above the Tulare County average, which is 74.8 percent, and the City of Delano average, which is 82.3 percent. The Tulare County Census Tract 44 contains the highest percentage, at 100 percent, while Census Tracts 42 and 43 contain a minority population percentage of 91 to 96 percent. City of Delano Census Tract 49.01 contains the highest at 98.3 percent, while Census Tracts 48 and 50.4 contain a minority population percentage of 94 to 98 percent.

Tulare County Census Tracts 42, 43 and 44 are above the county percentage below-poverty level at 18.9 and contain a higher percentage of residents below the poverty level at 34.7 percent, 43.5 percent, and 34.8 percent, respectively. City of Delano Census Tract 50.04 contains a lower percentage of residents below the poverty level at 11.6 percent than the City of Delano percentage at 22.6 percent. Remaining Census Tracts 48 and 49.01 contain a high percentage of residents below the poverty level at 25.7 percent and 40.5 percent, respectively.

The median household income in Tulare County is $49,687. Every census tract in the socioeconomic area of Tulare County has a median household income lower than the county median household income. The income ranges from $30,000 to $34,000. Census Tract 50.4 has the highest median income at $51,000, compared to the City of Delano median household income of $43,641. Census Tracts 49.01 and 48 have a median household income lower than the City of Delano, ranging from $29,000 to $35,000.

Given the high percentage of minority populations and low-income populations found in the socioeconomic study area, it is determined that environmental justice populations are present. Therefore, an analysis of effect related to environmental justice populations is required subject to the provisions of Executive Order 12898.

Table 2-1 Environmental Justice Populations by Census Tract in the Socioeconomic Study Area of Tulare County

Geographic Area	Aggregate Minority Percentage	Percentage Below Poverty Level	Median Household Income	Environmental Justice Population?
Tulare County	74.8	18.9	$49,687	Not Applicable
Census Tract 42	91.8	34.7	$33,504	Yes
Census Tract 43	95.6	43.5	$32,021	Yes
Census Tract 44	100	34.8	$30,504	Yes

Source: U.S. Census Bureau, 2015-2019 American Community Survey 5-Year Estimates *or Equivalent

Table 2-2 Environmental Justice Populations by Census Tract in the Socioeconomic Study Area in the City of Delano

Geographic Area	Aggregate Minority Percentage	Percentage Below Poverty Level	Median Household Income	Environmental Justice Population?
City of Delano	82.3	22.6	$43,641	Not applicable
Census Tract 49.01	98.3	25.7	$34,127	Yes
Census Tract 48	98.2	40.5	$29,178	Yes
Census Tract 50.04	94.3	11.6	$51,000	No

Source: U.S. Census Bureau, 2015-1019 American Community Survey 5-Year Estimates *or Equivalent

Environmental Consequences

The entire population in the socioeconomic study area has been identified as a minority population, a low-income population, or both. Therefore, any project effects, whether adverse or beneficial, would accrue to both types of populations of concern for environmental justice for Census Tracts 42, 43, and 44 in Tulare County and Census Tracts 49.01, 48, and 50.04 in the City of Delano. Summarized below are the impacts related to air quality, noise, and aesthetics on environmental justice populations and the measures designed to avoid or reduce impacts.

Air Quality

In the Air Quality Study, sensitive receptors include children, the elderly, asthmatics, and others who are at a heightened risk of negative health outcomes due to exposure to air pollution. For sensitive receptors, the zone of greatest concern near roadways is within 500 feet. However, no sensitive receptors have been identified for this project.

The Environmental Justice Analysis in the 2018 Tulare County Regional Transportation Plan study concluded that environmental justice communities are not disproportionately burdened by high and adverse effects and do share equitably in the benefits.

Construction Noise—Temporary Effects

As discussed in the Noise Study Report prepared for the project, noise from construction activities would result from the operations of heavy construction equipment and arrival and departure of heavy trucks. Construction noise levels would vary on a day-to-day basis during each phase of construction depending on the specific task being completed. Construction is anticipated to require about 375 working days total, of which 35 days would include night work. Temporary noise impacts would be experienced equally throughout the study area. Avoidance and minimization measures and adherence to Caltrans Standard Specifications would reduce temporary noise impacts.

Operational Noise—Long-Term Effects

A Noise Study was conducted to determine future traffic impacts of the project at frequent outdoor human use areas within the highway project limits. The future worst-case traffic noise impact at frequent outdoor human use areas along the project alignment was modeled for the Build Alternative to determine abatement measures. The project would result in noise impacts that require the consideration of noise abatement. The Noise Study proposes six soundwalls for the project as discussed in Section 2.2.3 Noise and Vibration.

Aesthetic

The visual quality of the existing corridor would be altered by the project. The project would remove about 63,000 linear feet of oleander bushes from the median within the project limits. The oleanders would be replaced with concrete pavement and a concrete median barrier. While the existing project corridor lacks visual quality that is vivid or memorable, there is a relatively strong sense of visual unity and intactness. The oleanders in the median provide a sense of visual unity with the adjacent agricultural lands. The composition of oleanders and agricultural crops communicate a cohesive sense of rural place. The vivid colors of the oleander flowers also add to the recognized composition.

The overall project effect is a reduction in visual quality within the project corridor, but the effects on visual quality are expected to be temporary. The project includes replacement planting to offset the effect on the visual quality of the oleanders removed from the median. New oleanders would be planted on either side of the highway, along the right-of-way fence. Therefore, the Build Alternative would not result in disproportionately high adverse effects related to aesthetics on environmental justice communities.

Based on the above discussion and analysis, the Build Alternative would not cause disproportionately high and adverse effects on any minority or low-income populations in accordance with the provisions of Executive Order 12898. No further environmental justice analysis is required.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.6 Utilities and Emergency Services

Affected Environment

Utilities

The following utilities are found within the project corridor: Pacific Gas and Electric Company distribution lines, Pacific Bell (American Telephone and Telegraph) fiber-optic underground lines, and Earlimart Public Utility District underground utilities.

Emergency Services

The closest fire station to the project is the Tulare County Fire Department Number 28 in the community of Earlimart. The closest police station is the Delano Police Department in the city of Delano. The closest medical facility is the Delano Regional Medical Center in the city of Delano. Table 2-3 lists the locations of the emergency services in the area and how far they are from the project.

Table 2-3 Emergency Services Near the Project Area

Name	Facility Type	Address	Distance (Miles)
Delano Regional Medical Center	Hospital	1401 Graces Highway, Delano, California 93215	1.6
Delano Ambulance Services	Ambulance Service	403 Main Street, Delano, California 93215	3.5
Tulare County Fire Department Number 28	Fire Station	808 East Washington Avenue, Earlimart, California 93219	0.8
Kern County Fire Station 34	Fire Station	1001 20th Avenue, Delano, California 93215	0.8
Delano Police Department	Police Station	2330 High Street, Delano, California, CA 93215	0.3
Tulare County Sheriff's Office	Sheriff's Office	161 North Pine Street, Pixley, California 93256	1.2

Source: Caltrans Community Impact Studies

Environmental Consequences

Utilities

Utilities will be relocated for this project. Caltrans staff will verify which utilities need to be relocated using available verification sources, such as as-built plans from Caltrans, utility owners, survey data, field investigations, and underground utility imaging surveys to identify approximate locations of utilities. Potholing will be performed to

confirm the horizontal and vertical locations, or positive locations, of all subsurface utilities impacted by the project. Utility companies would be given enough notice to relocate their facilities before construction, or at a later stage of construction, as appropriate. Existing utilities listed may be relocated temporarily or permanently as needed, and access rights or temporary construction easements would be necessary.

Such coordination is standard during the design phase. Utility relocations would be done using standard engineering practices, so substantial service disruption is not expected.

Emergency Services

As previously discussed in Chapter 1, two lanes would remain open for traffic in the northbound and southbound directions while construction is completed in stages. Emergency service vehicles would be able to move through the project area during construction. Once construction is complete, the additional lanes would improve the flow of traffic and should improve the delivery of emergency services to the area.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.1.7 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

Caltrans, as assigned by the Federal Highway Administration, directs that full consideration should be given to safe accommodation of pedestrians and bicyclists during the development of federal-aid highway projects (see 23 Code of Federal Regulations 652). It further directs that the special needs of the elderly and the disabled must be considered in all federal-aid projects that include pedestrian facilities. When current or anticipated pedestrian and/or bicycle traffic presents a potential conflict with motor vehicles traffic, every effort must be made to minimize the detrimental effects on all highway users who share the facility.

In July 1999, the U.S. Department of Transportation issued an Accessibility Policy Statement pledging a fully accessible multimodal transportation system. Accessibility in federally assisted programs is governed by the U.S. Department of Transportation regulations (49 Code of Federal Regulations 27) implementing Section 504 of the Rehabilitation Act (29 U.S. Code 794). The Federal Highway Administration has enacted regulations for the implementation of the 1990 Americans with Disabilities Act, including a commitment to build transportation facilities that provide equal access for all persons. These regulations require application of the Americans with Disabilities Act requirement to federal-aid projects, including Transportation Enhancement Activities.

Vehicle Miles Traveled (VMT)

With the passage of Senate Bill 743 (Steinberg, 2013) codified at Public Resources Code Section 21099, California embarked on a new approach for analyzing transportation impacts under the California Environmental Quality Act. The analysis documented herein was conducted to provide Senate Bill 743 concurrence and to

analyze the project's impact under the California Environmental Quality Act due to increases in Vehicle Miles Traveled attributable to the project. The California Environmental Quality Act requires assessing and disclosing environmental impacts resulting from a project, for example, impacts that would occur by the project. Therefore, under the California Environmental Quality Act, the transportation impact of a roadway capacity project is the overall increase in vehicles miles traveled that is attributable to the project, distinct from any background changes in Vehicle Miles Traveled due to other factors such as population or economic growth. The Vehicle Miles Traveled impact is the difference in Vehicle Miles Traveled with the project and without the project.

The difference in Vehicle Miles Traveled may be negative for some projects that reduce Vehicle Miles Traveled; zero for projects that do not affect vehicles miles traveled; or positive for those projects that are associated with an increase in Vehicle Miles Traveled. Generally, the project types associated with an increase in the total amount of driving are projects that add passenger vehicle and light-duty truck capacity to the state highway system. Many project types, including maintenance and rehabilitation projects as well as most safety projects, would be identified as unlikely to induce travel, requiring only screening and a narrative documenting that analysis and conclusion.

Affected Environment

Traffic and Transportation

State Route 99 begins at Interstate 5 south of Bakersfield and runs through each of the urban areas in the Central Valley until its northern end at State Route 36 near Red Bluff. At present, 92 percent of goods in the Central Valley are carried by truck, which is not expected to change in the foreseeable future. State Route 99 and Interstate 5 carry the highest volumes of trucks in the Central Valley and, in some locations, among the highest volumes in the state. State Route 99 is the backbone of intra-Central Valley goods movement and a major route for commuters who share the road with trucks in the urban centers. Interstate 5 is situated along the western edge of the Central Valley and is the preferred option for longer-range goods movement outside of the Central Valley.

State Route 99 in the project area is a divided 5-lane highway from post miles 56.4 to 57.6 in Kern County and a divided 4-lane highway from post miles 0.0 to 13.5 in Tulare County. South of the project limits, State Route 99 is a 6-lane highway. The posted speed limit in the project area is 70 miles per hour, except for 3-plus-axle trucks, which are limited to 55 miles per hour. State Route 99 is a 6-lane to 8-lane highway over more than half of its length, with some sections in the Central Valley being 4-lane highway. Those sections remaining as 4 lanes are mostly in Tulare, Merced and Madera counties. In Tulare County, State Route 99 covers 54 miles from Kingsburg (Fresno County line) to Delano (Kern County line), and the most of that is 4-lane highway. Pedestrians and bicyclists are prohibited from using State Route 99 and would not be impacted by this project.

Enhancement of this segment of State Route 99 in Tulare County is needed to improve truck freight throughput and travel time reliability. An analysis done by Caltrans for the 2015 Interregional Transportation Strategic Plan showed that State Route 99 and Interstate 5 in the Central Valley, and Interstate 10 between Palm Springs and Arizona, bear the greatest load of interregional freight trips per facility than any other in the state outside of the major urban areas. These routes have higher than average volumes of large, long-haul trucks using all lanes for travel and passing, which creates potential safety and capacity problems for interregional travelers. The limited nature of the east-west network for truck movement and the distance between State Route 99 and Interstate 5 through much of the Central Valley hinder the ability for trucks to bypass areas of congestion by switching between these routes.

The factors noted above, when combined with local truck traffic distributing goods to/from local areas to support the agricultural supply chain, strain the capacity of State Route 99 within the project area. An almost continuous flow of trucks along the outside lane of State Route 99 throughout the region is often the case during peak travel times. The 4-lane sections of State Route 99 do not provide the additional space for trucks and autos to maneuver as easily as on the 6-lane or 8-lane segments.

According to the California Freight Mobility Plan (March 2020), trucking is the most common used mode for California's freight transportation, and trucks transport almost all freight and services during some point within the supply chain. For this reason, the trucking industry is one of California's most valuable freight assets, particularly for the "first and last mile" of a trip. California must continue to develop, maintain, and operate a safe, efficient, and reliable freight transportation network to accommodate the truck volumes necessary to move freight within the state.

Traffic Volumes

Traffic volumes and quality of traffic flow are used to analyze highway operations and related congestion issues:

- Traffic volumes are represented as annual average daily traffic counts, which are the average number of vehicles that pass a given point with a 24-hour period.
- Quality of traffic flow is represented as Level of Service (also known by the acronym LOS). Level of Service ranges from LOS A to LOS F. LOS A indicates free-flowing traffic, while LOS F indicates gridlock and stop-and-go conditions. Caltrans strives to provide a minimum LOS D/E in rural areas.
- A traffic analysis was performed for existing conditions (2018), open-to-traffic year (2027) and design-year conditions, and Level of Service for State Route 99 between post mile 56.4 in Kern County and post mile 13.5 in Tulare County.

The State Route 99 segment was analyzed for Level of Service. Table 2-4 shows the existing traffic conditions and Level of Service for State Route 99 from post mile 56.4 in Kern County to post mile 13.5 in Tulare County.

Table 2-4 Existing Traffic Conditions and Level of Service on State Route 99 from post mile 56.4 in Kern County to post mile 13.5 in Tulare County

Year	Annual Average Daily Traffic (Total)	Annual Average Daily Traffic-Truck Percentage (19.23%)	Morning/Evening Peak Volume	Morning/Evening Peak Speed	Morning/Evening Peak Level of Service
2018	63,000	12, 051	Morning 1,554/ Evening 2,123	65/64	B/C

Source: Caltrans Updated Traffic Operational Analysis 2019

Vehicle Miles Traveled

The project is considered a capacity-increasing project and therefore falls into the group of projects that require an induced Vehicle Miles Traveled analysis and an evaluation for potential mitigation measures.

In general, two approaches exist for induced travel assessment. The first is the empirical approach, which applies methods from empirical studies that quantify the induced travel effect. The University of California, Davis National Center for Sustainable Transportation (NCST) Induced Travel Calculator applies this approach. The other is the travel demand model-based approach. These approaches are the preferred induced travel assessment tools for projects on the state highway system. The approach used to calculate Vehicle Miles Traveled for the air quality assessment used actual average annual daily traffic counts for the project limits, the project's length in miles, and the number of days in a year as inputs. Therefore, the projected annual induced Vehicle Miles Traveled are noticeably different from the estimates using the approaches discussed in this section.

The project location qualifies as "Other Metropolitan Statistical Area County," and the project type is "Lane Addition to Class 2 and Class 3 State Routes" as shown in Table 2-5.

Table 2-5 Selection Matrix for Preferred Induced Travel Assessment Method for Projects on the State Highway System

Project Location and Project Type	General Purpose or High Occupancy Vehicle Lane Addition to Interstate Highway	General Purpose or High Occupancy Vehicle Lane Addition to Class 2 and Class 3 State Routes	Other Vehicle Miles Traveled-Inducing Projects and Alternatives
County in Metropolitan Statistical Area with Class 1 Facility	Apply the National Center for Sustainable Transportation Calculator by Metropolitan Statistical Area and/or Travel Demand Model benchmarked with National Center for Sustainable Transportation Calculator	Apply the National Center for Sustainable Transportation Calculator by county and/or Travel Demand Model benchmarked with National Center for Sustainable Transportation Calculator	Apply Travel Demand Model or other quantitative methods
Other Metropolitan Statistical Area County	Apply Travel Demand Model or other quantitative methods	Apply the National Center for Sustainable Transportation Calculator by county and/or Travel Demand Model benchmarked with National Center for Sustainable Transportation Calculator	Apply Travel Demand Model or other quantitative methods
Rural County	Apply Travel Demand Model or other quantitative methods	Apply Travel Demand Model or other quantitative methods	Apply Travel Demand Model or other quantitative methods

Source: California Department of Transportation, *Transportation Analysis Framework,* First Edition, California Department of Transportation, 2020

Table Notes: If preferred methods are not available, qualitative assessment is acceptable as shown in Figure 5 of the *Transportation Analysis Framework,* First Edition; Travel Demand Models must be checked for applicability as described in Sections 4.4 and 4.5 of the *Transportation Analysis Framework,* First Edition.

Applying the Davis National Center for Sustainable Transportation Calculator by county outright or using the applicable travel demand model benchmarked with the Davis National Center for Sustainable Transportation Calculator are the two methods for measuring induced travel. Both approaches—Davis National Center for Sustainable Transportation Induced Travel Calculator and travel demand model-based assessment methods—were selected for evaluating travel that may be induced by construction of the project. The Davis National Center for Sustainable Transportation calculator uses three background inputs—the percentage of change in lane miles, existing vehicle miles, and one of two methods—to estimate induced annual Vehicle Miles Traveled attributable to the project. The Tulare County Association of Governments Regional Travel Demand Model is a conventional travel demand forecasting model that is similar in structure to most other area-wide models used for traffic forecasting in the San Joaquin Valley. It uses land use, socioeconomic, and road network data to estimate travel patterns, roadway traffic volumes and performance measures.

While the Travel Demand Model is far more sophisticated than the Davis National Center for Sustainable Transportation tool, it does not include a feedback mechanism for measuring travel induced by increases in roadway capacity. It can, however,

account for trip length, mode shift, route changes, and newly generated trips due to user-provided changes in land use. However, as the coverage of the model is Tulare County only, Vehicle Miles Traveled attributable to trips to and from outside of the county are not fully captured.

Pedestrian and Bicycle Facilities

No designated pedestrian facilities exist on State Route 99, including bicycle lanes or sidewalks.

Public Transportation

The Tulare County Area Transit system uses State Route 99 to provide bus services to the communities of Pixley, Teviston, and Earlimart, and the city of Delano. The South County 20 bus route runs through the project limits from Delano Transit Center, south of the project's starting point, to Pixley Medical Center, south of the project's end point. The bus route operates weekdays from 5:45 a.m. to 8:14 p.m. and weekends from 8:40 a.m. to 6:42 p.m.

Delano Area Rapid Transit provides four fixed bus routes within the City of Delano. Route 4 bus line crosses the project area using the Cecil Avenue overcrossing. The four bus routes do not travel on State Route 99. The bus operates weekdays from 7:00 a.m. to 5:00 p.m. and Saturdays from 8:30 a.m. to 4:00 p.m.

Delano Area Dial-A-Ride Transit operates within the city and the immediate Kern County area surrounding Delano within the boundaries of State Route 43 to the west, County Line Road to the north, Pond Road to the south, and Kyte Avenue to the east. The bus service provides rides to seniors and persons with disabilities and operates weekdays from 7:00 a.m. to 5:00 p.m. and Saturdays from 8:30 a.m. to 4:00 p.m.

Environmental Consequences

Traffic and Transportation

Table 2-6 and Table 2-7 show the traffic conditions and Level of Service with and without the project for the open-to-traffic year (2027) and future conditions (2047).

Table 2-6 Traffic Conditions and Level of Service on State Route 99 from post miles 0.0 to 13.50 for the No-Build Alternative

Year	Annual Average Daily Traffic (Total)	Annual Average Daily Traffic-Truck (19.13%)	Morning/ Evening Peak Volume	Morning/ Evening Peak Speed	Morning/ Evening Peak Level of Service
2027	69,000	13,199	1,575/2,340	65/63	B/C
2047	86,000	16,451	1,650/2,970	65/56	B/E

Source: Caltrans Updated Traffic Operational Analysis 2019

Table 2-7 Traffic Conditions and Level of Service on State Route 99 from post miles 0.0 to 13.50 for the Build Alternative

Year	Annual Average Daily Traffic (Total)	Annual Average Daily Traffic-Truck (19.13%)	Morning/ Evening Peak Volume	Morning/ Evening Peak Speed	Morning/ Evening Peak Level of Service
2027	69,000	13,199	1,575/2,340	65/65	B/B
2047	86,000	16,451	1,650/2,970	65/65	B/C

Source: Caltrans Updated Traffic Operational Analysis 2019

Based on the data presented, without the project, the Level of Service would decrease to LOS E by 2047 for the evening peak hour traffic; LOS B for the morning peak hours indicates stable operations for 2027 and 2047. This means there would be some unstable vehicle flow within this segment. As previously discussed, interregional truck traffic that uses State Route 99, when combined with the local supply chain traffic, adds additional strain to State Route 99 within the project area. An unanticipated increase in interregional freight volumes could lead to an additional decrease in Level of Service over time.

With the project, there would be an improved Level of Service for the evening peak hour traffic for the open-to-traffic year (2027) and future conditions year (2047).

Construction impacts on traffic and transportation would not be substantial. Access to and from State Route 99 would be available during construction, and the highway would remain open to traffic during construction.

Vehicle Miles Traveled

Consistent with the language of Section 15064.3 of the CEQA Guidelines, Caltrans concurs that Vehicle Miles Traveled is the most appropriate measure of transportation impacts under the California Environmental Quality Act (CEQA). The determination of significance of a Vehicle Miles Traveled impact would require a supporting induced travel analysis for capacity-increasing transportation projects on the state highway system when Caltrans is lead agency or when another entity acts as the lead agency. Caltrans has developed the Transportation Analysis Framework and Transportation Analysis under CEQA documents to guide CEQA transportation impact analysis for projects on the state highway system. Caltrans has prepared these documents to guide implementation of Senate Bill 743 (Steinberg, 2013).

The Transportation Analysis Framework and Transportation Analysis under CEQA establish Caltrans guidance on how to analyze induced travel associated with transportation projects and how to determine impact significance under CEQA, respectively. Table 1 in section 4.2.2 *Guidance For Selecting Analysis Approach* of the Transportation Analysis Framework, provides a selection matrix to be used in identifying the preferred Vehicle Miles Traveled assessment method(s) based on location and

project type. The application of the Davis National Center for Sustainable Transportation Calculator and the Travel Demand Model are described in Section 4.3 and 4.4 of the Transportation Analysis Framework, respectively. As shown in Table 2-8 below, the travel demand model-based methods produce markedly different induced Vehicle Miles Traveled results compared with the Davis National Center for Sustainable Transportation Calculator method. The travel demand model-based estimates of induced Vehicle Miles Traveled are grounded in a model calibrated to local/regional travel patterns and travel behavior however the travel demand model only satisfies four of the five checks on the checklist found in Table 4 of section 4.*5 The Checklist For Evaluating Model Adequacy*. Therefore, the use of the Davis National Center for Sustainable Transportation Calculator is the recommended method for this project.

Table 2-8 Davis National Center for Sustainable Transportation Calculator User Input Information Summary

Metric	Value
Facility Type	Class 2
County	Tulare
Total Lane Miles Added by the Project	28

Source: Induced Vehicle Miles Traveled Analysis for Delano to Pixley 6-lane with Pavement Rehabilitation, September 2021

Tables 2-9 and 2-10 summarize the selections and data input to the Davis National Center for Sustainable Transportation Calculator and the resulting annual induced Vehicle Miles Traveled. The calculation results indicate that the project would induce an additional 57.9 million Vehicle Miles Traveled per year. However, the Transportation Analysis Framework guidance includes the following statement regarding Vehicle Miles Traveled: “For a CEQA compliant transportation impact analysis, automobile Vehicle Miles Traveled (cars and light trucks) may be evaluated.” Based on current estimated truck volumes (approximately 22 percent) in this corridor, it is reasonable for this project to include a reduction in the induced demand calculation and provide a calculation based on the Vehicle Miles Traveled generated by passenger cars and light-duty trucks. The Caltrans Interregional Transportation Strategic Plan 2021 identifies State Route 99 as a major interregional trucking route within the San Jose/San Francisco Bay Area–Central Valley-Los Angeles Corridor. The Interregional Transportation Strategic Plan further states the forecasted increase in Freight Trips is expected to be significantly higher than the rate of Automobile Trips. Two-axle trucks compose 4.4 percent of the overall truck percentage using the roadway. Subtracting the 4.4 percent of light-duty trucks from the overall 22 percent of trucks greater than two-axles leaves 17.6 percent. Conservatively assuming that the percentage of trucks in the induced Vehicle Miles Traveled was the same as the existing percentage of trucks on the roadway, you could reduce the amount of Vehicle Miles Traveled that would need to be mitigated by 17.6 percent. The conclusion then would be that the Davis National Center for Sustainable Transportation Calculator Induced Vehicle Miles Traveled is 82.4 percent of the total or 47,706,213.

Table 2-9 Davis National Center for Sustainable Transportation Calculator Background Input Information Summary

Metric	Value
Lane Miles (Class 2 and 3)	712
Annual Vehicle Miles Traveled	1,962 million
Elasticity	0.75

Source: Induced Vehicle Miles Traveled Analysis for Delano to Pixley 6-lane with Pavement Rehabilitation, September 2021

Table 2-10 Summary of Induced Vehicle Miles Traveled Produced by Different Calculation Methods

Calculation Methods	Induced Vehicle Miles Traveled (in millions)
Davis National Center for Sustainable Transportation Calculator	57.9
Tulare County Association of Governments' RTDM 2024 (Build-No Build)	0.3
Difference with respect to Davis National Center for Sustainable Transportation Calculator	-99%

Source: Induced Vehicle Miles Traveled Analysis for Delano to Pixley 6-lane with Pavement Rehabilitation, September 2021

Pedestrian and Bicycle Facilities

Currently, no designated pedestrian facilities exist on State Route 99, including bicycle lanes or sidewalks.

