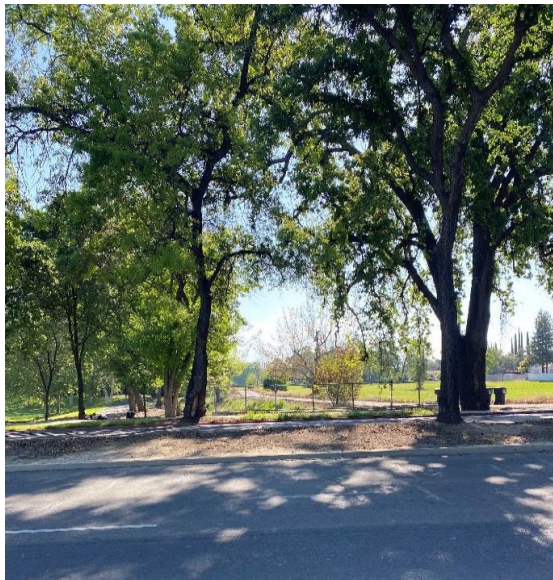


Lovers Lane Operational Improvements and Rehabilitation Project

On State Routes 198 and 216 in Tulare County
06-TUL-198, 216-PM R11.3-R12.0, R0.0-R2.56
EA 06-0W900 and Project Number 0618000012
State Clearinghouse Number 2021030131

Initial Study with Mitigated Negative Declaration/ Environmental Assessment with Finding of No Significant Impact



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 December 23, 2016, and executed by the Federal Highway Administration and Caltrans.

June 2021



General Information About This Document

Language has been added throughout the document to indicate where a change has been made since the circulation of the draft environmental document. Minor editorial changes and clarifications have not been so indicated.

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: Richard Putler, Senior Environmental Planner, Central Region Environmental, 2015 East Shields Avenue, Suite 100, Fresno, California, 93726; phone number 559-304-6599 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype), 1-800-735-2929 (Voice), or 711.


State Clearinghouse Number 2021030131
06-TUL-198, 216-PM R11.3-R12.0, R0.0-2.56
EA 06-0W900 and Project Number 0618000012

Operational improvements at the State Route 198/Lovers Lane Undercrossing from
post miles R11.3 to R12.0, and rehabilitation of State Route 216 from post miles
R0.0 to 2.56 in Tulare County

**INITIAL STUDY
with Mitigated Negative Declaration/
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



Jennifer H. Taylor
Office Chief
Southern San Joaquin Valley Environmental Office
California Department of Transportation
NEPA and CEQA Lead Agency

6/23/2021

Date

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**CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)**

FOR

Lovers Lane Operational Improvements and Rehabilitation Project

The following text has been added since the draft environmental document: The California Department of Transportation (Caltrans) has determined that the build alternative will have no significant impact on the human environment. This Finding of No Significant Impact is based on the attached Environmental Assessment, which has been independently evaluated by Caltrans and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. Caltrans takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

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 December 23, 2016, and executed by the Federal Highway Administration and Caltrans.



Jennifer H. Taylor
Office Chief
Southern San Joaquin Valley Environmental Office
California Department of Transportation
NEPA and CEQA Lead Agency

6/23/2021

Date



Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

State Clearinghouse Number: 2021030131

District-County-Route-Post Mile: 06-TUL-198/216-PM R11.3-R12.0/R0.0-2.56

EA/Project Number: EA 06-0W900 and Project Number 0618000012

Project Description

The California Department of Transportation (Caltrans), in cooperation with the City of Visalia, proposes to make operational improvements at the State Route 198/Lovers Lane Undercrossing from post miles R11.3 to R12.0 and rehabilitate State Route 216 from post miles R0.0 to 2.56 in Tulare County.

Determination

An Initial Study has been prepared by the California Department of Transportation (Caltrans), District 6.

On the basis of this study, it is determined that the proposed action with the incorporation of the identified mitigation measures will not have a significant effect on the environment for the following reasons:

- **Aesthetics:** Tree removal will require replanting onsite, replanting within the Caltrans right-of-way along the same watershed, or replanting at another offsite location. Between 52 and 63 trees are proposed to be removed. Heritage oak trees will be replanted at a 10 to 1 ratio, while other trees will be replanted at a 3 to 1 ratio.
- **Biology:** Tree removal within the Great Valley Oak Riparian Forest will require replanting onsite, replanting within the Caltrans right-of-way along the same watershed, or replanting at another offsite location. Heritage oak trees will be replanted at a 10 to 1 ratio, and oak trees will be replanted at a 3 to 1 ratio. Mitigation for temporary impacts to Mill Creek is proposed through the purchase of conservation credits from the National Fish and Wildlife Foundation, or other In-Lieu Fee/banking program, or habitat will be created to include restoration and replanting.
- **Paleontology:** Mitigation will consist of pre-construction environmental awareness training, field monitoring during construction, and salvaging, preparing, identifying, and curating scientifically significant fossils if discovered.

A handwritten signature in purple ink that reads 'Jennifer H. Taylor'.

Jennifer H. Taylor
Office Chief
California Department of Transportation

6/23/2021

Date

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Chapter 1 **Proposed Project**

1.1 Introduction

NEPA Assignment

California participated in the “Surface Transportation Project Delivery Pilot Program” (Pilot Program) pursuant to 23 U.S. Code 327 for more than 5 years, beginning July 1, 2007, and ending September 30, 2012. MAP-21 (P.L. 112-141), signed by President Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, the Department entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding) with the Federal Highway Association. The NEPA Assignment Memorandum of Understanding became effective October 1, 2012, and was renewed on December 23, 2016, for a term of 5 years. In summary, the Department continues to assume the Federal Highway Association 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 Association assigned and the Department assumed all of the U.S. Department of Transportation Secretary’s responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance Projects off of the State Highway System within the State of California, except for certain categorical exclusions that the Federal Highway Association assigned to the Department under the 23 U.S. Code 326 Categorical Exclusion Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

The California Department of Transportation (Caltrans) proposes making operational improvements at the Lovers Lane Undercrossing (Tulare-198-Post Mile 11.7, Bridge Number 46-216) and restoring the existing facility to a state of good repair. This project is on State Route 198 and State Route 216 within the City of Visalia in Tulare County. The project covers a 0.7-mile segment