Public Transportation

Tulare County Area Transit uses State Route 99 to provide services to the communities of Pixley, Teviston, Earlimart, and the city of Delano. No impacts to public transportation in the project area are anticipated.

Avoidance, Minimization, and/or Mitigation Measures

Traffic and Transportation

No mitigation measures are required for impacts to traffic and transportation. During construction, a traffic management plan would be developed to handle local traffic patterns and reduce delays, congestion, and the likelihood of accidents. The traffic management plan would include incident management through the Construction Zone Enhanced Enforcement Programs, notifying the public of construction activities via changeable message signs, construction strategies, and the Central Valley Traffic Management Center. The center reduces congestion by monitoring traffic and informing the public via media outlets such as radio and television.

Vehicle Miles Traveled

Based on the induced Vehicle Miles Traveled analysis, the project would increase Vehicle Miles Traveled by 47,706,213 after the deductions for truck Vehicle Miles

Traveled noted above. Vehicle Miles Traveled mitigation can be achieved through modification of the project to reduce the amount of Vehicle Miles Traveled generated or by providing transportation improvements on-system or off-system.

On-system mitigation measures are measures that can be implemented within the Caltrans right-of-way. On-system mitigation may include mitigation within or outside the initial project limits of any given capacity-increasing project. Caltrans, as owner and operator of the state highway system and associated right-of-way, exercises more direct authority over on-system measures as opposed to off-system measures. However, on-site mitigation can be very limited in reducing the amount of Vehicle Miles Traveled. For example, bike lanes or walking paths could be added to the project scope, but the benefit to Vehicle Miles Traveled reduction may be almost zero at the project level.

Off-system mitigation, outside Caltrans' right-of-way, requires cooperation with those jurisdictions that have influence over land use and transportation systems outside of Caltrans' direct control. The Caltrans Division of Transportation Planning recently completed a literature review and assessment of Vehicle Miles Traveled reduction strategies and found that measures that resulted in the largest decreases in Vehicle Miles Traveled are generally off-system and not under Caltrans' direct control. Similarly, the most cost-effective measures identified in the literature review also tended to be outside of Caltrans' direct control (such as transit-oriented development, transportation demand management).

The following mitigation would be incorporated into the project using Cooperative Agreements with local partners. The Cooperative Agreements would be finalized prior to construction of the project.

Tulare County Regional Transit Agency Vanpool Program

Caltrans would provide funding in the amount of $360,000 to subsidize the vanpool program at the Tulare County Regional Transit Agency for a two-year period. Caltrans funding would subsidize the addition of 30 vanpools to the existing program in the first year and 15 vanpools to the program in the second year. Assumptions include that 6 passengers (driver not included) would use the vanpools and each vanpool would result in an average Vehicle Miles Traveled reduction of 145,751. The addition of 45 vanpools over a two-year period would result in an annual Vehicle Miles Traveled reduction in the first year of 4,372,530 and a Vehicle Miles Traveled reduction of 6,558,795 in the second year. Transit agencies report transit data to the National Transit Database and the California State Controller. The numbers are used in annual apportionment calculations. This is a 2-year cycle, meaning data reported in 2022 would be used to calculate 2024 annual apportionments. Increasing the revenue and passenger miles would increase the annual apportionments and allow the transit agency to continue the services.

Kings County Regional Transit Agency Vanpool Program

Caltrans would provide funding in the amount of $252,000 to subsidize expansion of the vanpool program at the Kings County Regional Transit Agency for a one-year

period. Assumptions include that 6 passengers (driver not included) would use the vanpools, and each vanpool would result in an average Vehicle Miles Traveled reduction of 111,427. Caltrans funding would subsidize the addition of 30 vanpools to the existing program, which would result in an annual Vehicle Miles Traveled reduction of 3,342,810. Transit agencies report transit data to the National Transit Database and the California State Controller. The numbers are used in annual apportionment calculations. This is a 2-year cycle, meaning data reported in 2022 would be used to calculate 2024 annual apportionments. Increasing the revenue and passenger miles would increase the annual apportionments and allow the transit agency to continue the services.

Increased Frequency on Kings Area Regional Transit (KART) Route 15

Caltrans would provide 20 years of funding in the amount of $2,885,000 to subsidize the roundtrip bus service for Route 15 at Kings Area Regional Transit. Route 15 currently operates three trips per day between Hanford and Visalia. Caltrans proposes to subsidize one additional trip during the weekday, which would bring the roundtrip bus service to four trips per day during the weekday, and two additional trips per day on Saturday and Sunday. Adding 5 trips per weekday and 4 trips to the weekends with a roundtrip distance of 42 miles and an assumed ridership increase of approximately 14 per trip would result in an annual Vehicle Miles Traveled reduction of 270,220. Using the Transit Service Improvement multiplier allowed per the Vehicle Miles Traveled mitigation playbook would increase the Vehicle Miles Traveled reduction to 540,440. To summarize, Caltrans would subsidize a total of 9 additional roundtrip bus services per week for 20 years, which would provide an annual Vehicle Miles Traveled reduction of 540,440, and a total Vehicle Miles Traveled reduction of 10,808,800 for the 20-year period.

Table 2-11 shows a summary of the proposed funding and subsequent Vehicle Miles Traveled reductions for the mitigation measures listed above.

Table 2-11 Proposed Mitigation, Mitigation Cost and Annual Vehicle Miles Traveled Reduction

Parameter	Proposed Mitigation: Tulare County Regional Transit Agency Vanpool Program 2 Years of Funding	Proposed Mitigation: Kings County Regional Transit Agency Vanpool Program 1 Year of Funding	Proposed Mitigation: Increased Frequency on Kings Area Regional Transit Route 15 20 Years of Funding	Funding and Annual Vehicle Miles Traveled Reduction Totals for Mitigation Measures Listed Above
Proposed Funding Amount	$360,000	$252,000	$2,885,000	$3,497,000
Annual Vehicle Miles Traveled Reduction	6,558,795	3,342,810	540,440	10,442,045

Comprehensive Multimodal Corridor Plan

As discussed in Chapter 1, Caltrans Districts 6, 10, and 3 would collaborate with local agencies in the San Joaquin Valley to prepare the Comprehensive Multimodal Corridor Plan, which would prioritize identifying managed lane and mode shift opportunities in the corridor that would lead to reduced Vehicle Miles Traveled. Implementation of Vehicle Miles Traveled-reducing managed lane strategies, such as truck-only and/or tolling lanes, through the corridor (or parts of the corridor that include this project) could eliminate about 80 percent of the Vehicle Miles Traveled concern from the project because the only relevant capacity increase would result from the removal of trucks from the two general-purpose lanes. The lane management strategy would be developed in more detail before the final environmental document is signed.

Pedestrian and Bicycle Facilities

No avoidance, minimization, and/or mitigation measures are required for pedestrian facilities.

Public Transportation

No avoidance, minimization, and/or mitigation measures are required for public transportation.

2.1.8 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act of 1969, as amended, establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and aesthetically (emphasis added) and culturally pleasing surroundings (42 U.S. Code 4331[b][2]). To further emphasize this point, the Federal Highway Administration, in its implementation of the National Environmental Policy Act (23 U.S. Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act establishes that it is the policy of the state to take all action necessary to provide the people of the state “with…enjoyment of aesthetic, natural, scenic and historic environmental qualities” (California Public Resources Code Section 21001[b]).

California Streets and Highways Code Section 92.3 directs Caltrans to use drought-resistant landscaping and recycled water when feasible, and incorporate native wildflowers and native and climate-appropriate vegetation into the planting design when appropriate.

Affected Environment

A visual impact assessment was completed for the project in September 2021. The visual impact assessment was prepared in accordance with the guidelines in the Federal Highway Administration’s *Visual Impact Assessment for Highway Projects* (Federal Highway Administration 2015).

Visual Setting

The project area landscape is characterized by flat landform that lends itself to expansive views of the Sierra Nevada Mountain Range to the east and the Coast Range to the west. The project site is surrounded by agricultural cropland, rural and suburban commercial and industrial businesses, and unincorporated residential areas. State Route 99 in the project area is not listed as a State Scenic Highway.

Existing Visual Resources

Landcover in the project corridor is mainly agricultural crops and commercial/industrial buildings with areas of residential. Within Caltrans' right-of-way, the most notable landcover is an array of plantings of eucalyptus trees and oleander shrubs. The Route 99 Corridor Enhancement Master Plan identifies these plantings as iconic in the corridor.

Visual elements that contribute to the rural character are the nearby agricultural fields, a divided highway with blocked views of oncoming traffic, and oleanders in the median. The roadway segment through the community of Earlimart is depressed below grade and has the characteristic of an urban highway corridor. Oleanders in the median provide a texture that is visually compatible with the adjacent agricultural fields, and in the below-grade segment, soften the concrete edges. The oleanders create a strong vertical element screening the view of the opposing flowing traffic. This screening reduces the visual perception of the highway scale; only the northbound lanes are visible from the northbound side of traffic and vice-versa. The reduced scale enforces the rural character of the project corridor. When the oleanders flower from spring through fall, the flowers bring color that contrasts sharply with the adjacent colorless views.

Environmental Consequences

The project would remove about 63,000 linear feet of the oleanders from the median within the project limits. The oleanders would be replaced with concrete pavement and concrete median barrier. The resulting visual effect would be a much larger highway because both directions of traffic would now be visible. The views of oncoming traffic would increase for the highway user. The overall visual effect is a decrease in vegetation and an increase in concrete—a non-compatible urban project corridor in a rural, agricultural environment.

The visual quality of the existing corridor would be altered by the project. While the existing project corridor lacks visual quality that is vivid or memorable, there is a relatively strong sense of visual unity and intactness. Outside of the Earlimart segment, the oleanders in the median provide a sense of visual unity with the adjacent agricultural lands. The composition of oleanders and agricultural crops communicate a cohesive sense of rural place. The vivid colors of the oleander flowers add strongly to the recognized composition.

While concrete shoulders and concrete median barrier give a sense of visual unity in an urban setting, the introduction of the same materials in a rural agricultural setting disrupts the visual unity. The visual quality becomes less cohesive. The overall effect is a reduction in visual quality within the project corridor.

The project would provide replacement planting to offset the effect on visual quality of the oleander removed from the median. New oleanders would be planted on either side of the highway, along the right-of-ay fence. Therefore, the effects on visual quality are expected to be temporary. As the new oleanders mature, eventually the oleander would provide the same color and texture to the project corridor that existed prior to project construction. Therefore, long-term overall visual impacts of the project are expected to be moderate to low.

Avoidance, Minimization, and/or Mitigation Measures

The avoidance, minimization, and/or mitigation measures would be designed and implemented with concurrence from the Caltrans District 6 Landscape Architect. The following avoidance and minimization measure would be incorporated into the project:

- Reduce Oncoming Headlight Glare: Use of 56-inch-high concrete median barrier may reduce oncoming headlight glare. This measure would be implemented where feasible, as determined by the project engineer, in areas where median oleander is removed.

The following mitigation measure would be incorporated into the project to offset visual impacts:

- The oleanders in the median would be removed, and new oleanders would be planted on either side of the highway, along the right-of-way fence.

2.1.9 Cultural Resources

Regulatory Setting

The term “cultural resources,” as used in this document, refers to the “built environment” (structures, bridges, railroads, water conveyance systems, etc.), places of traditional or cultural importance, and archaeological sites (both prehistoric and historic), regardless of significance. Under federal and state laws, cultural resources that meet certain criteria of significance are referred to by various terms including “historic properties,” “historic sites,” “historical resources,” and “tribal cultural resources.” Laws and regulations dealing with cultural resources include those listed below.

The National Historic Preservation Act of 1966, as amended sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issues by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans went into effect for Caltrans projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservations’ regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and

delegating certain responsibilities to Caltrans. The Federal Highway Administration's responsibilities under the Programmatic Agreement has been assigned to Caltrans as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

The California Environmental Quality Act requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. Historical resources are defined in California Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 (AB 52) added the term "tribal cultural resources" to the California Environmental Quality Act when discussing the process to identify the tribal cultural resources (as well as identifying measures to avoid preserve or mitigate effects on them). Defined in California Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resource or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in California Public Resources Code Section 2108.2.

California Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its right-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or eligible for inclusion in the National Register of Historic Places or are registered or eligible for registration as California Historical Landmarks. Procedures for compliance with California Public Resources Code 5024 are outlined in a Memorandum of Understanding between Caltrans and the State Historic Preservation Officer, effective January 1, 2015. For most federal-aid projects on the state highway system, compliance with the Section 106 Programmatic Agreement would satisfy the requirements of California Public Resources Code Section 5024.

Affected Environment

An Historic Property Survey Report was completed for this project in December 2021. An archaeological survey was conducted to identify archaeological and historic resources within the project area. The survey covered the existing paved surface and Caltrans right-of-way on State Route 99. The Area of Potential Effects was established as the area subject to direct and indirect effects of activities during the project.

Record searches were made of the National Register of Historic Places, California Register of Historical Resources, California Points of Historical Interest, California Historical Resources Information System, National Historic Landmarks, California Historical Landmarks, Caltrans Historic Bridge Inventory, Caltrans Cultural Resources Database, and the Southern San Joaquin Valley Information Center at California State

University, Bakersfield. The record searches revealed 15 studies where a partial survey had been performed within the project area and four other studies that had been performed within a half-mile of the project area.

Archaeological Resources

There are no known prehistoric sites within a half-mile of the project. A pedestrian (walkabout) survey revealed no surface resources.

Architectural Resources

Caltrans identified six built resources within a half-mile from the project; two are near the project area. One resource is a bridge, which did not appear on the Caltrans Historic Bridge Inventory. The two built resources near the project area are located outside the Area of Potential Effects.

There are no properties eligible for or documented by the National Register of Historic Places or California Register of Historical Resources.

Environmental Consequences

Archaeological Resources

No known prehistoric sites would be impacted within a half-mile of the project area. No archaeological resources eligible for the National Register of Historic Places or California Register of Historical Resources have been recorded within the archaeological study area. No archeological sites were discovered during the pedestrian survey.

Architectural Resources

Caltrans identified six built resources a half-mile from the project; two are near the project area. One resource is a bridge, which did not appear on the Caltrans Bridge Inventory. No built resources are located within the project area.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required.

2.2 Physical Environment

2.2.1 Hazardous Waste and Materials

Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substance, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

The main federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability of 1980, and the Resource Conservation and Recovery Act of 1976. The purpose of the Comprehensive Environmental Response, Compensation and Liability, often referred to as "Superfund," is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The Resource Conservation and Recovery Act provides for "cradle to grave" regulation of hazardous waste generated by operating entitles. Other federal laws include:

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substance Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, Executive Order 12088, Federal Compliance with Pollution Control Standards, mandates that necessary actions be taken to prevent and control environmental pollutions when federal activities or federal facilities are involved.

California regulates hazardous materials, wastes, and substances under authority of the California Health and Safety Code and is also authorized by the federal government to implement the Resource Conservation and Recovery Act in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires cleanup of wastes that are below hazardous waste concentrations but could impact groundwater and surface water quality. California regulations that address waste management and prevention and cleanup of contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material are vital if such material is found, disturbed, or generated during project construction.

Affected Environment

Caltrans completed an Initial Site Assessment for the project in August 2021, which included a review of regulatory databases. The Initial Site Assessment identified and evaluated possible hazardous waste sites. It included the following tasks:

- A review of previous environmental reports about the project site.
- A geologic evaluation regarding naturally occurring asbestos within the project limits.
- A review of government databases of hazardous waste sites.
- A written report summarizing the records search results.

A Preliminary Site Investigation was completed in December 2020 to address environmental concerns related to aerially deposited lead along State Route 99 from post mile 56.4 in Kern County to post mile 13.5 in Tulare County.

A survey for asbestos-containing materials and lead-containing materials was completed in June 2021 on the two Avenue 76 overcrossing bridges (Bridge Numbers 46-170L and 46-170R) at post mile 9.71 in Tulare County.

Environmental Consequences

Results from the Preliminary Site Investigation determined that aerially deposited lead concentrations for soils along the northbound shoulder from a depth of 0 to 0.5 foot and along the southbound shoulder from a depth of 0.5 to 1.5 feet are considered hazardous. Soils at these depths along the northbound and southbound shoulders can either be disposed of at a hazardous waste disposal facility or reused on-site. If soils from these specified depths along the northbound and southbound shoulders are to be reused on-site, the soils would be placed at least 5 feet above the maximum historical elevation of the water table and covered by at least 1 foot of non-hazardous soils or pavement. Soils in the center median were minimally impacted by aerially deposited lead and would be considered non-hazardous.

Chrysotile asbestos is present in the concrete at Bridge Number 46-170R, representing an estimated 8,000 square feet of material. Asbestos-containing materials were not found in Bridge Number 46-170L or in any of the other suspect materials analyzed during the studies.

Lead was detected at the bridges, with concentration levels that were non-hazardous. However, the paint is considered lead-containing and is subject to compliance with the Division of Occupational Safety and Health of California and training requirements regarding construction activities where workers may be exposed.

Other potential hazardous substances or hazardous wastes in the project area include yellow and white pavement paint, striping and markings that may contain high levels of lead, and treated wood waste on roadside signs and guardrails. These potentially hazardous substances or hazardous wastes in the project area would need to be properly disposed of and handled.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans' Standard Specifications and Nonstandard Special Provisions that pertain to hazardous waste would be provided during the specifications and estimates phase of the project before construction starts.

- Soils along the northbound shoulder from a depth of 0 to 0.5 foot and along the southbound shoulder from a depth of 0.5 to 1.5 feet are considered hazardous. Soils at these depths along the northbound and southbound shoulders can either be disposed of at a hazardous waste disposal facility or reused on-site. If soils from these specified depths along the northbound and southbound shoulders are to be reused on-site, the soils would be placed at least 5 feet above the maximum historical elevation of the water table and covered by at least 1 foot of non-hazardous soils or pavement.
- To minimize the exposure to construction workers, a Lead Compliance Plan would be required before construction.
- Any contractor engaged in asbestos-related work involving the disturbance of more than 100 square feet of asbestos-containing material must be registered with the Division of Health and Safety of California.

2.2.2 Air Quality

Regulatory Setting

The Federal Clean Air Act, as amended, is the main federal law that governs air quality. The California Clean Air Act is its companion state law. These laws, and related regulations by the U.S. Environmental Protection Agency (U.S. EPA) and the California Air Resources Board, set standards for the concentration of pollutants in the air. At the federal level, these standards are called National Ambient Air Quality Standards (also known by the acronym NAAQS). The federal and state ambient air quality standards have been established for six criteria pollutants that have been linked to potential health concerns: carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), lead (Pb), and sulfur dioxide (SO2), and particulate matter (PM)—which is broken down for regulatory purposes into particles of 10 micrometers or smaller (PM10) and particles of 2.5 micrometers and smaller (PM2.5). In addition, state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide (H2S), and vinyl chloride. The federal and state standards are set at levels that protect public health with a margin of safety, and are subject to periodic review and revision. Both federal and state regulatory schemes also cover toxic air contaminants (air toxics); some criteria pollutants are also air toxics or may include certain air toxics in their general definition.

Federal air quality standards and regulations provide the basic scheme for project-level air quality analysis under the National Environmental Policy Act. In addition to this environmental analysis, a parallel “conformity” requirement under the Federal Clean Air Act also applies.

Conformity

The conformity requirement is based on Federal Clean Air Act Section 176(c), which prohibits the U.S. Department of Transportation and other federal agencies from funding, authorizing, or approving plans, programs, or projects that do not conform to State Implementation Plan for attaining the National Ambient Air Quality Standards.

"Transportation Conformity" applies to highway and transit projects and takes place on two levels: the regional (or planning and programming) level and the project level. The proposed project must conform at both levels to be approved.

Conformity requirements apply only in nonattainment and "maintenance" (former nonattainment) areas for the National Ambient Air Quality Standards, and only for the specific National Ambient Air Quality Standards that are or were violated. U.S. EPA regulations at 40 Code of Federal Regulations 93 govern the conformity process. Conformity requirements do not apply in unclassifiable/attainment areas for National Ambient Air Quality Standards and do not apply at all for state standards regardless of the status of the area.

Regional conformity is concerned with how well the regional transportation system supports plans for attaining the National Ambient Air Quality Standards for carbon monoxide (CO), nitrogen dioxide (NO2), ozone (O3), particulate matter (PM10 and PM2.5), and in some areas (although not in California), sulfur dioxide (SO2). California has nonattainment or maintenance areas for all of these transportation-related "criteria pollutants" except SO2, and also has a nonattainment area for lead (Pb); however, lead is not currently required by the Federal Clean Air Act to be covered in transportation conformity analysis. Regional conformity is based on emission analysis of Regional Transportation Plans and Federal Transportation Improvement Programs that include all transportation projects planned for a region over a period of at least 20 years (for the Regional Transportation Plan) and 4 years (for the Federal Transportation Improvement Program). Regional Transportation Plan and Federal Transportation Improvement Program conformity uses travel demand and emission models to determine whether or not the implementation of those projects would conform to emission budgets or other tests at various analysis years showing that requirements of the Federal Clean Air Act and the State Implementation Plan are met. If the conformity analysis is successful, the Metropolitan Planning Organization (also known by the acronym MPO), Federal Highway Administration, and Federal Transit Administration) make the determinations that the Regional Transportation Plan and Federal Transportation Improvement Program are in conformity with the State Implementation Plan for achieving the goals of the Federal Clean Air Act. Otherwise, the projects in the Regional Transportation Plan and/or Federal Transportation Improvement Program must be modified until conformity is attained. If the design concept and scope and the "open-to-traffic" schedule of a proposed transportation project are the same as described in the Regional Transportation Plan and Federal Transportation Improvement Program, then the proposed project meets regional conformity requirements for purposes of project-level analysis.

Project-level conformity is achieved by demonstrating that the project comes from a conforming Regional Transportation Plan and Transportation Improvement Program; the project has a design concept and scope that has not changed significantly from those in the Regional Transportation Plan and Transportation Improvement Program; project analyses have used the latest planning assumptions and Environmental Protection Agency-approved emissions models; and in particulate matter areas, the project complies with any control measures in the State Implementation Plan.

Furthermore, additional analyses (known as hot-spot analyses) may be required for projects located in carbon monoxide and particulate matter nonattainment or maintenance areas to examine localized air quality impacts.

Affected Environment

Caltrans completed an Air Quality Report for this project in December 2022. The project limits used in the Air Quality Report for air conformity concurrence begin at post mile 56.4 in Kern County and ended at post mile 13.5 in Tulare County.

In the region, air flow is channeled by mountain ranges, with the predominate wind direction following the valley's north-south axis in one direction. The second most prevalent wind follows this pattern as well, but in the opposite direction. California's coastal mountain ranges limit the inflow of maritime air into the interior of California. Due to subsidence's inversion (discussed below), marine air flow over the mountains is stifled and air flow is limited to breaks or low points in the coastal range. The greatest portion of maritime air reaches the Central Valley via a major break in the coastal ranges at the Carquinez Straits of San Francisco Bay.

During the day, precursor emissions from the Bay Area and the northern San Joaquin Air Basin move downwind into the interior San Joaquin Valley, accumulating in a region stretching from Stockton to Bakersfield. Limited airflow allows an escape of some air over the Tehachapi Mountains into the Mojave Desert. At night, the wind pattern is much the same. However cooler drainage winds at the Tehachapi Mountains force the air back northward, in a circular air pattern known as the Fresno eddy. The pollutants swirl in a counterclockwise pattern and return the air back to the polluted urban areas, where more precursors are added the next day. Nighttime winds are caused by a jet stream of fast-moving air about 1,000 feet above the valley floor, up to 30 miles per hour. Pollutants transported to higher altitudes due to daytime heating settle downward due to drainage winds.

Once marine air flows into the basin, it is relatively trapped. The San Joaquin Valley Air Basin is an essentially closed basin surrounded by the coastal ranges on the west, the Tehachapi Mountains to the south, and the Sierra Nevada to the east. These conditions result in poor horizontal movement of pollutants; meanwhile, high pressure hinders vertical pollutants movement, so pollutants settle and accumulate.

Criteria Pollutants and Attainment Status

The federal and state governments have established ambient air quality standards to define clean air for the protection of human health and the environment. An air quality standard defines the maximum amount of a pollutant averaged over a specified period of time that can be present in outdoor air without harmful effects or the environment. See Table 2-12 for the pollutants with their effects and typical sources.

The San Joaquin Valley Air Basin where the project sits is in nonattainment for the following pollutants:

- State: 1-hour and 8-hour ozone, particulate matter 10 and particulate matter 2.5 standards
- Federal: 8-hour ozone, particulate matter 2.5 standards (the basin is in attainment for the federal particulate matter 10 and carbon monoxide standards)

Pollutant-Specific Overview

Air pollutants are governed by multiple federal and state standards to regulate and mitigate health impacts. At the federal level, there are six criteria pollutants for which National Ambient Air Quality Standards have been established: carbon monoxide, lead, nitrogen dioxide, ozone, fine and respirable particulate matter, and sulfur dioxide. The U.S. Environmental Protection Agency has also identified nine priority mobile source air toxic contaminants: 1,3-butadiene, acetaldehyde, acrolein, benzene, diesel particulate matter, ethylbenzene, formaldehyde, naphthalene, and polycyclic organic matter. For more information, refer to the following Federal Highway Administration website: https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/. In California, sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride are also regulated.

Criteria Pollutants

The Clean Air Act requires the U.S. Environmental Protection Agency to set National Ambient Air Quality Standards for six criteria air contaminants: ozone, particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. It also permits states to adopt additional or more protective air quality standards, if needed. California has set standards for certain pollutants. Table 2-12 summarizes the sources and health effects of the six criteria pollutants and the pollutants regulated in California.

Table 2-12 State and Federal Criteria Air Pollutant Effects and Sources

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Ozone	High concentrations irritate lungs. Long-term exposure may cause lung tissue damage and cancer. Long-term exposure damages plant materials and reduces crop productivity. Precursor organic compounds include many known toxic air contaminants. Biogenic volatile organic compounds may also contribute.	Low-altitude ozone is almost entirely formed from reactive organic gases/volatile organic compounds and nitrogen oxides in the presence of sunlight and heat. Common precursor emitters include motor vehicles and other internal combustion engines, solvent evaporation, boilers, furnaces, and industrial processes.
Respirable Particulate Matter	Irritates eyes and respiratory tract. Decreases lung capacity. Associated with increased cancer and mortality. Contributes to haze and reduced visibility. Includes some toxic air contaminants. Many toxic and other aerosol and solid compounds are part of respirable particulate matter.	Dust- and fume-producing industrial and agricultural operations; combustion smoke and vehicle exhaust; atmospheric chemical reactions; construction and other dust-producing activities; unpaved road dust and re-entrained paved road dust; natural sources.

Pollutant	Principal Health and Atmospheric Effects	Typical Sources
Fine Particulate Matter	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and produces surface soiling. Most diesel exhaust particulate matter – a toxic air contaminant – is in the $PM_{2.5}$ size range. Many toxic and other aerosol and solid compounds are part of fine particulate matter.	Combustion including motor vehicles, other mobile sources, and industrial activities; residential and agricultural burning; also formed through atmospheric chemical and photochemical reactions involving other pollutants including nitrogen oxides, sulfur oxides, ammonia, and reactive organic gases.
Carbon Monoxide	Interferes with the transfer of oxygen to the blood and deprives sensitive tissues of oxygen. Carbon monoxide also is a minor precursor for photochemical ozone. Colorless, odorless.	Combustion sources, especially gasoline-powered engines and motor vehicles. Carbon monoxide is the traditional signature pollutant for on-road mobile sources at the local and neighborhood scale.
Nitrogen Dioxide	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown. Contributes to acid rain and nitrate contamination of stormwater. Part of the nitrogen oxide group of ozone precursors.	Motor vehicles and other mobile or portable engines, especially diesel; refineries; industrial operations.
Sulfur Dioxide	Irritates respiratory tract; injures lung tissue. Can yellow plant leaves. Destructive to marble, iron, steel. Contributes to acid rain. Limits visibility.	Fuel combustion (especially coal and high-sulfur oil), chemical plants, sulfur recovery plants, metal processing; some natural sources like active volcanoes. Limited contribution possible from heavy-duty diesel vehicles if ultra-low sulfur fuel not used.
Lead	Disturbs gastrointestinal system. Causes anemia, kidney disease, and neuromuscular and neurological dysfunction. Also, a toxic air contaminant and water pollutant.	Lead-based industrial processes like battery production and smelters. Lead paint, leaded gasoline. Aerially deposited lead from older gasoline use may exist in soils along major roads.
Visibility-Reducing Particles	Reduces visibility. Produces haze. It is not directly related to the Regional Haze program under the Federal Clean Air Act, which is oriented mainly toward visibility issues in National Parks and other “Class I” areas.	Sources include those previously listed. May be related more to aerosols than to solid particles.
Sulfate	Premature mortality and respiratory effects. Contributes to acid rain. Some toxic air contaminants attach to sulfate aerosol particles.	Industrial processes, refineries and oil fields, mines, natural sources like volcanic areas, salt-covered dry lakes, and large sulfide rock areas.
Hydrogen Sulfide	Colorless, flammable, poisonous. Respiratory irritant. Neurological damage and premature death. Headache, nausea. Strong odor.	Industrial processes such as: refineries and oil fields, asphalt plants, livestock operations, sewage treatment plants, and mines. Some natural sources like volcanic areas and hot springs.
Vinyl Chloride	Neurological effects, liver damage, cancer. Also considered a toxic air contaminant.	Industrial processes.

Source: Caltrans Air Quality Report, October 2021

Tables 2-13 through 2-16 present the state and federal attainment status for all regulated air pollutants in the San Joaquin Valley Air Basin. In the tables, the abbreviation “PPM” stands for parts per million.

Table 2-13 State and Federal Attainment Status

Pollutant	State Attainment Status	Federal Attainment Status
One Hour – Ozone	Nonattainment/Severe	Not applicable
Eight-Hour Ozone (O3)	Nonattainment	Nonattainment/Extreme
Respirable Particulate Matter (PM10)	Nonattainment	Attainment/Maintenance
Fine Particulate Matter (PM2.5)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Unclassified	Attainment/Unclassified
Nitrogen Dioxide (NO2)	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO2)	Attainment	Nonattainment/Unclassified
Lead (Pb)	Attainment	No Designation/Classification
Visibility- Reducing Particles	Unclassified	Not applicable
Sulfates	Attainment	Not applicable
Hydrogen Sulfide	Unclassified	Not applicable
Vinyl Chloride	Attainment	Not applicable

Source: Caltrans Air Quality Report, October 2021

Table 2-14 Ozone Concentrations for 2015 through 2020 at the Visalia North Church Street Monitor

Ozone Standard	2015	2016	2017	2018	2019	2020
Maximum 1-hour concentration	0.110	0.098	0.109	0.112	0.093	0.127
Number of days exceeded: 0.09 ppm	9	1	9	8	0	7
Maximum 8-hour concentration	0.091	0.083	0.092	0.095	0.082	0.103
Number of days exceeded: State 0.070 ppm	52	19	65	58	26	37
Number of days exceeded: Federal 0.070 ppm	49	18	61	53	22	36

Source: Caltrans Air Quality Report, October 2021

Table 2-15 PM_{10} Concentrations for 2013 through 2020 at the Visalia, North Church Street Monitor

Particulate Matter 10 Standards	2013	2014	2015	2016	2017	2018	2019	2020
State Maximum 24-hour concentration	160.0	104.2	140.3	132.5	145.7	159.6	418.5	305.7
Federal Maximum 24-hour concentration	155.0	102.4	67.3	137.1	144.8	153.4	411.1	317.4
Number of days exceeded: State: *50 µg/m^3*	94.0	No Data	No Data	No Data	135.9	164.4	115.8	157.0
Number of days exceeded: Federal: *150 µg/m^3*	3.3	0	No Data	0	0	0	5.0	20.2
State Maximum Annual concentration	44.5	No Data	No Data	No Data	46.9	52.0	46.3	60.5
Federal Maximum Annual concentration	43.2	45.4	28.9	43.3	47.4	52.5	45.7	59.4

Source: Caltrans Air Quality Report, October 2021

Table 2-16 $PM_{2.5}$ Concentrations for 2014 to 2020 at the Visalia North Church Street Monitor

Particulate Matter 2.5 Standard	2014	2015	2016	2017	2018	2019	2020
Maximum 24- hour concentration	81.3	86.3	48.0	86.1	86.8	47.2	127.1
Number of days exceeded: Federal 35 µg/m^3	35.5	17.9	21.3	26.7	42.3	19.9	51.2
State Maximum Annual concentration	17.8	No Data	15.5	16.8	17.4	12.2	No Data
Federal Maximum Annual concentration	17.8	16.1	14.6	16.2	17.3	12.9	19.6

Source: Caltrans Air Quality Report, October 2021

Existing Air Quality

The closest air quality monitoring station to the project is the Visalia Church Street station, which measures fine particulate matter. The monitor is about 30 miles north of the midpoint of the project.

Environmental Consequences

This section describes the results of the air quality analyses done for the project. The analyses applied methodology and assumptions that are consistent with federal and state requirements for air quality. The analyses also used guidelines and procedures provided in applicable air quality analysis protocols, such as the Transportation Project-Level Carbon Monoxide Protocol (CO Protocol) (Garza et al., 1997), Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in PM_{10} and

$PM_{2.5}$ Nonattainment and Maintenance Areas (U.S. Environmental Protection Agency, 2015), and the Federal Highway Administration Updated Interim Guidance on Air Toxics Analysis in NEPA Documents (Federal Highway Administration, 2016).

Key findings from the air quality analyses are listed below:

- Regional Air Quality Conformity—This project is regionally significant but is not included in Tulare County Association of Governments' current 2018 Regional Transportation Plan/2021 Federal Transportation Improvement Program; therefore, this project does not currently meet federal transportation conformity requirements. However, the Tulare County Association of Governments plans to amend its Regional Transportation Plan/2021 Federal Transportation Improvement Program in 2022 to incorporate the project; when this occurs, Caltrans staff will amend this report. In this draft environmental document, the project-level requirements for federal transportation conformity would still be addressed with the caveat that the Tulare County Association of Governments' Regional Transportation Plan/2021 Federal Transportation Improvement Program must be amended before final approval of the environmental document can be granted by the Federal Highway Administration.
- Carbon Monoxide (CO)—As of June 1, 2018, federal transportation conformity requirements for carbon monoxide ceased to apply as San Joaquin Valley demonstrated continuous attainment of the federal standard for carbon monoxide for a 20-year period as required by the Clean Air Act. The emissions modeling for this project shows a general decrease in carbon monoxide emissions over time and no difference in emissions between the build and no-build scenarios; therefore, no further analysis of carbon monoxide emissions is required.
- Ozone (O_3)—When projects are listed in an approved Regional Transportation Plan with associated conformity emissions analysis, the projects are conforming to the State Implementation Plan for ozone. As noted above, this project is not included in Tulare County Association of Governments' current 2018 Regional Transportation Plan/2021 Federal Transportation Improvement Program; therefore, this project does not currently meet federal transportation conformity requirements. However, the Tulare County Association of Governments intends to amend its Regional Transportation Plan/2021 Federal Transportation Improvement Program in 2022 to incorporate the project; when this occurs, Caltrans staff will update this environmental report.
- Particulate Matter 2.5 (PM2.5)—Emissions modeling shows no difference between the build and no-build scenarios except for the peak 1-hour afternoon period in 2047 where the build scenario shows 2.5 percent higher emissions for PM2.5 than the no-build scenario.
- Particulate Matter 10 (PM10)—Emissions modeling shows no difference between the build and no-build scenarios.
- Particulate Matter (PM2.5/PM10) Hot-Spot Analysis—The project is not a "project of air quality concern" and therefore a particular matter hot-spot analysis is not required. Caltrans submitted this project for interagency consultation on September

14, 2021 and received concurrence on September 15, 2021 from the U.S. Environmental Protection Agency and Federal Highway Administration that this is not a project of air quality concern.

- Mobile Source Air Toxics (MSAT)—Based on the present and future projected annual Vehicle Miles Traveled and Federal Highway Administration published guidance, the project has a low potential for mobile source air toxics effects. Also, mobile source air toxics in the study area are likely to be lower in the future because of stricter emission standards and improved pollution control technology, according to the U.S. Environmental Protection Agency.
- Construction Emissions—Caltrans Standard Specifications pertaining to dust control and dust palliative requirements are a required part of all construction contracts and should effectively reduce and control fugitive particulate matter emissions during construction. In addition, the provisions of Caltrans Standard Specifications, Section 14-9.02 “Air Pollution Control” and Section 10-5 “Dust Control,” require the contractor to comply with the air pollution control rules, ordinances, and regulations and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.
- Carbon Dioxide (CO2)—Carbon dioxide is the principal greenhouse gas of concern with transportation projects (see Chapter 3, Section 3.2.3 and Chapter 4, Section 4.3.3 in the Air Quality Report). There is no difference in carbon dioxide emissions between the build and no-build scenarios in this project.

Conformity Status

Tulare County is in the San Joaquin Valley Air Basin, which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Tulare County is classified as nonattainment for the federal 8-hour ozone and fine particulate matter standards, and in attainment for federal respirable particulate matter and carbon monoxide standards.

Regional Conformity

This project is currently not included in the Tulare County Association of Governments 2021 Federal Transportation Improvement Program and the 2018 Regional Transportation Plan with corresponding air conformity analysis. The project must be included in the updated 2022 Federal Transportation Improvement Program and 2022 Regional Transportation Plan prior to the final environmental document.

Final project-level conformity determination includes coordination with the Federal Highway Administration to ensure any future formal amendments to the Regional Transportation Plan/Federal Transportation Improvement Program list the project correctly prior to signature of the final environmental document. The project-level conformity determination will be included in this document prior to signature of the final environmental document.

Carbon Dioxide Analysis

The Carbon Dioxide Protocol was developed for project-level conformity (hot-spot) analysis and was approved for use by the U.S. Environmental Protection Agency in

1997. It provides qualitative and quantitative screening procedures, as well as quantitative (modeling) analysis methods to assess project-level carbon dioxide impacts. The qualitative screening step is designed to avoid the use of detailed modeling for projects that clearly cannot cause a violation, or worsen an existing violation, of the carbon dioxide standards. Although the protocol was designed to address federal standards, it has been recommended for use by several air pollution control districts in their California Environmental Quality Act analysis guidance documents and should also be valid for California standards because the key criterion (8-hour concentration) is similar: 9 parts per million for the federal standard and 9.0 parts per million for the state standard.

Project-Level Conformity

The project is subject to project-level conformity because it is considered a Routine Environmental Assessment under the National Environmental Policy Act and considered a regionally significant project. The project sits within the San Joaquin Valley Air Basin and is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Tulare County is nonattainment for the federal 8-Hour ozone and fine particulate matter standards, and in attainment for federal respirable particulate matter and carbon monoxide standards.

Under 40 Code of Federal Regulations Section 9.109, a project-level hot-spot analysis for conformity is required. The project was submitted for Interagency Consultation in September 2021, and the U.S. Environmental Protection Agency and the Federal Highway Administration concurred that the project is not a “Project of Air Quality Concern.”

For project-level conformity, a project may not contribute to any new localized carbon monoxide, fine and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis).

No project-level conformity requirements apply to ozone since it is considered a regional pollutant. The project would not interfere with the implementation of any transportation control measures.

Interagency Consultation

The project was submitted for Interagency Consultation on September 14, 2021, and was found not to be a “Project of Air Quality Concern” by the U.S. Environmental Protection Agency and the Federal Highway Administration.

The project would not cause or contribute to any new localized, fine and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis).

Short-Term Effects (Construction Emissions)

During construction, the project would generate air pollutants. The exhaust from construction equipment contains hydrocarbons, nitrogen oxides, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities would vary each day as construction progresses.

Construction Equipment, Traffic Congestion, and Fugitive Dust

Construction greenhouse gas emissions for the project are calculated using Caltrans' Construction Emissions Tool, Version 1.1. Project construction is expected to generate about 2,794 tons of carbon dioxide during the 375 working days.

Long-Term Effects (Operational Emissions)

Operational emissions are emissions from vehicles traveling on the highway after the project is completed. Operational emissions do not include emissions from construction. The operational emissions analysis compares forecasted emissions for existing/baseline, future no-build, and future build scenarios.

Tables 2-17 and 2-18 show a comparison of the carbon monoxide and particulate matter during peak morning and evening traffic periods.

Table 2-17 Comparison of Future Build and Future No-Build Emissions for Morning Peak Hours

Analysis Year	Peak Fine Particulate Matter (Pounds per Hour)	Peak Respirable Particulate Matter (Pounds per Hour)	Peak Carbon Monoxide (Pounds per Hour)
Existing 2018	2.7	8.6	61
No-Build 2027	2.2	8.5	24
No-Build 2047	2.3	9.1	16
Build 2027	2.2	8.5	24
Build 2047	2.3	9.1	16

Source: Caltrans Air Quality Report, October 2021

Table 2-18 Comparison of Future Build and Future No-Build Emissions for Evening Peak Hours

Analysis Year	Peak Fine Particulate Matter (Pounds per Hour)	Peak Respirable Particulate Matter (Pounds per Hour)	Peak Carbon Monoxide (Pounds per Hour)
Existing 2018	3.6	12	83
No-Build 2027	3.3	13	35
No-Build 2047	4.0	16	29
Build 2027	3.3	13	35
Build 2047	4.1	16	28

Source: Caltrans Air Quality Report, October 2021

Emissions Analysis

Particulate matter emissions were estimated for existing year 2018, no-build and build year 2027, and no-build and build design year 2047.

Particulate matter emissions were modeled for peak morning and evening periods. Peak period length for both morning and evening peak periods were 1 hour each. Off-peak period was also 1 hour in duration. Speeds and volumes during these periods were provided by Caltrans Forecasting Division.

Hot-Spot Analysis

In particulate matter nonattainment or maintenance areas, if a project is determined to be a Project of Air Quality Concern, a hot-spot analysis must be conducted under the conformity requirement. The U.S. Environmental Protection Agency guidance for particulate matter hot-spot analysis, along with required interagency consultation, is used to determine whether a project is a Project of Air Quality Concern.

In November 2015, the U.S. Environmental Protection Agency released an updated version of Transportation Conformity Guidance for Quantitative Hot-Spot Analyses in Fine and Respirable Particulate Matter Nonattainment and Maintenance Areas for quantifying the local air quality impacts of transportation projects and comparing them to the particulate matter National Ambient Air Quality Standards (75 Federal Register Section 79370). The U.S. Environmental Protection Agency originally released the quantitative guidance in December 2010 and released a revised version in November 2013 to reflect the approval of the Emission Factor 2011 model and the 2012 Particulate Matter National Ambient Air Quality Standards final rule. The November 2015 version reflects the 2014 Motor Vehicle Emissions Simulator model and its subsequent minor revisions such as the Motor Vehicle Emissions Simulator model 2014a, to revise design value calculations to be more consistent with other U.S. Environmental Protection Agency programs, and to reflect guidance implementation and experience in the field. Note that the Emission Factor model, not the Motor Vehicle Emissions Simulator model, should be used for project hot-spot analysis in California.

The guidance requires a hot-spot analysis to be completed for a Project of Air Quality Concern. The final rule in 40 Code of Federal Regulations Section 93.123(b)(1) defines a Project of Air Quality Concern as:

1. New or expanded highway projects that have a significant number of or significant increase in diesel vehicles.
2. Projects affecting intersections that are at Level of Service D, E, or F with a significant number of diesel vehicles, or those that would change to Level of Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project.
3. New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location.
4. Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location.
5. Projects in or affecting locations, areas, or categories of sites which are identified in the fine and respirable particulate matter applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The project was submitted for Interagency Consultation on September 14, 2021. It was deemed Not a Project of Air Quality Concern by the Interagency Consultation Partners because the project did not fall into the project categories listed above. Concurrence for Not a Project of Air Quality Concern was granted by the U.S. Environmental Protection Agency and by the Federal Highway Administration.

Construction Conformity

Construction activities would not last for more than 5 years at one general location, so construction-related emissions do not need to be included in regional and project-level conformity analysis (40 Code of Federal Regulations 93.123(c)(5)). During construction, short-term degradation of air quality may occur due to the release of particulate emissions (airborne dust) generated by excavation, grading, hauling, and other construction-related activities. Emissions from construction equipment are expected and would include carbon monoxide (CO), nitrogen oxides (NOx), volatile organic compounds, directly emitted particulate matter (PM10 and PM2.5), and toxic air contaminants such as diesel exhaust particulate matter. Ozone is a regional pollutant that comes from nitrogen oxides and volatile organic compounds in the presence of sunlight and heat.

Site preparation and roadway construction typically involves clearing, cut-and-fill activities, grading, removing or improving existing roadways, building bridges, and paving roadway surfaces. Construction-related effects on air quality from most highway projects would be greatest during the site preparation phase because most engine emissions are associated with the excavation, handling, and transport of soils to and from the site. These activities could temporarily generate enough particular matter 10

(PM10), particulate matter 2.5 (PM2.5), and small amounts of carbon monoxide, sulfur dioxide, nitrogen oxides and volatile organic compounds to be of concern.

Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site could deposit mud on local streets, which could be an added source of airborne dust after it dries.

PM10 emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM10 emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of equipment operating. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Construction activities for large development projects are estimated by the U.S. Environmental Protection Agency to add 1.2 tons of fugitive dust per acre of soil disturbed per month of activity. If water or other soil stabilizers are used to control dust, the emissions can be reduced by up to 50 percent. Caltrans Standard Specifications (Section 14) on dust minimization require use of water or dust palliative compounds and would reduce potential fugitive dust emissions during construction.

In addition to dust-related PM10 emissions, heavy-duty trucks and construction equipment powered by gasoline and diesel engines would generate carbon monoxide, sulfur dioxide, nitrogen oxides, volatile organic compounds and some soot particulate (PM10 and PM2.5) in exhaust emissions. If construction activities were to increase traffic congestion in the area, carbon monoxide and other emissions from traffic would increase slightly while those vehicles are delayed. These emissions would be temporary and limited to the immediate area surrounding the construction site.

Sulfur dioxide is generated by oxidation during combustion of organic sulfur compounds contained in diesel fuel. Under California law and Air Resources Board regulations, off-road diesel fuel used in California must meet the same sulfur and other standards as on-road diesel fuel (not more than 15 parts per million sulfur), so sulfur dioxide-related issues due to diesel exhaust would be minimal.

Some phases of construction, particularly asphalt paving, may result in short-term odors in the immediate area of each paving site. Such odors would quickly disperse to below detectable levels as distance from the site increases.

Implementation of the following standardized measures, some of which may also be required for other purposes such as storm water pollution control, would reduce any air quality impacts resulting from construction activities:

- The construction contractor must comply with Caltrans Standard Specifications in Section 14. Section 14 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

Section 14 is directed at controlling dust. If dust palliative materials other than water are to be used, material specifications are described in Section 18.

- Water or dust palliative would be applied to the site and equipment as often as necessary to control fugitive dust emissions. Fugitive emissions and Avoidance, Minimization, and/or Mitigation Measures generally must meet a "no visible dust" criterion either at the point of emissions or at the right-of-way line, depending on local regulations.
- Soil binder would be spread on any unpaved roads used for construction purposes, and on all project construction parking areas.
- Construction equipment and vehicles would be properly tuned and maintained. All construction equipment would use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
- A dust control plan would be developed documenting sprinkling, temporary paving, speed limits, and timely revegetation of disturbed slopes as needed to minimize construction impacts to existing communities.
- Track-out reduction measures, such as gravel pads at project access points to minimize dust and mud deposits on roads affected by construction traffic, would be used.
- All transported loads of soils and wet materials would be covered before transport, or adequate freeboard (space from the top of the material to the top of the truck) would be provided to minimize emission of dust (particulate matter) during transportation.
- Dust and mud that are deposited on paved, public roads due to construction activity and traffic would be promptly and regularly removed to decrease particulate matter emissions.
- To the extent feasible, construction traffic would be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.
- Mulch would be placed or vegetation planted as soon as practical after grading to reduce windblown particulate matter in the area.

The project contains standardized project measures that are used on most, if not all, Caltrans projects and were not developed in response to any specific environmental impact resulting from the proposed project.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required.

2.2.3 Noise and Vibration

Regulatory Setting

The California Environmental Quality Act and National Environmental Policy Act of 1969 provide the broad basis for analyzing and abating highway traffic noise effects.

The intent of these laws is to promote the general welfare and to foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between the California Environmental Quality Act and National Environmental Policy Act.

California Environmental Quality Act

The California Environmental Quality Act requires a strictly baseline-versus-build analysis to assess whether a proposed project will have a noise impact. If a project is determined to have a significant noise impact under the California Environmental Quality Act, then the California Environmental Quality Act dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this section will focus on the National Environmental Policy Act/Title 23 Part 772 of the Code of Federal Regulations (23 CFR 772) noise analysis; please see Chapter 3 of this document for further information on noise analysis under the California Environmental Quality Act.

National Environmental Policy Act and 23 CFR 772

For highway transportation projects with Federal Highway Administration involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 CFR 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criterion for residences (67 dBA) is lower than the noise abatement criterion for commercial areas (72 dBA). The following table lists the noise abatement criteria for use in the National Environmental Policy Act/23 CFR 772 analysis.

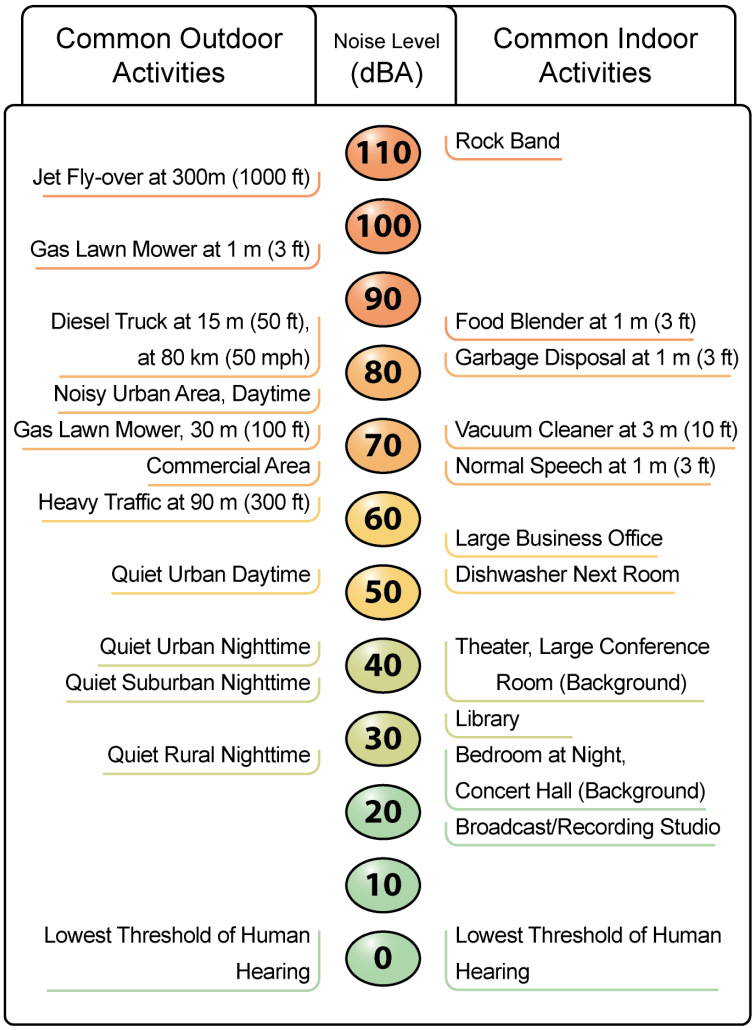
Table 2-19 Noise Abatement Criteria

Activity Category	Noise Abatement Criterion Hourly A-Weighted Noise Level, Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Residential. (Includes undeveloped lands permitted for this activity category)
C	67 (Exterior)	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails, and trail crossings. (Includes undeveloped lands permitted for this activity category)
D	52 (Interior)	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools, and television studios.
E	72 (Exterior)	Hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in A, B, C, D or F.
F	No noise abatement criterion—reporting only	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical, etc.), and warehousing.
G	No noise abatement criterion—reporting only	Undeveloped lands that are not permitted.

Source: Noise Study Report, December 2021

Figure 2-2 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise discussed in this section with common activities.

Figure 2-2 Noise Levels of Common Activities



According to the Caltrans Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects (May 2011), a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 dBA or more) or when the future noise level with the project approaches or exceeds the noise abatement criteria. A noise level is considered to approach the noise abatement criteria if it is within 1 dBA of the noise abatement criteria.

If it is determined that the project will have noise impacts, then potential abatement measures must be considered. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications. This document discusses noise abatement measures that would likely be incorporated in the project.

The Caltrans Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. Feasibility of noise abatement is

basically an engineering concern. Noise abatement must be predicted to reduce noise by at least 5 dB at an impacted receptor to be considered feasible from an acoustical perspective. It must also be possible to design and construct the noise abatement measure for it to be considered feasible. Factors that affect the design and constructability of noise abatement include, but are not limited to, safety, barrier height, topography, drainage, access requirements for driveways, presence of local cross streets, underground utilities, other noise sources in the area, and maintenance of the abatement measure. The overall reasonableness of noise abatement is determined by the following three factors: 1) the noise reduction design goal of 7 dB at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefited receptors (including property owners and residents of the benefited receptors).

Affected Environment

A Noise Study Report was completed for the project in December 2021; a Noise Abatement Decision Report was completed in May 2022.

A field noise investigation was conducted to identify land uses that could be subject to traffic noise impacts from the project. Single-family residences and a mobile home community were identified as Activity Category B land uses. Hotels, motels, and businesses were identified as Activity Category E land uses. Agricultural fields, light industrial facilities, truck stops, and warehousing have no noise impact criteria, and noise levels for this category are reported for informational use only.

As required by Caltrans protocol, noise abatement is considered for areas of frequent human use that would benefit from a lowered noise level. Accordingly, the noise study focused on locations with defined outdoor activity areas, such as residential backyards.

The noise study analyzed the land uses within the project limits. Representative receivers were divided into four segments.

Segment 1 between Avenue 100 and Avenue 96

Receiver 11

Receiver 11 is on the east side of State Route 99 at 874 South Park Drive and represents a single-family residence. The house is set back about 150 feet from the edge of traveled way of northbound State Route 99 and represents the first-row units on the east side of State Route 99 between Franklin Avenue and Avenue 96. The units represented by this receiver are eight single-family residences, one mobile home, one triplex and a church. The field visit for this segment concluded the residences do not have locations for frequent gathering facing State Route 99 that would benefit from noise abatement.

Receiver 12

Receiver 12 is a medical building on the west side of State Route 99 at 205 East Davis Street. This receiver is set back about 150 feet from the edge of traveled way of southbound State Route 99 and represents the first-row units on the east side of State Route 99 between Avenue 100 and Avenue 96. The units represented by this receiver

are five single-family residences, several commercial buildings, restaurants, and service stations. The field visit for this segment concluded the residences do not have locations for frequent gatherings facing State Route 99 that would benefit from noise abatement.

Receiver 14

Receiver 14 covers multi-family residential units on the west side of State Route 99 at 226 Main Street. This receiver is set back about 170 feet from the edge of traveled way of southbound State Route 99 and represents the first-row units on the west side of State Route 99 north of Avenue 100. The units represented by this receiver are five multi-family residential units, and service station and commercial building/Activity Category F land use. The field visit for this segment concluded the residences do not have locations for frequent gatherings facing State Route 99 that would benefit from noise abatement.

Receiver 13

Receiver 13 is Pixley Park on the east side of State Route 99 at 850 North Park Drive. The field measurement was impacted by high traffic noise from North Park Drive, which is between the park and traffic on State Route 99. There are few tables with seating at the park where frequent gatherings can take place.

Segment 2 Between Avenue 84 and Avenue 72 (Deer Creek)

Receiver 20

Receiver 20 is a residence on the east side of State Route 99 at 8331 Road 128. The house is set back about 250 feet from northbound State Route 99 and represents five other single-family homes on the east side of State Route 99 between Avenue 84 and Avenue 80. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

Receiver 2

Receiver 2 is vacant land/Activity Category F on the west side of State Route 99 about 250 feet north of Avenue 76. The receiver is set back about 100 feet from the edge of traveled way of southbound State Route 99. There are no impact criteria for Activity Category F land uses.

Receiver 15

Receiver 15 is a residence on the west side of State Route 99 at 7724 Bishop Drive. The house is set back about 350 feet from southbound State Route 99 and represents four other single-family residences on the west side of State Route 99 between Avenue 8 and Avenue 76. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

Receiver 10

Receiver 10 is a single-family residence on the east side of State Route 99 at 7438 Road 130. The house is set back about 150 feet from northbound State Route 99 and represents three other single-family residences on the west side of State Route 99

between Avenue 76 and Avenue 72. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

Receiver 21

Receiver 21 is a church on the east side of State Route 99 at 12879 Avenue 80, Earlimart. This receiver is set back about 230 feet from northbound State Route 99 and represents four residences and a commercial facility on the east side of State Route 99 between Avenue 76 and Avenue 80. The field visit concluded only one residence at 7808 Drive 130 has locations for frequent gatherings that would benefit from noise abatement.

Receiver 26

Receiver 26 is a single-family residence on the east side of State Route 99 at 7808 Drive 130, Pixley and is set back about 230 feet from northbound State Route 99.

Receiver 22

Receiver 22 is a single-family residence on the east side of State Route 99 at 13041 Avenue 72, Pixley and is set back about 240 feet from northbound State Route 99.

Segment 3 Between Avenue 72 and Avenue 44

Receiver 9

Receiver 9 is a single-family residence on the east side of State Route 99 at 286 East Bobbi Avenue and represents a total of six first-row homes set back about 210 feet from northbound State Route 99. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

Receiver 7

Receiver 7 is a single-family residence on the east side of State Route 99 at 667 North State Street and represents a total of 30 single-family residences and one triplex. Receiver 7 is set back about 160 feet from the edge of traveled way of northbound State Route 99.

Receiver 4

Receiver 4 is a single-family residence on the east side of State Route 99 at 591 South State Street and represents seven single-family residences between Spruce Avenue and Avenue 48. Receiver 4 is set back about 160 feet from the edge of traveled way of northbound State Route 99.

Receiver 5

Receiver 5 is a single-family residence on the east side of State Route 99 at 1027 South State Street and represents 28 single-family residences and one duplex between Washington Avenue and Avenue 48. Receiver 5 is set back about 170 feet from the traveled way of northbound State Route 99.

Receiver 8

Receiver 8 is a single-family residence on the west side of State Route 99 at 505 South Market Road and represents 32 single-family residences between Washington Avenue and Kely Avenue. Receiver 8 is set back about 120 feet from the edge of traveled way of southbound State Route 99.

Receiver 6

Receiver 6 is a single-family residence on the west side of State Route 99 at 505 South Market Road and represents 24 single-family residences and five multi-family units between Washington Avenue and Avenue 48. Receiver 6 is set back about 120 feet from the edge of traveled way of southbound State Route 99.

Receiver 3

Receiver 3 is a single-family residence on the west of State Route 99 at 381 Olympic Street and represents 11 single-family residences and a church (Apostolic Community Life Center) between Avenue 44 and Avenue 48. Receiver 3 is set back about 90 feet from the edge of traveled way of southbound State Route 99.

Receiver 23

Receiver 23 is a hotel/motel (Earlimart Motel) on the west side of State Route 99 at 1164 North Front Street, Earlimart. Receiver 23 is set back about 120 feet from the traveled way of southbound State Route 99. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from noise abatement.

Segment 4 Between Road 360 and Cecil Avenue

Receiver 1

Receiver 1 is the Best Western Liberty Inn hotel on the east side of State Route 99 at 14394 County Line Road and represents the swimming pool location at the hotel. Receiver 1 is set back about 182 feet from the edge of traveled way of northbound State Route 99.

Receiver 16

Receiver 16 is a mobile home unit at 2042 Gerard Street and represents the first row of mobile homes facing State Route 99. Receiver 16 is set back about 430 feet from the edge of traveled way of northbound State Route 99.

Receiver 24

Receiver 24 is a swimming pool at Americas Best Value Inn hotel on the east side of State Route 99 at 2231 Girard Street and represents another hotel (Roadway Inn) at 2211 Girard. Receiver 24 is set back about 100 feet from the edge of traveled way of northbound State Route 99.

Receiver 17

Receiver 17 is a single-family residence on the east side of State Route 99 at 603 17th Avenue and represents two single-family units, one multi-family unit and a small

business between Cecil Avenue and 21st Street. Receiver 17 is set back about 180 feet from the edge of traveled way of northbound State Route 99. The field visit concluded no locations for frequent gathering are facing State Route 99 that would benefit from noise abatement.

Receiver 18

Receiver 18 is a multi-family residence on the west side of State Route 99 at 430 20th Avenue and represents 14 multi-family units and a swimming pool between 20th Avenue and 18th Avenue. Receiver 18 is set back about 150 feet from the edge of traveled way of southbound State Route 99. The field visit concluded no locations for frequent gatherings are facing State Route 99 that would benefit from a noise abatement.

Receiver 25

Receiver 25 is a single-family residence on the west side of State Route 99 at 1725 Ellington Street and represents 11 single-family units between 18th Avenue and 17th Avenue. Receiver 25 is set back about 160 feet from the edge of traveled way of southbound State Route 99.

Environmental Consequences

The project is a Type 1 project defined by the Federal Highway Administration because it would increase the number of through-traffic lanes, potentially increase the volume of traffic, and move traffic closer to receivers. The project would result in noise impacts that require the consideration of noise abatement. The Noise Study proposes six soundwalls for the project.

A noise study was performed on January 19, 2021. Short-term (10-minute) noise measurements were taken at four sites to evaluate the existing noise environment. The sites are shown in Table 2-20. Collected data represent nearby frequent outdoor use areas. The measurements were collected between 11:15 a.m. and 2:40 p.m. Traffic volumes were counted during measurements. Measurements were taken when traffic was moving at a free pace (peak hour traffic volume) that occurred around 10:00 a.m. Long-term monitoring was not done and was considered unnecessary to determine the noise peak hour for this project since traffic conditions were suitable for uniform short-term samples of 10 minutes for each collection period.

Table 2-20 Short-Term Noise Measurement Results

Receiver Number	Location	Land Use	Noise Level Meter Distance from Right-of-Way (Feet)	Date	Start Time	Duration (Minutes)	Measured Decibels
Receiver 2	Agricultural Field	Agricultural	210	January 19, 2021/	11:15 a.m.	10:00	70
Receiver 1	14394 County Line Road, Pixley, CA 93256	Hotel/Motel	182	January 19, 2021	12:30 p.m.	10:00	64
Receiver 3	351 Bobbi Avenue, Pixley, CA 93215	Residential/ Mobile homes	57	January 19, 2021	1:22 p.m.	10:00	65
Receiver 4	591 South State Street, Earlimart, CA 93219	Residential	80	January 19, 2021	2:40 p.m.	10:00	69

Source: Noise Study Report, December 2021

Table 2-21 shows the existing noise levels for the identified 26 receivers. The table includes the modeling locations and land use. A map of the noise receivers is provided in Appendix E.

Table 2-21 Existing Noise Levels

Receiver Number	Location or Address	Land Use	Existing Noise Level (Decibels)	Measured or Modeled
Receiver 1	14394 County Line Road, Delano, CA 93215	Motel/Hotel	64	Measured
Receiver 2	Approximately 250 feet north of Avenue 76	Agricultural	68	Measured
Receiver 3	381 Olympic Street, Earlimart, CA 93219	Residential	73	Modeled
Receiver 4	591 South State Street, Earlimart, CA 93219	Residential	63	Modeled
Receiver 5	1027 South State Street, Earlimart, CA 93219	Residential	65	Modeled
Receiver 6	505 South Market Road, Earlimart, CA 93219	Residential	69	Modeled
Receiver 7	667 North State Street, Earlimart, CA 93219	Residential	61	Modeled

Receiver Number	Location or Address	Land Use	Existing Noise Level (Decibels)	Measured or Modeled
Receiver 8	283 South Market Road, Earlimart, CA 93219	Residential	71	Modeled
Receiver 9	286 East Bobbi Avenue, Earlimart, CA 93219	Residential	63	Measured
Receiver 10	7438 Road 130, Earlimart, CA 93219	Residential	68	Modeled
Receiver 11	874 South Park Drive, Pixley, CA 93256	Residential	69	Modeled
Receiver 12	205 East Davis Street, Pixley, CA 93256	Commercial	70	Modeled
Receiver 13	850 North Park Drive, Pixley, CA 93256	Park	71	Measured
Receiver 14	226 Main Street, Pixley, CA 93256	Residential	69	Modeled
Receiver 15	7724 Bishop Drive, Pixley, CA 93256	Residential	72	Modeled
Receiver 16	2042 Girard Street, Delano, CA 93215	Mobile Home	62	Modeled
Receiver 17	603 17th Avenue, Delano, CA 93215	Single-Family Resident	70	Modeled
Receiver 18	430 20th Avenue, Delano, CA 93215	Apartment	64	Modeled
Receiver 19	1612 Ellington Street, Delano, CA 93215	Commercial	67	Modeled
Receiver 20	8331 Road 128, Pixley, CA 93256	Residential	64	Modeled
Receiver 21	12879 Avenue 80, Pixley, CA 93256	Church	66	Modeled
Receiver 22	13041 Avenue 72, Earlimart, CA 93219	Residential	65	Modeled
Receiver 23	1164 North Front Street	Motel/ Hotel	73	Modeled
Receiver 24	2231 Girard Street, Delano, CA 93215	Motel/ Hotel	70	Modeled
Receiver 25	1725 Ellington Street, Delano, CA 93215	Residential	70	Modeled
Receiver 26	7808 Drive 130, Pixley, CA 93256	Residential	69	Modeled

Source: Noise Study Report, December 2021

Future Noise Environment and Impacts

A noise study was done to determine future traffic impacts of the project at frequent outdoor human use areas within the highway project limits. The future worst-case traffic noise impact at frequent outdoor human use areas along the project alignment was modeled for the Build Alternative to determine abatement measures. This section discusses the future noise environment and feasible noise abatement measures for impacted locations.

Modeling results indicate that predicted traffic noise levels for the design year with-project conditions approach or exceed the noise abatement criteria of 67 decibels for land use (residential) and 72 decibels for commercial establishments throughout the study area. Therefore, traffic noise impacts are predicted to occur within the study area, and noise abatement must be considered. See Appendix D for a summary of predicted future noise levels with and without the project and the reasonableness and feasibility of noise abatement.

Construction Noise

Temporary construction noise impacts would be unavoidable in areas next to the project. Noise from construction activities may intermittently dominate the noise environment in the immediate construction area.

Construction noise varies greatly depending on the construction process, type and condition of equipment used, and the construction site layout. Many of these factors are traditionally left to the contractor’s discretion, which makes it difficult to accurately estimate levels of construction noise. Construction noise estimates are approximate because of the lack of specific information available at the time of the assessment.

Construction is expected to take 375 working days to complete; about 35 of those working days would involve nightwork. Temporary construction noise impacts would be unavoidable in areas immediately next to the project and would be minimized in residential areas during the evening, weekend evenings, and holidays.

Table 2-23 lists the type of construction equipment typically used for similar projects. As indicated, equipment involved in construction is expected to generate noise levels ranging from 80 A-weighted decibels to 95 A-weighted decibels at 50 feet of distance. The noise that construction equipment produces would be reduced over distance at a rate of about 6 decibels per doubling of distance.

Table 2-23 Construction Equipment Noise

Noise Source	50-Foot Maximum Noise Level (Decibels)
Portable or Stationary Air Compressor	89
Auger, Drilled Shaft Rig	89
Backhoe	90
Chain Saw	88
Compactor	85
Concrete Mixer (Small Trailer)	68
Concrete Mixer Truck	89
Concrete Pump Trailer	84
Concrete Vibrator	81
Crane, Derrick	90
Mobile Crane	85
Dozer (Bulldozer)	90
Excavator	92
Forklift	86
Front End Loader	90
Generator	87
Gradall	85
Grader	89
Grinder	82
Impact Wrench	85
Jackhammer	88
Paver	92
Pavement Breaker	85
Pneumatic Tool	88
Pump	80
Roller	83
Sand Blaster	87
Electric Saw	80
Scraper	91
Shovel	90
Tamper	88
Tractor	90
Truck (Under Load)	95
Water Truck	94
Other Equipment with Diesel	88

Source: Noise Study Report, December 2021

Certain construction activities could cause intermittent localized vibration in the project area. Processes such as earth-moving with bulldozers, use of vibratory compaction

rollers, demolitions, or pavement breaking may cause construction-related vibration impacts such as human annoyance or, in some cases, building damages. The following measures could be used to minimize potential impacts from construction vibration. The owner of a building close enough to a construction vibration source that could potentially damage that structure due to vibration would be entitled to a pre-construction building inspection to document the pre-construction condition of that structure.

Avoidance, Minimization, and/or Abatement Measures

The Noise Abatement Decision Report analyzed noise barriers of heights ranging from 8 feet to 16 feet to determine feasible noise abatement. Soundwalls are considered feasible when they provide a noise reduction of at least 5 decibels. The Noise Reduction Design Goal, which is one measure in determining whether a soundwall is reasonable, is achieved when a noise barrier is predicted to provide a noise reduction of at least 7 decibels at one or more benefitted receptors. Other considerations include topography, access requirements, other noise sources, and safety considerations.

Factors used in determining if a proposed noise abatement measure is reasonable include residents' acceptance and cost per benefitted home. From a cost perspective, the estimated cost of the noise barrier should be equal to or less than the total cost allowance calculated for the noise barrier to be considered reasonable. The total cost allowance is derived from the Construction Price Index and is periodically adjusted. Noise abatement measures that are determined to be reasonable and feasible at the time of final design are incorporated into the project plans and specifications.

Below is a discussion of noise abatement considered for each area where traffic noise impacts are predicted. Table 2-24 summarizes key information used in determining noise abatement decisions regarding noise barrier construction for the project.

Table 2-24 Noise Barrier Evaluation

Barrier Number	Location	Noise Barrier Height (Feet)	Number of Benefitted Homes	Total Reasonable Allowance	Estimated Cost of Soundwall	Acoustical Design Goal Met	Cost Less Than Allowance?
Soundwall 1	Along the right-of-way east of State Route 99 and along Park Drive	12	3	$321,000	$470,900	Yes	No
Soundwall 2	Along the right-of-way west of State Route 99 on Market Road between Kelly Avenue and Washington Avenue	10	56	$5,992,000	$1,126,500	Yes	Yes
Soundwall 3	Along the right-of-way west of State Route 99 on Market Road between Washington Avenue and Avenue 48	12	24	$2,568,000	$1,267,520	Yes	Yes
Soundwall 4	Along the right-of-way of State Route 99 on Market Road south of Avenue 48	8	11	$1,177,000	$511,423	Yes	Yes

Barrier Number	Location	Noise Barrier Height (Feet)	Number of Benefitted Homes	Total Reasonable Allowance	Estimated Cost of Soundwall	Acoustical Design Goal Met	Cost Less Than Allowance?
Soundwall 5	Along the right-of-way on Road 130 east of State Route 99 and between Avenue 80 and Avenue 79	14	1	$107,000	$378,306	Yes	No
Soundwall 6	Along the right-of-way west of State Route 99 on Ellington Street between 17th Avenue and 18th Avenue	12	11	$1,177,000	$317,824	Yes	Yes

Source: Noise Abatement Decision Report, May 2022

Soundwall 1

Receiver 13 at 850 North Park Drive, Pixley, California 93256 consists of the following receiver category: Pixley Park and one single-family home. The predicted noise level for the design year with the project at this represented receiver is 72 decibels. A 12-foot noise barrier along the right-of-way on the west side of State Route 99 is expected to reduce traffic noise by 7 decibels. Soundwall 1 would start along the right-of-way on the east side of State Route 99 and is expected to reduce traffic noise by 7 decibels. Soundwall 1 would start along the right-of-way on the east side of State Route 99 on Park Drive and would extend for a length of about 900 feet. Total allowance for the benefitted receivers is $321,000; estimated cost of the soundwall is $470,900.

Soundwall 2

Receiver 8 at 283 South Market Road, Earlimart, California 93219 consists of the following receiver category: 56 single-family homes. The predicted noise level for the design year with the project at this represented receiver is 69 decibels. A 10-foot noise barrier along the right-of-way on the west side of State Route 99 is expected to reduce traffic noise by 7 decibels. Soundwall 2 would start along the right-of-way on the west side of State Route 99 on Market Road between Kelly Avenue and Washington Avenue. The soundwall would extend for a length of about 2,600 feet. Total allowance for the benefitted homes is $5,992,000; estimated cost of the soundwall is $1,126,500.

Soundwall 3

Receiver 6 at 505 South Market Street, Earlimart, California 93219 consists of the following receiver category: 24 single-family homes. The predicted noise level for the design year with the project at this represented receiver is 68 decibels. A 12-foot noise barrier along the right-of-way on the west side of State Route 99 is expected to reduce traffic noise by 8 decibels. Soundwall 3 would start along the right-of-way on the west side of State Route 99 on Market Road between Washington Avenue and Avenue 48. The soundwall would extend for a length of about 2,400 feet to cover the homes. Total allowance for the benefitted homes is $2,568,000; estimated cost of the soundwall is $1,267,520.

Soundwall 4

Receiver 3 at 381 Olympic Street, Earlimart, California 93219 consists of the following receiver category: 11 single-family homes. The predicted noise level for the design year with the project at this represented receiver is 71 decibels. An 8-foot noise barrier along the right-of-way on the west side of State Route 99 is expected to reduce traffic noise by 8 decibels. Soundwall 4 would start along the right-of-way on the west side of State Route 99 on Market Road south of Avenue 48 and extend for a length of about 1,500 feet. Total cost allowance for benefitted home is $1,177,000; estimated cost of the soundwall is $511,423.

Soundwall 5

Receiver 26 at 7808 Drive 130, Pixley, California 93256 consists of the following receiver category: one single-family home. The predicted noise level for the design year with the project at this represented receiver is 71 decibels. A 14-foot noise barrier along the right-of-way on the east side of State Route 99 is expected to reduce traffic noise by 8 decibels. Soundwall 5 would start along the right-of-way on the east side of State Route 99 on Road 130 between Avenue 80 and Avenue 79 and extend for a length of about 620 feet. Total cost allowance for benefitted home is $107,000; estimated cost of the soundwall is $378,306.

Soundwall 6

Receiver 25 at 1725 Ellington Street, Delano, California 93215 consists of the following receiver category: 11 single-family homes. The predicted noise level for the design year with the project at this represented receiver is 72 decibels. A 12-foot noise barrier along the right-of-way on the west side of State Route 99 is expected to reduce traffic noise by 5 decibels or more. Soundwall 6 would start along the right-of-way on the west side of State Route 99 on Ellington Street between 17th Avenue and 18th Avenue and extend for a length of about 606 feet to cover 11 single-family homes. Total cost allowance for benefitted homes is $1,177,000; estimated cost of the soundwall is $317,824.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of barriers at: Soundwall 2, Soundwall 3, Soundwall 4, and Soundwall 6 with respective lengths of 600 to 2,600 feet and average heights of 8 to 16 feet. Calculations based on preliminary design data show that the barriers would reduce noise levels by 5 to 7 dBA for 102 residences at a cost of $3,223,267. These measures may change based on input received from the public. If conditions have substantially changed during

final design, noise abatement may not be constructed. The final decision on noise abatement would be made upon completion of the project design.

Construction Noise

The following control measures would be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment shall have sound-control devices no less effective than those provided on the original equipment. Each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.
- Construction methods or equipment that would provide the lowest level of noise impact should be used.
- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extend.

The contractor would be required to adhere to the following administrative noise control measures:

- Once details of the construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.
- Good public relations shall be maintained with the community to minimize objectives to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the Caltrans Resident Engineer shall coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

It is possible that certain construction activities could cause intermittent localized concern from vibration in the project area. During certain construction phases, processes such as earth moving with bulldozers, the use of vibratory compaction rollers, demolitions, or pavement braking may cause construction related vibration impacts such as human annoyance or, in some cases, building damages. There are cases where it may be necessary to use this type of equipment while operating close to residential buildings. The following are procedures that can be used to minimize the potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a pre-construction building inspection to document the pre-construction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

A combination of the mitigation techniques for equipment vibration control as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity.

Application of the mitigation measures will reduce the construction impacts; however, temporary increases in vibration would likely occur at some locations.

2.3 Biological Environment

2.3.1 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act: 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (and Caltrans, as assigned), are required to consult with the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take Statement or a Letter of Concurrence. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act, California Fish and Game Code Section 2050, et seq. The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act. Section 2080 of the California Fish and Game Code prohibits "take" of any species determined to be an endangered

species or a threatened species. Take is defined in Section 86 of the California Fish and Game Code as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an incidental take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to California Endangered Species Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

Affected Environment

A Natural Environment Study (Minimal Impacts) was completed for the project in January 2022.

A list of federally endangered or threatened species and critical habitat(s) that may be affected by the project was first requested from the U.S. Fish and Wildlife Service on July 20, 2021 (see Appendix F for an updated list). Caltrans Federal Endangered Species Act Determinations are listed in Appendix G. Based on in-office research (California Native Plant Society, California Department of Fish and Wildlife, and U.S. Fish and Wildlife Service) and field surveys, Caltrans biologists determined there is potentially suitable habitat for the Swainson’s hawk within the project footprint.

General wildlife surveys were performed from March 2021 to June 2021; additional field surveys were conducted in December 2021.

Swainson’s Hawk

The Swainson’s hawk is listed as a state threatened species by the California Department of Fish and Wildlife. This hawk is a summer migrant to California, wintering in South America and breeding in western North America. The hawk nests in large trees surrounded by open areas as well as in riparian forests. It forages in adjacent grasslands or suitable agricultural fields and pastures.

The closest occurrence of a Swainson’s hawk sighting and nests occurred near the community of Pixley in 2017. No occurrences were recorded within the project area. The project falls within the known range of the species, and potential nesting habitat is present, mostly in landscaped shrubs and trees, including those within the Caltrans

right-of-way. Fields adjacent to the project area contain low-growing ruderal species that provide potential foraging habitat.

Environmental Consequences

Swainson's Hawk

Surveys of the project area noted a Swainson's hawk flying overhead. The project area contains suitable nesting trees. Removal of trees along the Caltrans right-of-way is expected for the project, but no nesting Swainson's hawks were present during the surveys. If Swainson's hawks were to enter the project area, noise and visual disturbance from construction activities would not impact the species more than the current disturbances on State Route 99 and the nearby train tracks. Therefore, no impacts on the Swainson's hawk are expected with the implementation of avoidance and minimization measures.

Avoidance, Minimization, and/or Mitigation Measures

Swainson's Hawk

- Pre-construction surveys following the *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley* (May 2000) would be conducted by a qualified biologist within 500 feet of the project footprint during nesting season (February 1 to September 30) prior to construction.
- If nesting Swainson's hawks are discovered within 500 feet of the project footprint, the nest site would be designated an Environmentally Sensitive Area, and a 500-foot buffer would be established until a qualified biologist has determined that the nest is no longer active.
- A qualified biologist would monitor an active nest during construction activities within the buffer.
- A special provision for migratory birds would be included to ensure that no potential nesting migratory birds are affected during construction activities.
- Removal of any trees within the project area should be done outside of the nesting season; however, if a tree within the project area needs to be removed during the nesting season, a qualified biologist would inspect the tree before the removal to ensure that no nests are present.

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance Under CEQA

The project is a joint project by Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (known by the acronym NEPA) and the California Environmental Quality Act (known by the acronym CEQA). These acronyms will be used in this chapter for quick reference. The Federal Highway Administration's responsibility for environmental review, consultations, and any other actions required by applicable federal environmental laws for this project are being, or have been carried out by Caltrans pursuant to 23 U.S. Code Section 327 (23 USC 327) and the Memorandum of Understanding dated May 27, 2022, and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under NEPA and CEQA.

One of the main differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement, or lower level of documentation, will be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action (project) as a whole has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgement of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental document.

CEQA, on the other hand, does require Caltrans to identify each "significant effect on the environment" resulting from the project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each and every significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the CEQA Guidelines list a number of "mandatory findings of significance," which also require the preparation of an Environmental Impact Report. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This chapter discusses the effect of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant Impact With Mitigation Incorporated, Less Than Significant Impact, and No Impact. In many cases, background studies performed in connection with a project will indicate that there are no impacts to a particular resource. A “No Impact” answer reflects this determination. The words “significant” and “significance” used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this checklist are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 to provide you with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

Except as provided in Public Resources Code Section 21099, would the project:

a) Have a substantial adverse effect on a scenic vista?

No Impact—The project would not have substantial adverse effect on a scenic vista. (Visual Impact Assessment, September 2021)

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

No Impact—The project would not substantially damage scenic resources within a state scenic highway. (Visual Impact Assessment, September 2021)

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

Less Than Significant Impact With Mitigation Incorporated—The project would have a high impact on the existing visual character of the site and its surroundings. The project would remove 63,000 linear feet of oleanders in the median. To compensate for the visual loss, the project would replace plants to offset the effect on visual quality of the oleanders removed from the median. New oleanders would be planted on either side of the highway, along the right-of-way fence. (Visual Impact Assessment, September 2021)

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

Less Than Significant Impact—The project would not create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area. The project would have a low impact on the creation of a new source of light or glare. The new concrete median barrier would provide a visual screen from the oncoming headlight glare. The 56-inch-high concrete barrier would avoid impacts of oncoming headlight glare. (Visual Impact Assessment, September 2021)

3.2.2 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

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

No Impact—The project would not convert Prime Farmland, Unique Farmland of Statewide Importance because all work would be within the existing Caltrans right-of-way. (Updated Caltrans Draft Project Report, June 2022)

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

No Impact—The project would not conflict with existing zoning for agricultural use because all work would be within the existing right-of-way. (Updated Caltrans Draft Project Report, June 2022)

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

No Impact—There is no forest land or timberland in the project area. (Updated Caltrans Draft Project Report, June 2022)

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

No Impact—There is no forest land or timberland in the project area. (Updated Caltrans Draft Project Report, June 2022)

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

No Impact—There are no other changes anticipated to farmland or forest land. (Updated Caltrans Draft Project Report, June 2022)

3.2.3 Air Quality

CEQA Significance Determinations for Air Quality

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

Would the project:

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

No Impact—The project is currently not included in the Tulare County Association of Governments 2021 Federal Transportation Improvement Program and the 2018 Regional Transportation Plan with corresponding air conformity analysis. The project will be included in the updated 2022 Federal Transportation Improvement Program and 2022 Regional Transportation Plan prior to final environmental document approval. (Caltrans Air Quality Report, October 2021)

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

No Impact—The project sits within the San Joaquin Valley Air Basin and is under the jurisdiction of the San Joaquin Valley Air Pollution Control District. Tulare County is in nonattainment for the federal 8-hour ozone and fine particulate matter standards, and in attainment for federal respirable particulate matter and carbon monoxide standards. Tulare County must consider transportation control measures to reduce emissions to demonstrate conformity with the State Implementation Plan for air quality to satisfy federal requirements. The project was submitted for Interagency Consultation on September 14, 2021, and was found not to be a "Project of Air Quality Concern" by the U.S. Environmental Protection Agency and the Federal Highway Administration. The project would not cause or contribute to any new localized, fine, and/or respirable particulate matter violations or delay timely attainment of any National Ambient Air Quality Standards or any required interim emission reductions or other milestones during the timeframe of the transportation plan (or regional emissions analysis). (Caltrans Air Quality Report, October 2021)

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact—For sensitive receptors, the zone of greatest concern near roadways is within 500 feet. The terms "sensitive receptors" and "sensitive land use" refer only to humans and human-occupied locations, such as hospitals, schools, day care centers, and other such centers where humans would be impacted by air quality emissions harmful to human health. No sensitive receptors have been identified for this project. (Caltrans Air Quality Report, October 2021)

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

No Impact—The project would not result in other emissions such as odors adversely affecting a substantial number of people. The project is in a transportation corridor with a major highway. (Caltrans Air Quality Report, October 2021)

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-

status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Less Than Significant Impact—The project would have a less than significant impact on the Swainson's hawk. With incorporation of avoidance and minimization measures (discussed in Chapter 2 under Biological Environment) into the project, these impacts are considered to be less than significant. (Natural Environment Study-Minimal Impacts, January 2022)

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

No Impact—A California Natural Diversity Database query did not identify any riparian habitat or other sensitive natural communities of special concern within the project area. So, no potential impacts to riparian habitat or natural communities of special concern are expected. (Natural Environment Study-Minimal Impacts, January 2022)

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

No Impact—No wetlands were identified within the project area. (Natural Environment Study-Minimal Impacts, January 2022)

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less Than Significant Impact—Migratory birds may try to nest in vegetation or on structures within the Caltrans right-of-way easement during their nesting season between February 1 and September 30. No impacts to migratory birds are expected with the implementation of Caltrans' Standard Special Provisions. (Natural Environment Study-Minimal Impacts, January 2022)

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

No Impact—The project would not conflict with any local policies or ordinances protecting biological resources. (Natural Environment Study-Minimal Impacts, January 2022)

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

No Impact—The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (Natural Environment Study-Minimal Impacts, January 2022)

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

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

No Impact—As discussed in the Cultural Resources section in Chapter 2, Caltrans identified six built resources within a half-mile of the project; two of these resources are near the project area. One is a bridge and did not appear on the Caltrans Historic Bridge Inventory. No built resources are within the project area. (Historic Property Survey Report, December 2021)

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

No Impact—No known prehistoric sites would be impacted within a half-mile of the project area. No archaeological resources eligible for the National Register of Historic Places or California Register of Historical Resources have been recorded within the archaeological study area. No archeological sites were discovered during the pedestrian (walkabout) survey. (Historic Property Survey Report, December 2021)

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

No Impact—As discussed in the Cultural Resource section in Chapter 2, the project is not expected to disturb any human remains, including those interred outside of dedicated cemeteries. (Historic Property Survey Report, December 2021)

3.2.6 Energy

CEQA Significance Determinations for Energy

Would the project:

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

No Impact—Per Caltrans' Best Management Practices, newer or well-maintained equipment that is more energy efficient would be used during construction. The amount of energy used by construction during the project would be temporary. Fuel consumption projected for the Build Alternative would be offset by efficiencies experienced from the reduction of congestion on local roadways.

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

No Impact—The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

3.2.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

No Impact—Rupture of a known earthquake fault is not expected since the project is not in a known earthquake fault area. (California Geological Survey, Seismic Hazard Zones and Alquist-Priolo Earthquake Fault Zone Interactive Map, accessed January 2022)

ii) Strong seismic ground shaking?

No Impact—Strong seismic ground shaking is not expected since the project is not in a known earthquake fault area. (U.S. Geological Survey U.S. Quaternary Faults Interactive Map, accessed January 2022)

iii) Seismic-related ground failure, including liquefaction?

No Impact—The project is in an area with low potential for seismic-related ground failure, including liquefaction, because the project area does not contain soil that is prone to liquefaction or seismic-related ground failure. (U.S. Geological Survey U.S. Quaternary Faults Interactive Map, accessed January 2022)

iv) Landslides?

No Impact—The project area would not be subject to landslides because of the generally flat topography and because the project would not involve large cuts and fills or steep excavation. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—Project construction would not result in substantial soil erosion or the loss of topsoil because the project would include appropriate Best Management Practices to prevent substantial soil erosion or loss of topsoil. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—Project construction would not cause the project area to become unstable or cause landslides, lateral spreading, subsidence, or collapse. The soil in the project area is not subject to liquefaction. (U.S. Geological Survey U.S. Quaternary Faults Interactive Map, accessed January 2022)

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

No Impact—The project is not on expansive soil and would not create substantial direct or indirect risks to life or property. (U.S. Geological Survey U.S. Quaternary Faults Interactive Map, accessed January 2022)

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

No Impact—The project would not include septic tanks or alternative wastewater disposal systems; therefore, there would be no impact.

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

No Impact—Excavation in the project area could impact paleontological resources, but the extent and intensity of the proposed excavation are expected to be limited to shallow soils. (Updated Paleontological Identification Report, August 2021)

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

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

Less Than Significant Impact—Greenhouse gas reduction strategies would be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project. (Climate Change Memo, February 2022; Caltrans Air Quality Report, October 2021)

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

Less Than Significant Impact—The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Climate Change Memo, February 2022; Caltrans Air Quality Report, October 2021)

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

Less Than Significant Impact—As discussed in Chapter 2 under hazardous waste, applicable Caltrans' Standard Provisions and/or Non-Standard Special Provisions addressing proper handling and disposal of aerially deposited lead, asbestos-containing materials, lead-based paint, and treated wood waste would be included in the construction contract to protect construction personnel and the public. (Initial Site Assessment and Preliminary Site Investigation, August 2021)

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

No Impact—Project construction would not 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. (Initial Site Assessment and Preliminary Site Investigation, August 2021)

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

No Impact— The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Initial Site Assessment and Preliminary Site Investigation, August 2021)

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

No Impact—The project is not on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Initial Site Assessment and Preliminary Site Investigation, August 2021)

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

No Impact—The project is not within an airport land use plan or within 2 miles of a public or private airport that would result in a safety hazard or excessive noise for people residing or working in the project area. (Noise Study Report, December 2021)

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

No Impact—The project would not impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—The project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. The project is not considered to be in an area identified as vulnerable to wildfires. (Caltrans District 6 Climate Change Vulnerability Map)

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

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

No Impact—With implementation of Best Management Practices and Caltrans Standard Specifications, the project would not violate any water quality standards or waste discharge requirements or substantially degrade surface water or groundwater quality. Adherence to construction provisions and precautions described in the National Pollutant Discharge Elimination System permit would be upheld. (Water Quality Compliance Memorandum, August 2021)

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

No Impact—Construction or operation of the project would not impede sustainable groundwater management of the basin since the project would not use groundwater or interfere with groundwater recharge. (Water Quality Compliance Memorandum, August 2021)

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

i) Result in substantial erosion or siltation on-site or off-site;

No Impact—Project construction would not result in substantial soil erosion or siltation because the project would include appropriate Best Management Practices to prevent soil erosion and siltation. (Location Hydraulic Study, June 2021)

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

No Impact—The project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site. (Location Hydraulic Study, June 2021)

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

No Impact—The project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (Location Hydraulic Study, June 2021)

iv) Impede or redirect flood flows?

No Impact—The project would not alter the course of any channel or alter drainage patterns within the project study area. (Water Quality Compliance Memorandum, August 2021)

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

No Impact—Due to the topography of the project location, it would not be possible for construction of the project to cause inundation of an area by seiche, tsunami, or mudflow. (Location Hydraulic Study, June 2021)

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

No Impact—The project would not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Water quality during construction would be protected by provisions as described in the National Pollutant Discharge Elimination System permit. (Location Hydraulic Study, June 2021)

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No Impact—The project would not physically divide an established community. (Community studies conducted throughout 2020 and 2021)

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

No Impact—The project would not 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. (Tulare County Association of Governments Regional Transportation Plan, 2020)

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

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

No Impact—The project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. The project is not on land that is classified as a Mineral Resource Zone, according to the state geologist. (California Department of Conservation On-line Mineral Land Classification Interactive Map, accessed December 2021)

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

No Impact—The project would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. The project is not within a locally important mineral resource recovery site. (California Department of Conservation On-line Mineral Land Classification Interactive Map, accessed December 2021)

3.2.13 Noise

CEQA Significance Determinations for Noise

Would the project result in:

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

Less Than Significant Impact With Mitigation Incorporated—As discussed in Chapter 2 under Noise and Vibration, the Build Alternative would move future traffic closer to the identified receivers on State Route 99.

According to the Caltrans *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects*, May 2011, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as an increase of 12 decibels or more) or when the future noise level with the project approaches or exceeds the noise abatement criterion (67 decibels, in this case). Approaching the noise abatement criterion is defined as coming within 1 decibel of the noise abatement criterion. Therefore, potential abatement measures must be considered.

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of soundwalls for the project. The final decision on noise abatement would be made upon completion of the project design and the public involvement process.

Details of the recommended noise abatement measures are included in Appendix D. (Noise Study Report, December 2021, Noise Abatement Decision Report, May 2022)

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

Less Than Significant Impact—Groundborne vibration may occur during project construction, but equipment noise control and administrative measures would be in place. Application of these measures would reduce construction-related noise impacts; nevertheless, a temporary increase in noise and vibration may still occur. These measures are detailed in Chapter 2. (Noise Study Report, December 2021)

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

No Impact—The project is not within the vicinity of a private airstrip or an airport land use plan and is not within two miles of a public airport or public use airport. (Noise Study Report, December 2021)

3.2.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

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

No Impact—The project would not induce substantial unplanned population growth in the area, either directly or indirectly, because the project would not add capacity or extend roads or other infrastructure. (Community studies conducted throughout 2020 and 2021)

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

No Impact—The project would not displace any people or housing. (Community studies conducted throughout 2020 and 2021)

3.2.15 Public Services

CEQA Significance Determinations for Public Services

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain

acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection? Police protection? Schools? Parks? Other public facilities?

No Impact—The project would not result in an impact on parks, schools, or other public facilities and would not impact emergency response times. (Community studies conducted throughout 2020 and 2021)

3.2.16 Recreation

CEQA Significance Determinations for Recreation

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

No Impact—Pixley Park is 0.7 mile outside the project area. The project would not increase the use of existing neighborhood and regional parks or other recreational facilities to cause physical deterioration of the facility. (Community studies conducted throughout 2020 and 2021)

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

No Impact—The project does not propose any recreational facilities or require the construction or expansion of recreational facilities. (Community studies conducted throughout 2020 and 2021)

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

No Impact—The project would not conflict with any applicable program plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would ensure the safe operation of the highway system for motorists and emergency responders.

b) Conflict with or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Significant and Unavoidable Impact—According to CEQA, transportation projects that reduce, or have no impact on, Vehicle Miles Traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, such as the Delano to Pixley 6-Lane project, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. A lead agency has discretion to choose the most appropriate methodology to evaluate a project's Vehicle Miles Traveled, including whether to express the change in absolute terms, per capita, per household or in any other measure.

An Induced Vehicle Miles Traveled Analysis was completed in September 2021 for the project. The analysis found that annual Vehicle Miles Traveled induced by the proposed project would increase by about 47,706,213 after the deductions for truck Vehicle Miles Traveled, as discussed in Chapter 2, Section 2.1.7 Transportation/Pedestrian and Bicycle Facilities. The increase in Vehicle Miles Traveled would result from the addition of one northbound travel-lane and one southbound travel-lane for the length of the project.

Mitigation Measures

Mitigation measures would be used to decrease the project's permanent effects on Vehicle Miles Traveled, as discussed in Chapter 2, Section 2.1.7 Transportation/Pedestrian and Bicycle Facilities. As discussed in Chapter 1, Section 1.2.2 Need, the Comprehensive Multimodal Corridor Plan would include the prioritization of identifying managed lane and mode shift opportunities in the corridor that would lead to reduced Vehicle Miles Traveled. Implementation of Vehicle Miles Traveled-reducing managed lane strategies, such as truck-only and/or tolling lanes, through the corridor (or parts of the corridor that include this project) could eliminate about 80 percent of the Vehicle Miles Traveled concern from the project, because the only relevant capacity increase would result from the removal of trucks from the two general-purpose lanes. The lane-management strategy would be developed in more detail before the final environmental document is completed. Proposed mitigation measures with the Tulare County Regional Transit Agency Vanpool Program, Kings County Regional Transit Agency Vanpool Program and the increased frequency on KART Route 15 would reduce the annual Vehicle Miles Traveled impacts by 10,442,045.

Impacts

Therefore, even with mitigation, there would be a significant and unavoidable impact to Vehicle Miles Traveled.

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

No Impact—The project would not increase hazards due to a geometric design feature.

d) Result in inadequate emergency access?

No Impact—The project would not result in inadequate access.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

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

No Impact—No resources in the project area are listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources as defined in Public Resources Code Section 5020.1(k). (Historic Property Survey Report, December 2021)

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

No Impact—There are no tribal cultural resources in the project area that are significant to a California Native American tribe pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. (Historic Property Survey Report, December 2021)

3.2.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

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

Less Than Significant Impact—The project would require the relocation of existing electrical power, natural gas, and telecommunication facilities. These

facilities would be relocated as needed within the project area, which would not cause significant environmental effects. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—The project would have sufficient water supplies for construction and would not require additional water supplies in future years. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—The project would not generate significant amounts of wastewater or require future capacity for wastewater treatment. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Caltrans Updated Draft Project Report, June 2022)

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

No Impact—The construction contractor would be responsible for controlling and disposing of solid waste in accordance with federal, state, and local statutes and regulations. (Caltrans Standard Specifications)

3.2.20 Wildfire

CEQA Significance Determinations for Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

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

No Impact—The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The project is not

within a very high fire hazard severity zone. (Caltrans District 6 Climate Change Vulnerability Map)

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

No Impact—The project would not exacerbate wildfire risks, expose project occupants to pollutant concentrations from a wildfire, or promote the uncontrolled spread of a wildfire. The project is not within a very high fire hazard severity zone. (Caltrans District 6 Climate Change Vulnerability Map)

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

No Impact—The project would not require the installation or maintenance of associated infrastructure (such as roads, fuels breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary ongoing impacts to the environment. The project is not within a very high fire hazard severity zone. (Caltrans District 6 Climate Change Vulnerability Map)

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

No Impact—The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project is not within a very high fire hazard severity zone. (Caltrans District 6 Climate Change Vulnerability Map)

There is the potential that construction activities could create an unintended fire. However, the contractor would use adequate precautions and procedures as outlined in the contract's standard specifications to prevent and extinguish fire incidents during construction.

3.2.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to

eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant Impact—The environmental studies conducted for the project found the project would not substantially degrade the quality of the environment. The project would not reduce the habitat of fish or wildlife, cause fish or wildlife population to drop, threaten to eliminate plant or animal communities, reduce the number or restrict the range of rare or endangered plant or animal species, or eliminate important examples of California history or prehistory.

Biological and cultural studies done during 2020 and 2021 using data research and field reviews for species, habitat, and historical resources found no evidence of presence of special-status species or historic resources in the project area. The area is highly disturbed by mostly agricultural development, with no native plant species found. There are no rivers or creeks in the project vicinity, so no fish would be affected. There is a potential that migratory birds such as the Swainson's hawk could migrate into the area and nest in trees in the project area. Caltrans has measures to avoid and minimize impacts to existing nests according to regulatory requirements. Pre-construction surveys would be conducted to identify any new arrivals and protect them if they do appear. Also, exclusionary measures would be implemented to safely discourage species from nesting prior to and during construction. The Caltrans Historic Property Survey Report (December 2021) determined that no sensitive historic or prehistoric resources would be impacted by the project. No mitigation is required.

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

Less Than Significant Impact—The environmental studies found the project would not have individually limited, but cumulatively considerable impacts.

The project would increase capacity by constructing one additional lane on either side of State Route 99, therefore increasing Vehicle Miles Traveled. Based on the Vehicle Miles Traveled analysis, the project would induce an additional 57.9 million Vehicle Miles Traveled per year. The improvements proposed for the project mostly address the anticipated growth in freight traffic. Trucks account for about 22 percent of the Annual Average Daily Traffic count within this corridor, compared with the state average of 9 percent truck traffic. The 2020 California Freight Mobility Plan estimates over 463 million tons of goods moved into, out of, and within the region in 2010. This is expected to grow to more than 800 million tons by 2040. Forecasting and

Operational Analysis for the project do not indicate a congested corridor, and therefore pent-up demand is not evident. Additional lanes would improve safety and travel time reliability in this high truck volume, time-sensitive agricultural-product corridor.

While the traffic study projections show traffic would increase in the project area, which correlates with the predicted increase in Vehicle Miles Traveled, this is mostly from predicted increased population growth and implementation of approved local planned developments, and not from construction of the project. The impacts from the individual project are not cumulatively considerable. No mitigation for cumulative impacts is required.

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

Less Than Significant Impact—The project would not cause substantial adverse effects on human beings, either directly or indirectly.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988 led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are mostly concerned with the emissions of greenhouse gases generated by human activity, including carbon dioxide, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. Carbon dioxide is the most abundant greenhouse gas; while it is a naturally occurring component of Earth's atmosphere, fossil-fuel combustion is the main source of additional, human-generated carbon dioxide.

Two terms are typically used when discussing how we address the impacts of climate change: "greenhouse gas mitigation" and "adaptation." Greenhouse gas mitigation covers the activities and policies aimed at reducing greenhouse gas emissions to limit or "mitigate" the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels). This analysis will include a discussion of both.

3.3.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce greenhouse gas emissions from transportation sources.

Federal

To date, no national standards have been established for nationwide mobile-source greenhouse gas reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and greenhouse gas emissions reduction at the project level.

The National Environmental Policy Act (42 U.S. Code Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. The Federal Highway Administration therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices (Federal Highway Administration, 2019). This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability" (Federal Highway Administration, no date). Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these was the Energy Policy and Conservation Act of 1975 (42 U.S. Code Section 6201) and Corporate Average Fuel Economy Standards. This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy program based on each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Energy Policy Act of 2005, 109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) the establishment of the Office of Indian Energy Policy and Programs within the Department of Energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

The U.S. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration is responsible for setting greenhouse gas emission standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the United States. Fuel efficiency standards directly influence greenhouse gas emissions.

State

California has been innovative and proactive in addressing greenhouse gas emissions and climate change by passing multiple Senate and Assembly bills and executive orders including, but not limited to, the following:

Executive Order S-3-05 (June 1, 2005): The goal of this order is to reduce California's greenhouse gas emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.

Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006: Assembly Bill 32 codified the 2020 greenhouse gas emissions reduction goals outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The California Air Resources Board re-adopted the low carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 greenhouse gas reduction goals.

Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable Communities Strategy" that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the State's long-range transportation plan to identify strategies to address California's climate change goals under Assembly Bill 32.

Executive Order B-16-12 (March 2012): This order requires state entities under the direction of the governor, including the California Air Resources Board, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015): This order establishes an interim statewide greenhouse gas emission reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reductions targets. It also directs the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent. Greenhouse gases differ in how much heat each trap in the atmosphere (global warming potential). Carbon dioxide is the most important greenhouse gas, so amounts of other gases are expressed relative to carbon dioxide, using a metric called "carbon dioxide equivalent." The global warming potential of carbon dioxide is assigned a value of 1, and the global warming potential of other gases is assessed as multiples of carbon dioxide. Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every three years, and to ensure that its provisions are fully implemented.

Senate Bill 32, Chapter 249, 2016: This bill codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

Senate Bill 1386, Chapter 545, 2016: This bill declared "it to be the policy of the state that the protection and management of natural and working lands … is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."

Assembly Bill 134, Chapter 254, 2017: This bill allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.

Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to the California Environmental Quality Act from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic-related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.

Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the California Air Resources Board to prepare a report that assesses progress made by each Metropolitan Planning Organization in meeting its established regional greenhouse gas emission reduction targets.

Executive Order B-55-18 (September 2018): This order sets a new statewide goal to achieve and maintain carbon neutrality no later than 2045. This goal is in addition to existing statewide targets of reducing greenhouse gas emissions.

Executive Order N-19-19 (September 2019): This order advances California's climate goals in part by directing the California State Transportation Agency to leverage annual transportation spending to reverse the trend of increased fuel consumption and reduce greenhouse gas emissions from the transportation sector. It orders a focus on transportation investments near housing, managing congestion, and encouraging alternatives to driving. This order also directs the California Air Resources Board to encourage automakers to produce more clean vehicles, formulate ways to help Californians purchase them, and propose strategies to increase demand for zero-emission vehicles.

3.3.2 Environmental Setting

The project sits along State Route 99 within the San Joaquin Valley Air Basin in Tulare and Kern counties. The project area is rural and mostly agricultural. Traffic volume in past years has grown in relative proportion to the population in the project vicinity. State Route 99 is the only major regional route in the area, carrying commuter, truck, and interregional traffic.

State Route 99 is a major route for goods movement through California. Trucks account for approximately 22 percent of the Annual Average Daily Traffic volume within this corridor, compared with the state average of 9 percent truck traffic. The 2020 California Freight Mobility Plan estimates over 463 million tons of goods moved into, out of, and within the region in 2010. This is expected to grow to more than 800 million tons by 2040.

State Route 99 also carries a large amount of interregional traffic. This traffic can include people traveling for business or pleasure, with origins and destinations both inside and outside of California.

This segment of State Route 99 would widen from a 4-lane facility to a 6-lane facility. South of the project limits, State Route 99 is a 6-lane facility. This project would close the gap in this segment and continue the statewide objective of eliminating 4-lane segments on State Route 99 in the San Joaquin Valley.

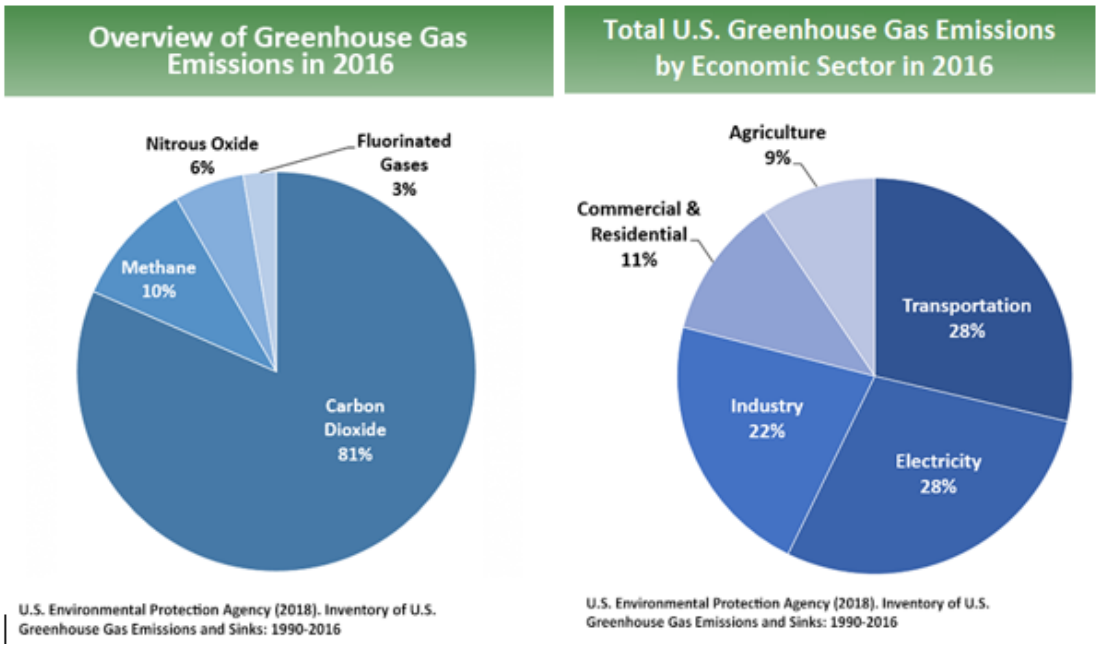
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are changing and what actions may be needed to attain emission reduction goals. U.S. Environmental Protection Agency is responsible for documenting greenhouse gas emissions nationwide, and the California Air Resources Board does so for the state, as required by Health and Safety Code Section 39607.4.

National Greenhouse Gas Inventory

The U.S. Environmental Protection Agency prepares a national greenhouse gas inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of greenhouse gases in the United States, reporting emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It also accounts for emissions of carbon dioxide that are removed from the atmosphere by “sinks” such as forests, vegetation, and soils that uptake and store carbon dioxide (carbon sequestration).

The 1990–2016 inventory found that of 6,511 million metric tons of carbon dioxide equivalent greenhouse gas emissions in 2016, 81 percent is carbon dioxide, 10 percent is methane, and 6 percent is nitrous oxide; the balance consists of fluorinated gases (Environmental Protection Agency 2018a). In 2016, greenhouse gas emissions from the transportation sector accounted for nearly 28.5 percent of U.S. greenhouse gas emissions. See Figure 3-1.

Figure 3-1 U.S. 2016 Greenhouse Gas Emissions



State Greenhouse Gas Inventory

The California Air Resources Board collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year. It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its greenhouse gas reduction goals. The 2019 edition of the greenhouse gas emissions inventory found total California emissions of 424.1 million metric tons of carbon dioxide equivalent for 2017, with the transportation sector responsible for 41 percent of total greenhouse gases. It also found that overall statewide greenhouse gas emissions declined from 2000 to 2017 despite growth in population and state economic output (Air Resources Board 2019a). See Figures 3-2 and 3-3.

Figure 3-2 California 2016 Greenhouse Gas Emissions

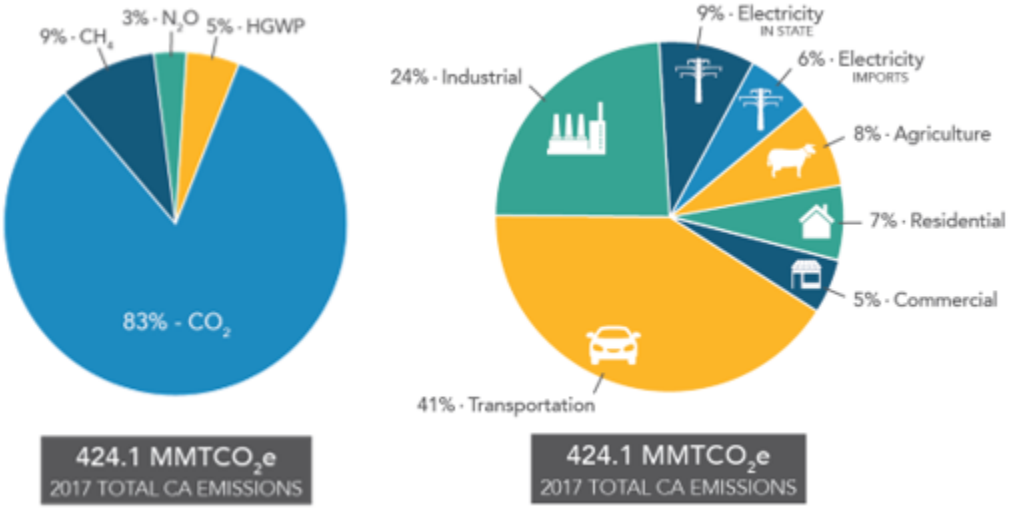
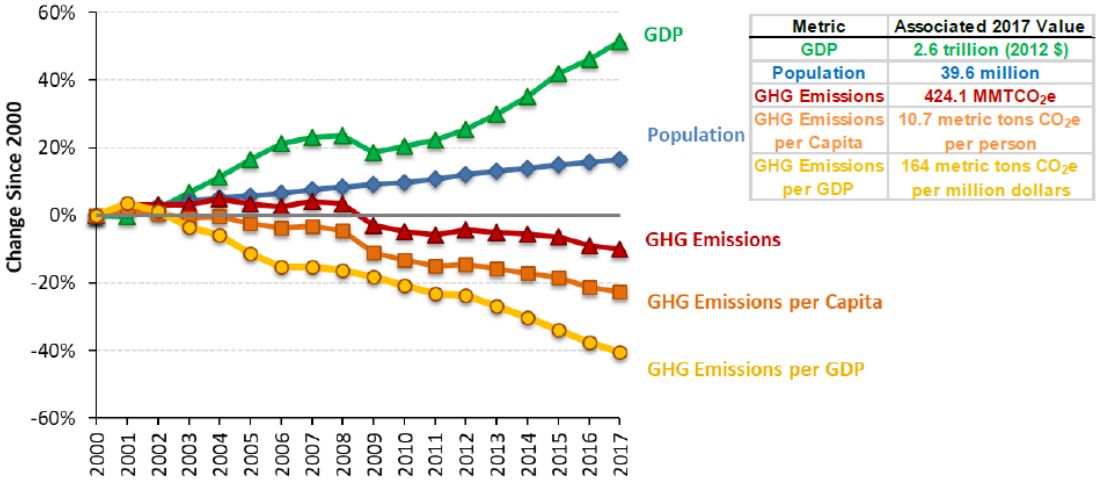


Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000



Assembly Bill 32 required the California Air Resources Board to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing greenhouse gas emissions to 1990 levels by 2020, and to update it every five years. The California Air Resources Board adopted the first scoping plan in 2008. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in Executive Order B-30-15 and Senate Bill 32. The Assembly Bill 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce greenhouse gas emissions.

Regional Plans

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation

Plan/Sustainable Communities Strategy to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels. The Tulare Association of Governments and Kern Council of Governments are the Metropolitan Planning Organizations for the project area. The regional reduction targets for Tulare County are 13 percent by 2020 and 16 percent by 2035. The regional reduction targets for Kern County are 9 percent by 2020 and 15 percent by 2035 (Air Resources Board 2019c).

The Tulare County Association of Governments and Kern Council of Governments 2018 Regional Transportation Plan/Sustainable Communities Strategies detail how the region will reduce greenhouse gas emissions to state-mandated levels over time. The inclusion of the Sustainable Communities Strategy is required by Senate Bill 375 and stresses the importance of meeting greenhouse gas per capita emission reduction targets set by the California Air Resources Board. See Table 3-1.

Table 3-1 Regional and Local Greenhouse Gas Reduction Plans

Title	Greenhouse Gas Reduction Policies or Strategies
Tulare County Association of Governments 2018 Regional Transportation Plan/Sustainable Communities Strategy	Achieve Senate Bill 375 Greenhouse Gas reduction goals. To promote better coordination of land use, transportation, and housing planning at local and regional level. To identify a transportation network to service the transportation needs of the region.
Kern Council of Governments 2018 Regional Transportation Plan/Sustainable Communities Strategy	Achieve Senate Bill 375 Greenhouse Gas reduction goals. To forecast development pattern to accommodate the region's future transportation, employment and housing needs, while promoting conservation of natural resources and open space areas. Strategies to manage demands on the region's transportation roadway system in ways that reduce or eliminate traffic congestion during peak period of demand.

3.3.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during operation of the state highway system and those produced during construction. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbon emissions is included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code, Section 21083(b)(2)). As the California Supreme Court explained,

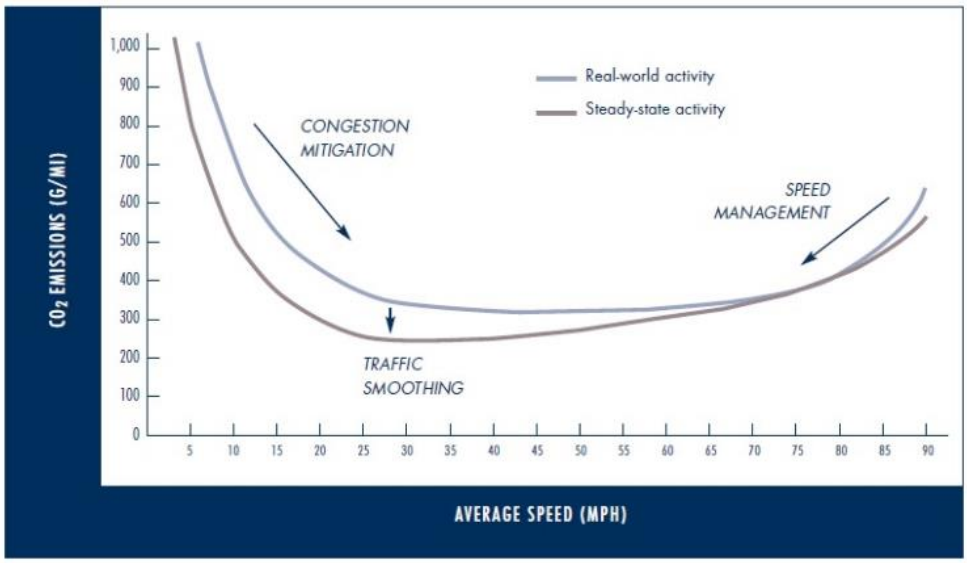
"because of the global scale of climate change, any one project's contribution is unlikely to be significant by itself" (Cleveland National Forest Foundation versus San Diego Association of Governments (2017) 3 California 5th 497, 512). In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gases must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

Carbon dioxide accounts for 95 percent of transportation greenhouse gas emissions in the U.S. The largest sources of transportation-related greenhouse gas emissions are passenger cars and light-duty trucks, including sport utility vehicles, pickup trucks, and minivans. These sources account for over half of the emissions from the sector. The remainder of greenhouse gas emissions comes from other modes of transportation, including freight trucks, commercial aircraft, ships, boats, and trains, as well as pipelines and lubricants. Because carbon dioxide emissions represent the greatest percentage of greenhouse gas emissions, it has been selected as a proxy within the following analysis for potential climate change impacts generally expected to occur.

The highest levels of carbon dioxide from mobile sources such as automobiles occur at stop-and-go speeds (0 to 25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0 to 25 miles per hour (see Figure 3-4, Source: Barth and Boriboonsomsin 2010). To the extent that a project relieves congestion by enhancing operations and improving travel times in high-congestion travel corridors, greenhouse gas emissions, particularly carbon dioxide, may be reduced.

Figure 3-4 Possible Use of Traffic Operation Strategies in Reducing On-road Carbon Dioxide Emissions



Four main strategies can reduce greenhouse gas emissions from transportation sources: (1) improving the transportation system and operational efficiencies, (2) reducing travel activity, (3) transitioning to lower greenhouse gas-emitting fuels, and (4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued concurrently.

This project is currently not included in the Tulare County Association of Governments 2021 Federal Transportation Improvement Program and 2018 Regional Transportation Plan with corresponding air conformity analysis. The project must be included in the updated 2022 Federal Transportation Improvement Plan and 2022 Regional Transportation Plan prior to final environmental document approval.

The Tulare County Regional Transportation Plan identifies State Route 99 as a significant goods movement corridor in the San Joaquin Valley. The project meets the Regional Transportation Plan's overall strategy for providing mobility and congestion relief with construction of an additional travel lane in each direction. The project supports goals and objectives of the Regional Transportation Plan such as "support projects which improve the efficiency of goods movement in Tulare County (including farm to market products) such as improved truck circulation project, road rehabilitation, and highway interchange improvements" and "support projects which result in the development of an efficient and connected regional circulation system that provides maximum achievable mobility and accessibility for all modes of travel."

Quantitative Analysis

Carbon dioxide emissions for the project were analyzed using Caltrans-Emissions Factor 2017. Results are summarized in Table 3-2.

Table 3-2 Modeled Annual CO2e Emissions and Vehicle Miles Traveled, by Alternative

Alternative	CO_2e Emissions (metric tons/year)	Annual Vehicle Miles Traveled[a]
Existing/Baseline 2018	165,000	320,000,000
Open to Traffic 2027—No-Build	143,000	350,000,000
Open to Traffic 2027—Build	143,000	350,000,000
20-Year Horizon/Design-Year 2047—No-Build	143,000	440,000,000
20-Year Horizon/Design-Year 2047—Build	143,000	440,000,000

Source: CT-EMFAC (2017); CO2 = carbon dioxide, CO2e = CO2, N2O, CH4

Table Note: [a] Annual Vehicle Miles Traveled values derived from Daily Vehicle Miles Traveled values multiplied by 347, per Air Resources Board methodology (Air Resources Board 2008: I-19).

Existing/Baseline CO_2e Emissions

The Existing/Baseline Year 2018 CO_2e emissions are 165,000 metric tons per year.

2027 CO_2e Emissions

For the No-Build Alternative in year 2027, the forecasted CO_2e emissions would be 143,000 metric tons per year. This is 22,000 metric tons less than the Existing/Baseline CO_2 emissions.

For the Build Alternative in year 2027, the forecasted CO_2e emissions would also be 143,000 metric tons per year, the same as the No-Build Alternative. This is 22,000 metric tons less than the Existing/Baseline CO_2 emissions.

2047 CO_2e Emissions

For the No-Build Alternative in year 2047, the forecasted CO_2e emissions would be 143,000 tons per year. This is 22,000 metric tons less than the Existing/Baseline CO_2e emissions.

For the Build Alternative in year 2047, the forecasted CO_2e emissions would also be 143,000 tons per year, the same as the No-Build Alternative. This is 22,000 metric tons less than the Existing/Baseline CO_2e emissions.

Analysis

Comparing the Build and No-Build Alternatives

The CO2e emissions from the Build Alternative and No-Build Alternative are projected to be the same for each year because the traffic forecasts (Annual Average Daily Traffic, Vehicle Miles Traveled) for the Build and No-Build Alternatives are the same for each year. The increase in traffic in 2027/and

2047 is attributable to expected population and economic growth in both Kern and Tulare counties and not to induced travel (Vehicle Miles Traveled) from construction of the project.

State Route 99 is already three lanes south of the project start point. North of the project end point, State Route 99 would remain two lanes to the City of Tulare, which is also proposed for widening to three lanes. The segment of State Route 99 being expanded is in a rural area of the southern San Joaquín Valley. Most of the travel on State Route 99 between Delano and Pixley originates south of Delano or north of Pixley, with destination points south of Delano or north of Pixley. Presence of an additional lane for this segment of State Route 99 would not likely draw additional traffic to State Route 99 because the route is already the only practical north-south route in the southern San Joaquin Valley. Therefore, there is no difference in expected CO_2 emissions between the Build and No-Build Alternatives.

Comparing Build/No-Build Alternatives to the Baseline

With either the Build or the No-Build Alternative, CO_2e emissions would be lower in Opening Year 2027 and Design Year 2047 compared to the Baseline Year of 2018 despite an increase in the number of vehicles traveling along this segment of roadway. The main reason for the forecasted decrease in future CO_2e emissions is the gradually improving fuel economy across all categories of new vehicles. As older, less fuel-efficient vehicles are retired and new vehicles replace them, less fuel would be used and therefore less CO_2 would be emitted per mile of travel on average. Also contributing to this trend of reduced CO_2e emissions in transportation in general is California's Low Carbon Fuel Standard, which requires the pool of transportation fuels in California to reduce their carbon-intensity (in production, transport, and use) over time.

While CT-EMFAC has a rigorous scientific foundation and has been vetted through multiple stakeholder reviews, its greenhouse gas emission rates are based on tailpipe emission test data. [Note: This analysis does not currently account for the effects of the U.S. National Highway Traffic Safety Administration and Environmental Protection Agency SAFE (acronym for Safer Affordable Fuel-Efficient) Vehicles Rule. Part One revoking California's authority to set its own greenhouse gas emissions standards was published on September 27, 2019 and effective November 26, 2019. The SAFE Vehicles Rule Part 2 would amend existing Corporate Average Fuel Economy (CAFE) and tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. The proposal would retain the model year 2020 standards for both programs through model year 2026. Although the California Air Resources Board has not yet provided adjustment factors for greenhouse gas emissions to be used in light of the SAFE Rule, modeling these estimates with EMFAC2017 or CT-EMFAC2017 remains the most precise means of estimating future greenhouse gas emissions.]

Moreover, the model does not account for factors such as the rate of acceleration and vehicle aerodynamics, which influence the amount of emissions generated by a vehicle. Greenhouse gas emissions quantified using CT-EMFAC are therefore estimates and may not reflect actual physical emissions. Though CT-EMFAC is currently the best available tool for calculating greenhouse gas emissions from mobile sources, it is important to note that the greenhouse gas results are only useful for a comparison among alternatives.

Construction Emissions

Construction greenhouse gas emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions would be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement life, improved traffic management plans, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions for the project are calculated using the Department of Transportation's Construction Emissions Tool (CALCET v1.1). Project construction is expected to generate approximately 2,794 tons of carbon dioxide during the 375 working days duration. Measures to reduce construction-related greenhouse gas emissions must be included in all projects.

All construction contracts include Caltrans Standard Specifications Sections 7-1.02A and 7-1.02C, Emissions Reduction, which require contractors to comply with all laws applicable to the project and to certify they are aware of and would comply with all Air Resources Board emission reduction regulations, and Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations, such as equipment idling restrictions, that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

CEQA Conclusion

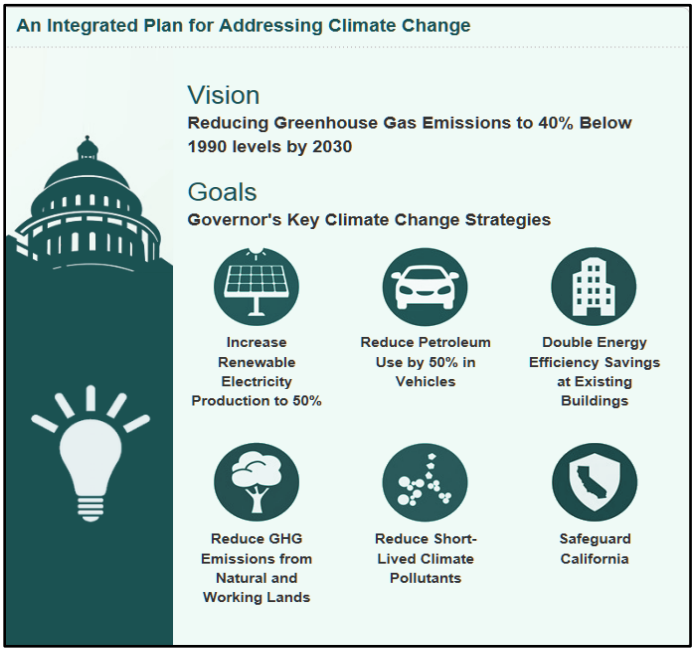
While the project would result in greenhouse gas emissions during construction, it is expected that the project would not result in any increase in operational greenhouse gas emissions. The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. With implementation of construction greenhouse gas-reduction measures, the impact would be less than significant. Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

3.3.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

Major sectors of the California economy, including transportation, will need to reduce emissions to meet the 2030 and 2050 greenhouse gas emissions targets. Former Governor Edmund G. Brown Jr promoted greenhouse gas reduction goals that involved (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farms and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the state's climate adaptation strategy, *Safeguarding California*. See Figure 3-5.

Figure 3-5 California Climate Strategy



The transportation sector is integral to the people and economy of California. To achieve greenhouse gas emission reduction goals, it is vital that the state build on past successes in reducing criteria and toxic air pollutants from transportation and goods movement. Greenhouse gas emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of Vehicle Miles Traveled. A key state goal for reducing greenhouse gas emissions is to reduce today's petroleum use in cars and trucks by up to 50 percent by 2030 (State of California 2019).

In addition, Senate Bill 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision-making. Trees and

vegetation in forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above-ground and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32. Executive Order B-30-15 (April 2015), and Senate Bill 32 (2016), set an interim target to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan is a statewide, long-range transportation plan to meet future mobility needs and reduce greenhouse gas emissions. In 2016, Caltrans completed the *California Transportation Plan 2040*, which establishes a new model for developing ground transportation systems, consistent with carbon dioxide reduction goals. It serves as an umbrella document for all the other statewide transportation planning documents. Over the next 25 years, California will be working to improve transit and reduce long-run repair and maintenance costs of roadways and developing a comprehensive assessment of climate-related transportation demand management and new technologies rather than continuing to expand capacity on existing roadways.

Senate Bill 391 (Liu 2009) requires the California Transportation Plan to meet California's climate change goals under Assembly Bill 32. Accordingly, the California Transportation Plan 2040 identifies the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the state's transportation needs. While Metropolitan Planning Organizations have primary responsibility for identifying land use patterns to help reduce greenhouse gas emissions, the California Transportation Plan 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce greenhouse gas emissions, among other goals. Specific performance targets in the plan that will help to reduce greenhouse gas emissions include:

- Increasing percentage of non-auto mode share
- Reducing Vehicle Miles Traveled

- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce greenhouse gas emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's Regional Transportation Plan/Sustainable Communities Strategy; contribute to the state's greenhouse gas reduction targets and advance transportation-related greenhouse gas emission reduction project types/strategies; and support other climate adaptation goals (*Safeguarding California*).

Caltrans Policy Directives and Other Initiatives

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities. *Caltrans Activities to Address Climate Change* (April 2013) provides a comprehensive overview of Caltrans' statewide activities to reduce greenhouse gas emissions resulting from agency operations.

Project-Level Greenhouse Gas Reduction Strategies

The following measures would be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project.

- Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- Schedule truck trips outside of peak morning and evening commute hours.
- Reduce construction waste and maximize the use of recycled materials (reduces consumption of raw materials, reduces landfill waste, and encourages cost savings).
- Encourage improved fuel efficiency from construction equipment.

3.3.5 Adaptation

Reducing greenhouse gas emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads; longer periods of intense heat can buckle pavement and railroad tracks; storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes

that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

Under NEPA assignment, Caltrans is obligated to comply with all applicable federal environmental laws and Federal Highway Administration NEPA regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every four years, in accordance with the Global Change Research Act of 1990 (15 U.S. Code Chapter 56A Section 2921 et seq). The *Fourth National Climate Assessment*, published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime" (U.S. Global Change Research Program 2018).

The U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the U.S. Department of Transportation in order to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services and operations remain effective in current and future climate conditions" (U.S. Department of Transportation 2011).

Federal Highway Administration Order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events,* December 15, 2014) established Federal Highway Administration policy to identify the risks of climate change and extreme weather events to current and planned transportation systems. The Federal Highway Administration developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels (Federal Highway Administration 2019).

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California's Fourth Climate Change Assessment* (2018) is the state's effort to "translate the state of climate science into useful information for action"

in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the "combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities."
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the "capacity of any entity – an individual, a community, an organization, or a natural system – to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience." Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the "susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt." Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

Several key state policies have guided climate change adaptation efforts. Recent state publications produced in response to these policies draw on these definitions.

Executive Order S-13-08, issued by then-governor Arnold Schwarzenegger in November 2008, focused on sea-level rise and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan). The Safeguarding California Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.

Executive Order S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance) in 2010, with instructions for how state agencies could incorporate "sea-level rise (SLR) projections into planning and

decision-making for projects in California" in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California—An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.

Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This order recognizes that effects of climate change other than sea-level rise also threaten California's infrastructure. At the direction of Executive Order B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.

Assembly Bill 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, Paying it Forward: The Path Toward Climate-Safe Infrastructure in California. The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans does climate change vulnerability assessments to identify segments of the state highway system vulnerable to climate change effects, including precipitation, temperature, wildfire, storm surge, and sea-level rise. The approach to the vulnerability assessments was tailored to the practices of a transportation agency, and involves the following concepts and actions:

- *Exposure*—Identify Caltrans assets exposed to damage or reduced service life from expected future conditions.
- *Consequence*—Determine what might occur to system assets in terms of loss of use or costs of repair.
- *Prioritization*—Develop a method for making capital programming decisions to address identified risks, including considerations of system use and/or timing of expected exposure.

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the

vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the state highway system, allowing Caltrans to both reduce the costs of storm damage and provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

Sea Level Rise

The project is outside the coastal zone and not in an area subject to sea-level rise. Therefore, direct impacts to transportation facilities due to projected sea-level rise are not expected.

Floodplains

Based on the mapping from the Federal Emergency Management Agency, the southern end of the project has a shaded Zone X Special Flood Hazard Area east of State Route 99. This area extends to the median of State Route 99. The shaded Zone X area is within the 0.2 percent annual chance flood with average depths of less than 1 foot or with drainage areas of less than 1 square mile.

At post mile 1.53, a Zone AH Special Flood Hazard Area continues to the east and along the median of State Route 99. This Zone AH area passes through the City of Earlimart. The 1 percent annual chance flood is generally contained within the channel of the White River both east and west of State Route 99.

North of Earlimart, the Zone AH turns into a Zone A Special Flood Hazard Area. This Zone A area crosses the southbound lanes of State Route 99 near post mile 7.80 and continues along the railroad to the west of the highway. North of Deer Creek, the Zone A area is bounded by an irrigation canal farther west of the railroad until it crosses back over State Route 99 at post mile 9.2.

The Caltrans District Climate Change Vulnerability Map of projected change in 100-year storm precipitation depth shows that the project area is likely to experience a less than 5 percent increase in storm precipitation depth by the year 2085. The current stormwater basin has the capacity to accommodate a 6-lane facility, and the project would replace, reline and repair culverts. Considering the location in a low flood-risk area and the relatively small projected increase in storm precipitation through 2085, the project is expected to be resilient to changes in precipitation under climate change scenarios.

Wildfire

The project is not within or near areas of land classified as very high fire severity zone (California Department of Forestry and Fire Protection, 2007). Construction activities could create an unintended fire in roadside vegetation; however, Caltrans' 2018 revised Standard Specification Section 7-1.02M(2) mandates fire prevention procedures during construction, including a fire prevention plan. By implementing this specification and construction best

practices, the project is not expected to worsen the impacts of wildfires intensified by climate change.

Climate Change References

California Air Resources Board (ARB). 2019a. California Greenhouse Gas Emissions Inventory–2019 Edition. https://ww3.arb.ca.gov/cc/inventory/data/data.htm. Accessed: August 21, 2019.

California Air Resources Board (ARB). 2019b. California Greenhouse Gas Emissions for 2000 to 2017. Trends of Emissions and Other Indicators. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2017/ghg_inventory_trends_00-17.pdf. Accessed: August 21, 2019.

California Air Resources Board (ARB). 2019c. SB 375 Regional Plan Climate Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/regional-plan-targets. Accessed: August 21, 2019.

California Department of Transportation. 2018. Caltrans Climate Change Vulnerability Assessments. District 6 Technical Report. February 2022.

Federal Highway Administration (FHWA). 2019. Sustainability. https://www.fhwa.dot.gov/environment/sustainability/resilience/. Last updated February 7, 2019. Accessed: August 21, 2019.

Federal Highway Administration (FHWA). No date. Sustainable Highways Initiative. https://www.sustainablehighways.dot.gov/overview.aspx. Accessed: August 21, 2019.

State of California. 2018. California's Fourth Climate Change Assessment. http://www.climateassessment.ca.gov/. Accessed: August 21, 2019.

State of California. 2019. California Climate Strategy. https://www.climatechange.ca.gov/. Accessed: August 21, 2019.

U.S. Department of Transportation (U.S. DOT). 2011. Policy Statement on Climate Change Adaptation. June. https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2009. Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act. https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean. Accessed: August 21, 2019.

U.S. Environmental Protection Agency (U.S. EPA). 2018. Inventory of U.S. Greenhouse Gas Emissions and Sinks. https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks. Accessed: August 21, 2019.

U.S. Global Change Research Program (USGCRP). 2018. Fourth National Climate Assessment. https://nca2018.globalchange.gov/. Accessed: August 21, 2019

Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and to identify potential impacts and avoidance minimization, and/or mitigation measures and related environmental requirements. Agency and tribal consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including interagency coordination meetings, public meetings, public notices, and Project Development Team meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

A Notice of Preparation was distributed through the State of California Governor's Office of Planning and Research State Clearinghouse and Planning Unit electronically and posted on the State Clearinghouse website on November 18, 2020. A copy of the Notice of Preparation was sent to 45 potential interested agencies and parties, per CEQA guidelines. The Notice of Preparation was sent to the California Transportation Commission.

Caltrans received a total of six response letters and emails on the project from representatives of the U.S. Army Corps of Engineers, Leadership Counsel for Justice and Accountability, Native American Heritage Commission, Tulare County Fire Department, Tulare County Resource Management Agency, and the San Joaquin Valley Air Pollution Control District.

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P.O. Box 14
Dunlap, CA 93621

David Alvarez, Chairman
Traditional Choinumni Tribe
2415 Houston Avenue
Fresno, CA 93720

Melissa Hurtado, State Senator
California State Senate
1201 East California Avenue, Suite A
Bakersfield, CA 93307

Theodore Smalley, Executive Director
Tulare County Association of Governments
210 North Church Street, Suite B
Visalia, CA 93291

Charlie Norman, Fire Chief
Tulare County Fire Department
835 South Akers Street
Visalia, CA 93277

Tashia Clemons, Director, Planning and Environment
Federal Highway Administration
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

Nancy Ruble, Superintendent
Pixley Union School District
300 North School Street
Pixley, CA 93256

Ashley Werner, Attorney
Leadership Counsel for Justice and Accountability
764 P Street, Suite 12
Fresno, CA 93721

Nesamani Kalandiyur/
California Air Resources Board – Transportation Projects
1001 Street P.O Box 2815
Sacramento, CA 95812

David Ray, District Commander
U.S. Army Corps of Engineers
1325 J Street, Room 1513
Sacramento, CA 95814

Carol Bill, Chair
Cold Springs Rancheria of Mono Indians
P.O. Box 209
Tollhouse, CA 93667

Jennifer Ruiz, Chairwomen
Picayune Rancheria
P.O. Box 2226
Oakhurst, CA 93644

Kenneth Woodrow, Chairperson
Eshom Valley Band of Indians/
Wuksachi Indian Community
1179 Rock Haven Court
Salinas, CA 93906

Rosalina Rivera, Superintendent
Delano Union School District
1405 12th Avenue
Delano, CA 93515

Devon Mathis, Assemblyman
California State Assembly
100 West Willow Plaza, Suite 405
Visalia, CA 93291

Appendix A Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-6130
FAX (916) 653-5776
TTY 711
www.dot.ca.gov

Making Conservation a California Way of Life.

September 2021

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964, ensures "*No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.*"

Caltrans will make every effort to ensure nondiscrimination in all of its services, programs and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin. In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a nondiscriminatory manner.

Related federal statutes, remedies, and state law further those protections to include sex, disability, religion, sexual orientation, and age.

For information or guidance on how to file a complaint, or obtain more information regarding Title VI, please contact the Title VI Branch Manager at (916) 324-8379 or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi .

To obtain this information in an alternate format such as Braille or in a language other than English, please contact the California Department of Transportation, Office of Civil Rights, at 1823 14th Street, MS-79, Sacramento, CA 95811; PO Box 942874, MS-79, Sacramento, CA 94274-0001; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

Toks Omishakin
Director

"Provide a safe and reliable transportation network that serves all people and respects the environment."

Appendix B Avoidance, Minimization and/or Mitigation Summary

Visual/Aesthetics

The avoidance, minimization, and/or mitigation measures will be designed and implemented with concurrence from the Caltrans District 6 Landscape Architect. The following avoidance and minimization measure would be incorporated into the project:

- Reduce Oncoming Headlight Glare: Use of 56-inch-high concrete median barrier may reduce oncoming headlight glare. This measure would be implemented where feasible, as determined by the project engineer, in areas where median oleander is removed.

The following mitigation measure would be incorporated into the project to offset visual impacts:

- The oleanders in the median would be removed, and new oleanders would be planted on either side of the highway, along the right-of-way fence.

Utilities and Emergency Services

During construction, two lanes would remain open for traffic on the northbound and southbound directions, and construction would be done in stages.

Traffic and Transportation/Pedestrian and Bicycle Facilities

Vehicle Miles Traveled

Based on the Vehicle Miles Traveled analysis, the project would increase Vehicle Miles Traveled by 47,706,213 after the deductions for truck Vehicle Miles Traveled, and mitigation measures must be considered. Vehicle Miles Traveled mitigation can be achieved through modification of the project to reduce the amount of Vehicle Miles Traveled generated or by providing transportation improvements on-system or off-system.

On-system mitigation measures are measures that can be implemented within the Caltrans right-of-way. On-system mitigation may include mitigation within or outside the initial project limits of any given capacity-increasing project. Caltrans, as owner and operator of the state highway system and associated right-of-way, exercises more direct authority over on-system measures as opposed to off-system measures. However, on-site mitigation can be very limited in the amount of Vehicle Miles Traveled reduced. For example, bike lanes or walking paths could be added to the project scope, but the benefit to Vehicle Miles Traveled reduction may be almost zero at the project level.

Off-system mitigation, outside Caltrans' right-of-way, requires cooperation with those jurisdictions that have influence over land use and transportation systems outside of Caltrans' direct control. The Caltrans Division of Transportation Planning recently completed a literature review and assessment of Vehicle Miles Traveled reduction strategies and found that measures that resulted in the largest decreases in Vehicle Miles Traveled are generally off-system and not under Caltrans' direct control. Similarly, the most cost-effective measures identified in the literature review also tended to be outside of Caltrans' direct control (e.g., transit-oriented development, transportation demand management).

The following mitigation would be incorporated into the project through a Cooperative Agreement with local partners. The Cooperative Agreement would be finalized prior to construction of the project:

Tulare County Regional Transit Agency Vanpool Program

Caltrans would provide funding in the amount of $360,000 to subsidize the vanpool program at the Tulare County Regional Transit Agency for a two-year period. Caltrans funding would subsidize the addition of 30 vanpools to the existing program in the first year and 15 vanpools to the program in the second year. Assumptions include that six passengers (driver not included) would use the vanpools and each vanpool would result in an average Vehicle Miles Traveled reduction of 145,751. The addition of 45 vanpools over a two-year period would result in an annual Vehicle Miles Traveled reduction in the first year of 4,372,530 and a Vehicle Miles Traveled reduction of 6,558,795 in the second year. The transit agencies report transit data to the National Transit Data Base and the California State Controller. The numbers are used in annual apportionment calculations. This is a 2-year cycle, meaning data reported in 2022 would be used to calculate 2024 annual apportionments. Increasing the Revenue and Passenger Miles increases the annual apportionments and would allow the transit agencies to continue the services.

Kings County Regional Transit Agency Vanpool Program

Caltrans would provide funding in the amount of $252,000 to subsidize expansion of the vanpool program at the Kings County Regional Transit Agency for a 1-year period. Assumptions include that six passengers (driver not included) would use the vanpools and each vanpool would result in an average Vehicle Miles Traveled reduction of 111,427. Caltrans funding would subsidize the addition of 30 vanpools to the existing program, to result in an annual Vehicle Miles Traveled reduction of 3,342,810. The transit agencies report transit data to the National Transit Data Base and the California State Controller. The numbers are used in annual apportionment calculations. This is a 2-year cycle, meaning data reported in 2022 would be used to calculate 2024 annual apportionments. Increasing the Revenue and Passenger Miles increases the annual apportionments and would allow the transit agencies to continue the services.

Increased Frequency on Kings Area Regional Transit (KART) Route 15

Caltrans would provide 20 years of funding in the amount of $2,885,000 to subsidize the roundtrip bus service for Route 15 at Kings Area Regional Transit. Route 15 currently operates three trips per day between Hanford and Visalia. Caltrans proposes to subsidize one additional trip during the weekday, which would bring the roundtrip bus service to four trips per day during the weekday and two additional trips per day on Saturday and Sunday. Adding 5 trips per weekday and 4 trips to the weekends with a roundtrip distance of 42 miles and an assumed ridership increase of approximately 14 per trip would result in an annual Vehicle Miles Traveled reduction of 270,220. Using the Transit Service Improvement multiplier allowed per the Vehicle Miles Traveled mitigation playbook would increase the Vehicle Miles Traveled reduction to 540,440. To summarize, Caltrans would subsidize a total of 9 additional roundtrip bus services per week for 20 years, which would provide an annual Vehicle Miles Traveled reduction of 540,440, and a total Vehicle Miles Traveled reduction of 10,808,800 for the 20-year period.

Table B-1 shows a summary of the proposed funding and subsequent Vehicle Miles Traveled reductions for the mitigation measures listed above.

Table B-1 Proposed Mitigation, Mitigation Cost and Annual Vehicle Miles Traveled Reduction

Proposed Mitigation	Tulare County Regional Transit Agency Vanpool Program	Kings County Regional Transit Agency Vanpool Program	Increased frequency on KART Route 15	Totals for Mitigation Measures Listed Above
Proposed Funding Amount	$360,000	$252,000	$2,885,000	$3,497,000
Annual Vehicle Miles Traveled Reduction	6,558,795	3,342,810	540,440	10,442,045

Comprehensive Corridor Management Plan

As discussed in Chapter 1, Caltrans Districts 6, 10, and 3 would collaborate with the local agencies in the San Joaquin Valley to prepare the Comprehensive Corridor Management Plan, which would include the prioritization of identifying managed lane and mode shift opportunities in the corridor that would lead to reduced Vehicle Miles Traveled. Implementation of Vehicle Miles Traveled-reducing managed lane strategies, such as truck-only and/or tolling lanes, through the corridor (or parts of the corridor that include this project) could eliminate about 80 percent of the Vehicle Miles Traveled concern from the project, because the only relevant capacity increase would result from the removal of trucks from the two general-purpose lanes. The

lane-management strategy would be developed in more detail before the final environmental document is signed.

Hazardous Waste and Materials

Caltrans' Standard Specifications and Nonstandard Special Provisions that pertain to hazardous waste would be provided during the specifications and estimates phase of the project before construction starts.

- Soils along the northbound shoulder from a depth of 0 to 0.5 foot and along the southbound shoulder from a depth of 0.5 to 1.5 feet are considered hazardous. Soils at these depths along the northbound and southbound shoulders can either be disposed of at a hazardous waste disposal facility or reused on-site. If soils from these specified depths along the northbound and southbound shoulders are to be reused on-site, the soils would be placed at least 5 feet above the maximum historical elevation of the water table and covered by at least 1 foot of non-hazardous soils or pavement.
- To minimize the exposure to construction workers, a Lead Compliance Plan would be required before construction.
- Any contractor engaged in asbestos-related work involving the disturbance of more than 100 square feet of asbestos-containing material must be registered with the Division of Health and Safety of California.

Climate Change

Neither the U.S. Environmental Protection Agency nor the Federal Highway Administration has issued explicit guidance or methods to conduct project-level greenhouse gas analysis. The Federal Highway Administration emphasizes concepts of resilience and sustainability in highway planning, project development, design, operations, and maintenance. Because there have been requirements set forth in California legislation and executive orders on climate change, the issue is addressed in the California Environmental Quality Act (CEQA) chapter of this document. The CEQA analysis may be used to inform the National Environmental Policy Act (NEPA) determination for the project.

Threatened or Endangered Species

Swainson's Hawk

The project area contains suitable nesting trees that may be removed, but no nesting Swainson's hawks were present. Caltrans proposes the following avoidance and minimization efforts to ensure the project would not result in measurable impacts to the species:

- Pre-construction surveys following the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (May 2000) would be conducted by a qualified biologist within 500

feet of the project footprint during nesting season (February 1 to September 30) prior to construction.

- If a nesting Swainson's hawk is discovered within 500 feet of the project footprint, the nest site would be designated an Environmentally Sensitive Area, and a 500-foot buffer would be established until a qualified biologist has determined that the nest is no longer active.
- A qualified biologist would monitor the active nest during construction activities within the buffer.
- A special provision for migratory birds would be included to ensure that no potential nesting migratory birds are affected during construction activities.
- Removal of any trees within the project area should be done outside of the nesting season; however, if a tree within the project area needs to be removed during the nesting season, a qualified biologist would inspect the tree before the removal to ensure that no nests are present.

Noise

Based on the studies completed to date, Caltrans intends to incorporate noise abatement in the form of barriers at: Soundwall 2, Soundwall 3, Soundwall 4 and Soundwall 6 with respective lengths of 600 to 2,600 feet and average heights of 8 to 16 feet. Calculations based on preliminary design data show that the barriers would reduce noise levels by 5 to 7 dBA for 102 residences at a cost of $3,223,267. These measures may change based on input received from the public. If conditions have substantially changed during final design, noise abatement may not be constructed. The final decision on noise abatement would be made upon completion of the project design.

Construction Noise

The following control measures would be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment shall have sound-control devices no less effective than those provided on the original equipment; each internal combustion engine used for any purpose on the job or related to the job shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine should be operated on the job site without an appropriate muffler.
- Construction methods or equipment that would provide the lowest level of noise impact should be used.
- Idling equipment shall be turned off.
- Truck loading, unloading, and hauling operations shall be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extend.

The contractor would be required to adhere to the following administrative noise control measures:

- Once details of the construction activities become available, the contractor shall work with local authorities to develop an acceptable approach to minimize interference with the business and residential communities, traffic disruptions, and the total duration of the construction.
- Good public relations shall be maintained with the community to minimize objectives to unavoidable construction impacts. Frequent activity updates of all construction activities shall be provided. A construction noise monitoring program to track sound levels and limit the impacts shall be implemented.
- In case of construction noise complaints by the public, the Caltrans Resident Engineer shall coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.

Certain construction activities could cause intermittent localized concern from vibration in the project area. During certain construction phases (processes such as earth-moving with bulldozers), the use of vibratory compaction rollers, demolitions, or pavement breaking may cause construction-related vibration impacts such as human annoyance or, in some cases, building damages. There are cases where it may be necessary to use this type of equipment while operating close to residential buildings. The following are procedures that can be used to minimize the potential impacts from construction vibration:

- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible would be entitled to a pre-construction building inspection to document the pre-construction condition of that structure.
- Conduct vibration monitoring during vibration-intensive activities.

A combination of the mitigation techniques for equipment vibration control as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity. Application of the mitigation measures will reduce the construction impacts; however, temporary increases in vibration would likely occur at some locations.

Greenhouse Gas

Project-Level Greenhouse Gas Reduction Strategies

The following measures would be implemented to reduce greenhouse gas emissions and potential climate change impacts from the project:

- Limit idling to 5 minutes for delivery and dump trucks and other diesel-powered equipment.
- Schedule truck trips outside of peak morning and evening commute hours.
- Reduce construction waste, and maximize the use of recycled materials (reduces consumption of raw materials, reduces landfill waste, and encourages cost savings).
- Encourage improved fuel efficiency from construction equipment.

Appendix C Notice of Preparation

Notice of Preparation

Notice of Preparation

To: State Clearinghouse
1400 10th Street
Sacramento, CA 95814

From: Caltrans - District 6
855 M Street, Suite 200
Fresno, CA 93721

Subject: Notice of Preparation of a Draft Environmental Impact Report

California Department of Transportation (Caltrans) - District 6 will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☐ is ☒ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Som Phongsavanh at the address shown above. We will need the name for a contact person in your agency.

Project Title: State Route 99 Delano to Pixley 6-lane Widening; EA 06-0W790

Project Applicant, if any:

Date 11/17/2020

Signature

Title Senior Environmental Planner

Telephone 559-445-5286

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH # 2020110281

Project Title: State Route 99 Delano to Pixley 6-lane Widening
Lead Agency: California Department of Transportation — Contact Person: Som Phongsavanh
Mailing Address: 855 M Street Suite 200 — Phone: (559) 445-6447
City: Fresno — Zip: 93721 — County: Fresno

Project Location: County: Tulare — City/Nearest Community: Pixley
Cross Streets: State Route 99 and Avenue 48 — Zip Code: 93219
Longitude/Latitude (degrees, minutes and seconds): 35 ° 58 ′ 50 ″ N / 119 ° 17 ′ 46 ″ W Total Acres:
Assessor's Parcel No.: — Section: — Twp.: — Range: — Base:
Within 2 Miles: State Hwy #: 99 — Waterways: N/A
Airports: N/A — Railways: Union Pacific Railroad — Schools: N/A

Document Type:

CEQA: ■ NOP ☐ Draft EIR — NEPA: ☐ NOI — Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) ☐ Draft EIS ☐ Other:
☐ Mit Neg Dec Other: ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☐ Site Plan ☐ Land Division (Subdivision, etc.) ■ Other: Highway widening

Development Type:

☐ Residential: Units — Acres
☐ Office: Sq.ft. — Acres — Employees
☐ Commercial: Sq.ft. — Acres — Employees
☐ Industrial: Sq.ft. — Acres — Employees
☐ Educational:
☐ Recreational:
☐ Water Facilities: Type — MGD
■ Transportation: Type Highway widening
☐ Mining: Mineral
☐ Power: Type — MW
☐ Waste Treatment: Type — MGD
☐ Hazardous Waste: Type
☐ Other:

Project Issues Discussed in Document:

■ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
■ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
■ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☐ Land Use
☐ Drainage/Absorption ☐ Population/Housing Balance ☐ Toxic/Hazardous ☐ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☐ Traffic/Circulation ■ Other:

Present Land Use/Zoning/General Plan Designation:

Agricultural, commercial

Project Description: *(please use a separate page if necessary)*

The California Department of Transportation (Caltrans) proposes to widen State Route 99 from a 4-lane freeway to a 6-lane freeway and rehabilitate the existing lanes from post mile 0.0 to post mile 13.5 in Tulare County. The project would add the additional lanes within the median.

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

x	Air Resources Board	x	Office of Historic Preservation
	Boating & Waterways, Department of		Office of Public School Construction
x	California Emergency Management Agency		Parks & Recreation, Department of
x	California Highway Patrol		Pesticide Regulation, Department of
s	Caltrans District # 6		Public Utilities Commission
	Caltrans Division of Aeronautics	x	Regional WQCB #
	Caltrans Planning		Resources Agency
x	Central Valley Flood Protection Board		Resources Recycling and Recovery, Department of
	Coachella Valley Mtns. Conservancy		S.F. Bay Conservation & Development Comm.
	Coastal Commission		San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
	Colorado River Board		San Joaquin River Conservancy
	Conservation, Department of		Santa Monica Mtns. Conservancy
	Corrections, Department of		State Lands Commission
	Delta Protection Commission		SWRCB: Clean Water Grants
	Education, Department of		SWRCB: Water Quality
	Energy Commission		SWRCB: Water Rights
x	Fish & Game Region # 4		Tahoe Regional Planning Agency
	Food & Agriculture, Department of	x	Toxic Substances Control, Department of
x	Forestry and Fire Protection, Department of	x	Water Resources, Department of
	General Services, Department of		
	Health Services, Department of		Other:
	Housing & Community Development		Other:
x	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date 11/18/2020 Ending Date 12/20/2020

Lead Agency (Complete if applicable):

Consulting Firm:
Address:
City/State/Zip:
Contact:
Phone:

Applicant:
Address:
City/State/Zip:
Phone:

Signature of Lead Agency Representative: [redacted] **Date:** 11/17/2020

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

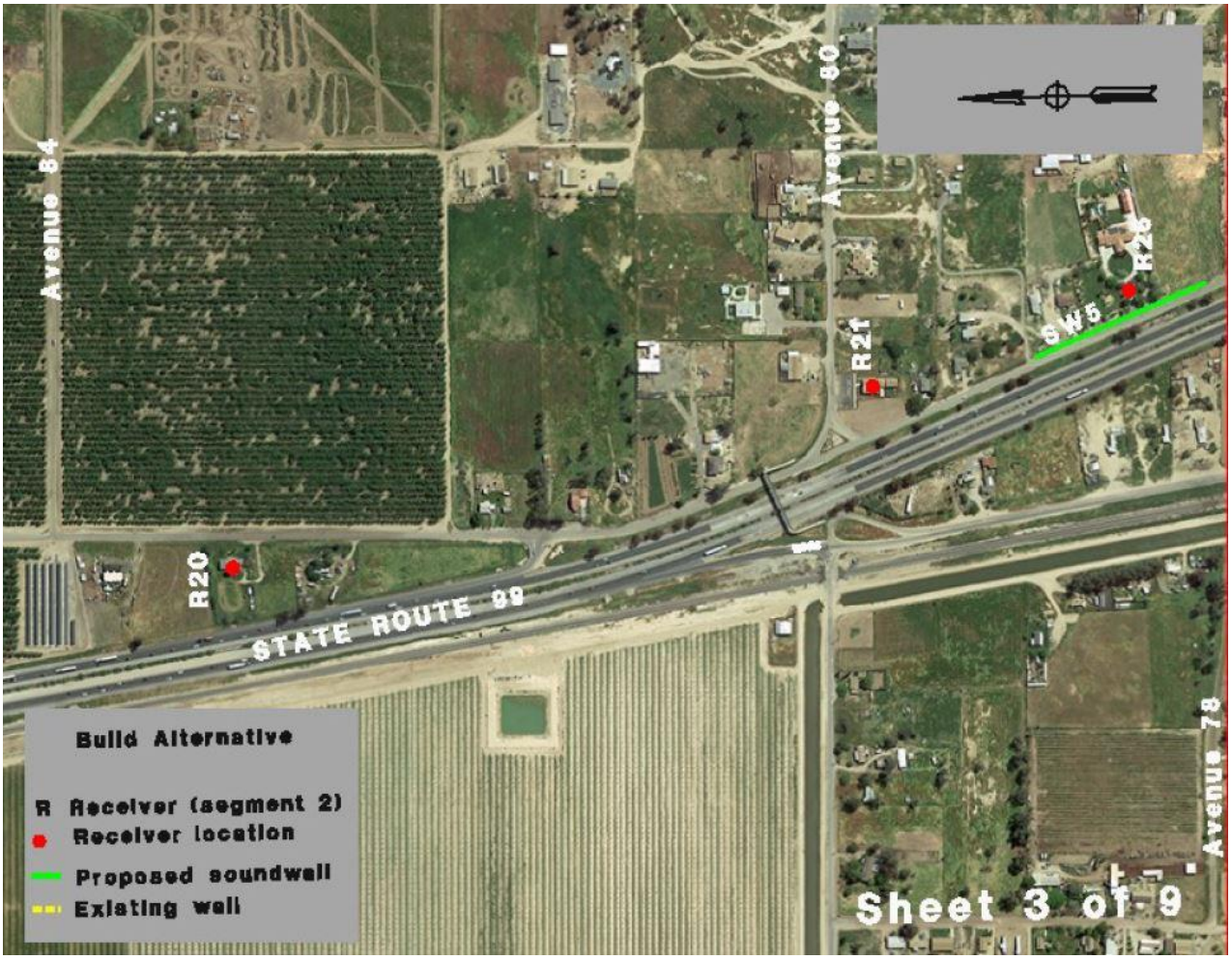
Receiver Number	Location or Address	Soundwall Number	Existing Noise Level (Decibels)	Predicted Noise Levels No-Build Alternative (Decibels)	Predicted Noise Levels Build Alternative (Decibels)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with 8-Foot Wall (Decibels)	Predicted Noise Level with 10-Foot Wall (Decibels)	Predicted Noise Level with 12-Foot Wall (Decibels)	Predicted Noise Level with 14-Foot Wall (Decibels)	Predicted Noise Level with 16-Foot Wall (Decibels)	Feasible	Reasonable
Receiver 1	14394 County Line Road, Delano, California, 93215	Existing Soundwall at this location	64	64	65	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Receiver 2	Approximately 250 feet north of Avenue 76	Not Applicable	68	69	68	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Receiver 3	381 Olympic Street, Earlimart, California, 93219	Soundwall 4	73	74	71	Yes	65	63	62	61	61	Yes	No
Receiver 4	591 South State Street, Earlimart, California, 93219	Existing Soundwall at this location	63	64	65	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Receiver 5	1027 South State Street, Earlimart, California, 93219	Existing Soundwall at this location	65	65	65	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Receiver 6	505 South Market Road, Earlimart, California, 93219	Soundwall 3	69	69	68	Yes	63	60	59	58	58	Yes	No
Receiver 7	667 North State Street, Earlimart, California, 93219	Existing Soundwall at this location	61	62	62	No	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Receiver 8	283 South Market Road, Earlimart, California, 93219	Soundwall 2	71	72	69	Yes	63	62	61	60	59	Yes	No

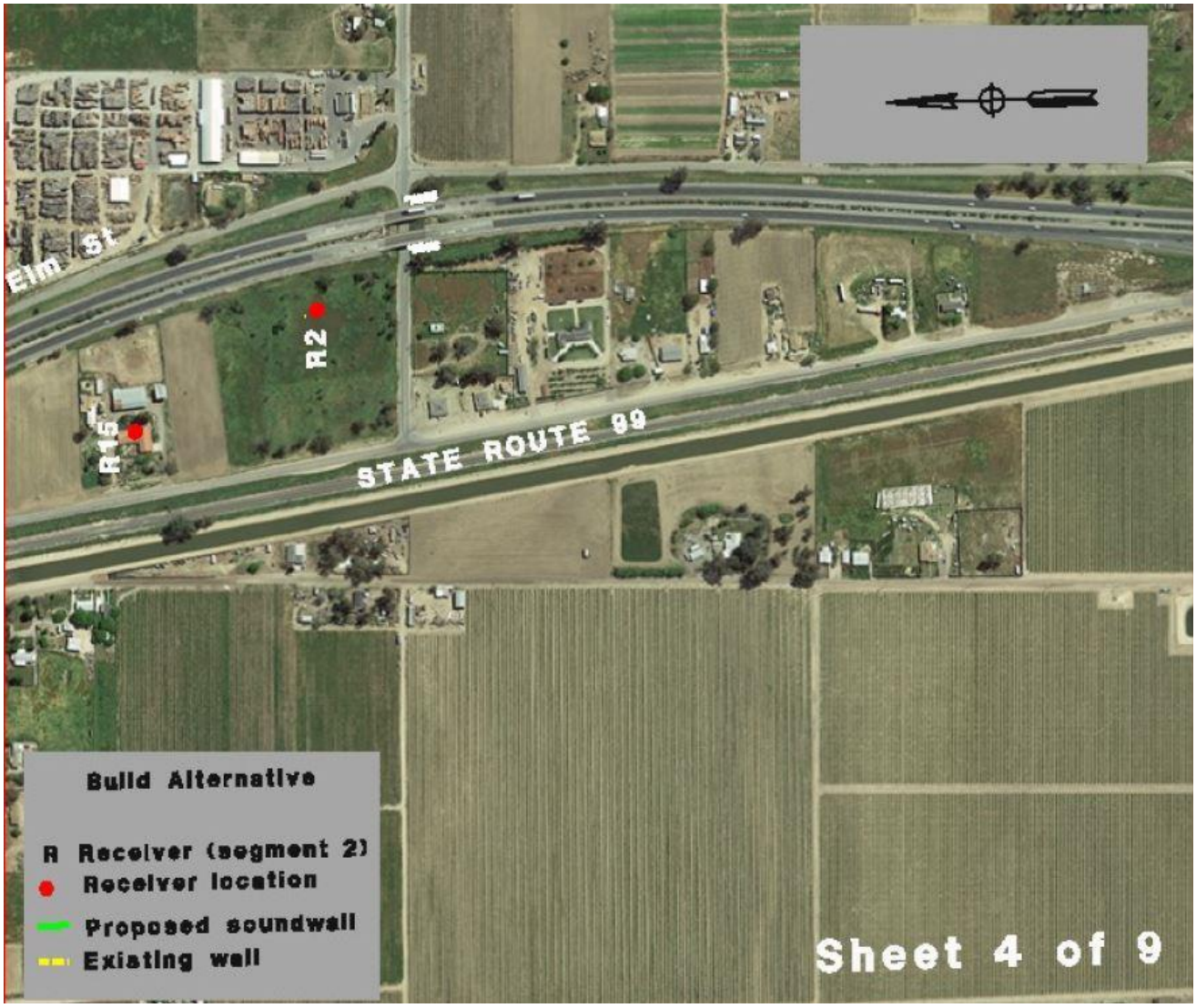
Receiver Number	Location or Address	Soundwall Number	Existing Noise Level (Decibels)	Predicted Noise Levels No-Build Alternative (Decibels)	Predicted Noise Levels Build Alternative (Decibels)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with 8-Foot Wall (Decibels)	Predicted Noise Level with 10-Foot Wall (Decibels)	Predicted Noise Level with 12-Foot Wall (Decibels)	Predicted Noise Level with 14-Foot Wall (Decibels)	Predicted Noise Level with 16-Foot Wall (Decibels)	Feasible	Reasonable
Receiver 9	286 East Bobbi Avenue, Earlimart, California, 93219	No outdoor gathering location	63	64	65	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 10	7438 Road 130, Earlimart, California, 93219	No outdoor gathering location	68	69	70	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 11	874 South Park Drive, Pixley, California, 93256	No outdoor gathering location	69	70	71	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 12	205 East Davis Street, Pixley, California 93256	No outdoor gathering location	70	71	72	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 13	850 North Park Drive, Pixley, California, 93256	Soundwall 1	71	72	72	Yes	65	63	62	61	60	Yes	No
Receiver 14	226 Main Street, Pixley, California, 93256	No outdoor gathering location	69	70	70	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 15	7724 Bishop Drive, Pixley, California, 93256	No outdoor gathering location	72	73	72	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 16	2042 Girard Street, Delano, California, 93215	No outdoor gathering location	62	63	63	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 17	603 17th Avenue, Delano, California, 93215	No outdoor gathering location	70	71	71	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable

Receiver Number	Location or Address	Soundwall Number	Existing Noise Level (Decibels)	Predicted Noise Levels No-Build Alternative (Decibels)	Predicted Noise Levels Build Alternative (Decibels)	Noise Impact Requiring Abatement Consideration	Predicted Noise Level with 8-Foot Wall (Decibels)	Predicted Noise Level with 10-Foot Wall (Decibels)	Predicted Noise Level with 12-Foot Wall (Decibels)	Predicted Noise Level with 14-Foot Wall (Decibels)	Predicted Noise Level with 16-Foot Wall (Decibels)	Feasible	Reasonable
Receiver 18	430 20th Avenue, Delano, California, 93215	No outdoor gathering location	64	64	64	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location
Receiver 19	1612 Ellington Street, Delano, California, 93215	No outdoor gathering location	67	67	68	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location
Receiver 20	8331 Road 128, Pixley, California, 93256	No outdoor gathering location	64	66	68	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 21	12879 Avenue 80, Pixley, California, 93256	No outdoor gathering location	66	68	69	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 22	13041 Avenue 72, Earlimart, California 93219	No outdoor gathering location	65	67	68	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 23	1164 North Front Street	No outdoor gathering location	73	74	73	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 24	2231 Girard Street, Delano, California 93215	No outdoor gathering location	70	71	70	No	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	No outdoor gathering location	Not Applicable	Not Applicable
Receiver 25	1725 Ellington Street, Delano, California, 93215	Soundwall 6	70	70	72	Yes	66	64	63	62	61	Yes	No
Receiver 26	7808 Drive 130, Pixley, California, 93256	Soundwall 5	69	70	71	Yes	65	63	62	62	61	Yes	No

Appendix E Noise Receptor and Proposed Soundwall Location Maps


STATE ROUTE 99
Avenue 96
Build Alternative
06-OW790
R Receiver (segment 1)
Receiver Location
Proposed soundwall
Existing wall
Sheet 2 of 9


Avenue 84
Avenue 80
Avenue 78
R20
R21
R23
SW5
STATE ROUTE 99
Build Alternative
R Receiver (segment 2)
Receiver location
Proposed soundwall
Existing wall
Sheet 3 of 9


Elm St
R2
R15
STATE ROUTE 99
Build Alternative
R Receiver (segment 2)
Receiver location
Proposed soundwall
Existing wall
Sheet 4 of 9


Bobbi Ave
R22
R23
Build Alternative
R Receiver (segment 3)
Receiver location
Proposed soundwall
Existing wall
Sheet 5 of 9


Sierra Ave
Sutter Ave
Washington
State St
SW3
State Route 99
SW2
Market St
Front St
Kelly Ave
Build Alternative
R Receiver (segment 3)
Receiver location
Proposed soundwall
Existing wall
Sheet 6 of 9


R5
Wilso
SW3
SW4
Cedar Ave
Olympia Ave
R3
Build Alternative
R Receiver (segment 3)
Receiver location
Proposed soundwall
Existing wall
Sheet 7 of 9


R1
R24
R18
State Route 99
20th Ave
Build Alternative
R Receiver (segment 4)
Receiver location
Proposed soundwall
Existing wall
Sheet 8 of 9


Girard St
18th Ave
Cecil Ave
State Route 99
Ellington St
SW6
R25
Build Alternative
R Receiver (segment 4)
Receiver location
Proposed soundwall
Existing wall
Sheet 9 of 9

Appendix F Species Lists

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:
Project Code: 2023-0002865
Project Name: 06-0W790 and 06-0W791

October 10, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

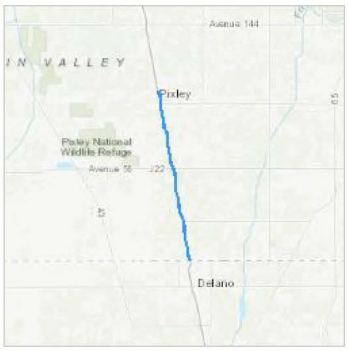
This species list is provided by:

Sacramento Fish And Wildlife Office
Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846
(916) 414-6600

Project Summary

Project Code: 2023-0002865
Project Name: 06-0W790 and 06-0W791
Project Type: Road/Hwy - Maintenance/Modification
Project Description: Delano to Pixley Rehab
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.8833452,-119.27186889178287,14z



Counties: Kern and Tulare counties, California

Endangered Species Act Species

There is a total of 10 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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

Mammals

NAME	STATUS
San Joaquin Kit Fox *Vulpes macrotis mutica* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2873	Endangered
Tipton Kangaroo Rat *Dipodomys nitratoides nitratoides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7247	Endangered

Birds

NAME	STATUS
California Condor *Gymnogyps californianus* Population: U.S.A. only, except where listed as an experimental population There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8193	Endangered

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard *Gambelia silus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/625	Endangered

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp *Branchinecta conservatio* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp *Branchinecta lynchi* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened

Flowering Plants

NAME	STATUS
California Jewelflower *Caulanthus californicus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4599	Endangered
Kern Mallow *Eremalche kernensis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1731	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

IPaC User Contact Information

Agency: California Department of Transportation District 6
Name: Sara Thornburgh
Address: 2011 E Shields Ave
City: Fresno
State: CA
Zip: 93726
Email sara.thornburgh@dot.ca.gov
Phone: 7606448326

Summary Table Report
California Department of Fish and Wildlife
California Natural Diversity Database

Query Criteria: Quad IS (Pixley (3511983) OR Taylor Weir (3611914) OR Tipton (3611913) OR Woodville (3611912) OR Alpaugh (3511984) OR Sausalito School (3511982) OR Delano East (3511972) OR Delano West (3511973) OR Allensworth (3511974))

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Agelaius tricolor tricolored blackbird	G1G2 S1S2	None Threatened	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_EN-Endangered NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	205 271	955 S:12	0	0	0	0	1	11	5	7	11	1	0
Ammospermophilus nelsoni Nelson's (=San Joaquin) antelope squirrel	G2G3 S2S3	None Threatened	BLM_S-Sensitive IUCN_EN-Endangered	207 230	287 S:3	0	0	0	1	0	2	3	0	3	0	0
Andrena macswaini An andrenid bee	G2 S2	None None		280 280	7 S:2	0	0	0	0	0	2	2	0	2	0	0
Anniella grinnelli Bakersfield legless lizard	G2G3 S2S3	None None	CDFW_SSC-Species of Special Concern	243 243	28 S:1	0	0	0	0	0	1	0	1	1	0	0
Athene cunicularia burrowing owl	G4 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern USFWS_BCC-Birds of Conservation Concern	200 275	2011 S:34	4	11	5	1	0	13	13	21	34	0	0
Atriplex cordulata var. erecticaulis Earlimart orache	G3T1 S1	None None	Rare Plant Rank - 1B.2	225 300	23 S:12	0	2	1	2	4	3	9	3	8	3	1
Atriplex coronata var. vallicola Lost Hills crownscale	G4T3 S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	275 275	75 S:1	0	0	0	0	0	1	1	0	1	0	0
Atriplex depressa brittlescale	G2 S2	None None	Rare Plant Rank - 1B.2	225 320	60 S:2	0	0	0	0	0	2	2	0	2	0	0
Atriplex minuscula lesser saltscale	G2 S2	None None	Rare Plant Rank - 1B.1	230 265	52 S:2	0	0	0	0	0	2	2	0	2	0	0
Atriplex persistens vernal pool smallscale	G2 S2	None None	Rare Plant Rank - 1B.2	370 370	41 S:1	0	0	0	0	0	1	1	0	1	0	0

Summary Table Report
California Department of Fish and Wildlife
California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks A	B	C	D	X	U	Population Status Historic > 20 yr	Recent <= 20 yr	Presence Extant	Poss. Extirp.	Extirp.
Atriplex subtilis subtle orache	G1 S1	None None	Rare Plant Rank - 1B.2	250 325	24 S:5	0	0	0	0	0	5	5	0	5	0	0
Branchinecta lynchi vernal pool fairy shrimp	G3 S3	Threatened None	IUCN_VU-Vulnerable	210 320	796 S:5	0	3	0	0	0	2	5	0	5	0	0
Buteo swainsoni Swainson's hawk	G5 S3	None Threatened	BLM_S-Sensitive IUCN_LC-Least Concern	200 271	2548 S:22	8	6	1	0	0	7	4	18	22	0	0
Calochortus striatus alkali mariposa-lily	G3 S2S3	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden USFS_S-Sensitive	235 235	113 S:1	0	0	0	0	0	1	1	0	1	0	0
Caulanthus californicus California jewelflower	G1 S1	Endangered Endangered	Rare Plant Rank - 1B.1 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden SB_UCBG-UC Botanical Garden at Berkeley	295 325	67 S:4	0	0	0	0	4	0	4	0	0	1	3
Charadrius montanus mountain plover	G3 S2S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened NABCI_RWL-Red Watch List USFWS_BCC-Birds of Conservation Concern	205 205	90 S:2	0	0	1	0	0	1	1	1	2	0	0
Charadrius nivosus nivosus western snowy plover	G3T3 S2	Threatened None	CDFW_SSC-Species of Special Concern NABCI_RWL-Red Watch List	200 200	138 S:1	0	0	0	0	0	1	1	0	1	0	0
Cicindela tranquebarica joaquinensis San Joaquin tiger beetle	G5T1 S1	None None		200 200	2 S:1	0	0	0	0	0	1	0	1	1	0	0

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California Department of Fish and Wildlife
California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Delphinium recurvatum recurved larkspur	G2? S2?	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive SB_SBBG-Santa Barbara Botanic Garden	230 320	119 S:14	2	3	0	0	3	6	12	2	11	0	3
Dipodomys nitratoides nitratoides Tipton kangaroo rat	G3T1T2 S1S2	Endangered Endangered	IUCN_VU-Vulnerable	210 320	81 S:17	1	1	1	0	2	12	16	1	15	0	2
Eremalche parryi ssp. kernensis Kern mallow	G3G4T3 S3	Endangered None	Rare Plant Rank - 1B.2 SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	200 284	202 S:6	0	1	0	0	0	5	3	3	6	0	0
Eryngium spinosepalum spiny-sepaled button-celery	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	300 300	108 S:1	0	0	0	0	0	1	1	0	1	0	0
Gambelia sila blunt-nosed leopard lizard	G1 S1	Endangered Endangered	CDFW_FP-Fully Protected IUCN_EN-Endangered	208 326	418 S:30	3	11	2	0	2	12	22	8	28	2	0
Lampetra hubbsi Kern brook lamprey	G1G2 S1S2	None None	AFS_TH-Threatened CDFW_SSC-Species of Special Concern IUCN_VU-Vulnerable USFS_S-Sensitive	395 395	2 S:1	0	0	0	0	0	1	1	0	1	0	0
Lanius ludovicianus loggerhead shrike	G4 S4	None None	CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	266 266	110 S:1	0	0	0	0	0	1	1	0	1	0	0
Lasthenia chrysantha alkali-sink goldfields	G2 S2	None None	Rare Plant Rank - 1B.1	190 325	55 S:13	0	0	0	0	6	7	11	2	7	6	0
Lasthenia glabrata ssp. coulteri Coulter's goldfields	G4T2 S2	None None	Rare Plant Rank - 1B.1 BLM_S-Sensitive SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden SB_SBBG-Santa Barbara Botanic Garden	225 225	111 S:2	0	0	0	0	0	2	1	1	2	0	0

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Summary Table Report
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California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Lytta hoppingi Hopping's blister beetle	G1G2 S1S2	None None		300 300	5 S:1	0	0	0	0	0	1	1	0	1	0	0
Lytta molesta molestan blister beetle	G2 S2	None None		200 200	17 S:1	0	0	0	0	0	1	1	0	1	0	0
Lytta morrisoni Morrison's blister beetle	G1G2 S1S2	None None		210 275	10 S:3	0	0	0	0	0	3	1	2	2	1	0
Masticophis flagellum ruddocki San Joaquin coachwhip	G5T2T3 S2?	None None	CDFW_SSC-Species of Special Concern	220 250	96 S:3	0	1	1	0	0	1	3	0	3	0	0
Monolopia congdonii San Joaquin woollythreads	G2 S2	Endangered None	Rare Plant Rank - 1B.2 SB_UCBG-UC Botanical Garden at Berkeley		111 S:1	0	0	0	0	1	0	1	0	0	1	0
Northern Claypan Vernal Pool Northern Claypan Vernal Pool	G1 S1.1	None None		217 325	21 S:2	0	0	0	0	0	2	2	0	2	0	0
Perognathus inornatus San Joaquin pocket mouse	G2G3 S2S3	None None	BLM_S-Sensitive IUCN_LC-Least Concern	210 245	140 S:6	0	0	0	0	0	6	2	4	6	0	0
Phrynosoma blainvillii coast horned lizard	G3G4 S3S4	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	230 255	784 S:7	2	1	1	0	0	3	5	2	7	0	0
Puccinellia simplex California alkali grass	G2 S2	None None	Rare Plant Rank - 1B.2 BLM_S-Sensitive	220 220	80 S:1	0	0	0	0	0	1	1	0	1	0	0
Spea hammondii western spadefoot	G2G3 S3	None None	BLM_S-Sensitive CDFW_SSC-Species of Special Concern IUCN_NT-Near Threatened	209 403	1425 S:20	1	7	0	0	0	12	10	10	20	0	0
Taxidea taxus American badger	G5 S3	None None	CDFW_SSC-Species of Special Concern IUCN_LC-Least Concern	213 280	594 S:3	0	0	1	1	0	1	1	2	3	0	0
Valley Sacaton Grassland Valley Sacaton Grassland	G1 S1.1	None None		220 220	9 S:1	0	0	1	0	0	0	1	0	1	0	0

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Summary Table Report
California Department of Fish and Wildlife
California Natural Diversity Database

Name (Scientific/Common)	CNDDB Ranks	Listing Status (Fed/State)	Other Lists	Elev. Range (ft.)	Total EO's	Element Occ. Ranks						Population Status		Presence		
						A	B	C	D	X	U	Historic > 20 yr	Recent <= 20 yr	Extant	Poss. Extirp.	Extirp.
Valley Saltbush Scrub	G2	None		235	19	1	1	0	0	0	0	2	0	2	0	0
Valley Saltbush Scrub	S2.1	None		275	S:2											
Valley Sink Scrub	G1	None		230	29	0	1	2	0	0	0	3	0	3	0	0
Valley Sink Scrub	S1.1	None		240	S:3											
Vulpes macrotis mutica	G4T2	Endangered		205	1020	5	4	1	0	0	56	65	1	66	0	0
San Joaquin kit fox	S2	Threatened		460	S:66											

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Appendix G Federal Endangered Species Act Determinations

Species	Status	Habitat Requirements	Federal Endangered Species Act Determination
California red-legged frog	Federally Threatened	Ponds, perennial pools, slow-moving streams, and adjacent riparian areas. Can be found in livestock watering impoundments.	No Effect
California tiger salamander	Federally Threatened	Partly shaded, shallow streams and riffles with a rocky substrate.	No Effect
Delta smelt	Federally Threatened	Spawns in freshwater but lives in the mixing zone of freshwater and saline water in the Sacramento and San Joaquin estuaries of the San Francisco Bay.	No Effect
Vernal pool fairy shrimp	Federally Threatened	Vernal pool complexes apart of undulating landscapes, where soil mounds are interspersed with basins, swales, and drainages.	No Effect
San Joaquin kit fox	Federally Endangered	Alkali sink, valley grassland, and open woodlands, in valleys and adjacent gentle foothills with suitable prey base.	No Effect
Tipton Kangaroo rat	Federally Endangered	Arid-land communities on alluvial fan and floodplain soils having level or nearly level topography along the valley floor of the Tulare Basin.	No Effect
Blunt-nosed leopard lizard	Federally Endangered	Semiarid grasslands, alkali flats, low foothills, canyon floors, large washes, and arroyos, usually on sandy, gravelly, or loamy substrate, sometimes on hardpan.	No Effect
Giant garter snake	Federally Threatened	Agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes and low-gradient streams.	No Effect
San Joaquin adobe sunburst	Federally Threatened	Cismontane woodland, valley and foothill grasslands.	No Effect

List of Technical Studies Bound Separately (Volume 2)

Air Quality Report

Noise Study Report

Noise Abatement Decision Report

Induced Vehicle Miles Traveled Analysis

Water Quality Memorandum

Updated Natural Environment Study (Minimal Impacts)

Location Hydraulic Study

Historic Property Survey Report

Hazardous Waste Reports

- Initial Site Assessment
- Preliminary Site Investigation (Aerially Deposited Lead Study)

Visual Impact Assessment (Minor Level)

Updated Paleontological Identification Report

To obtain a copy of one or more of these technical studies/reports or the Draft Environmental Impact Report/Environmental Assessment, please send your request to the following email address: javier.almaguer@dot.ca.gov

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report or document you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).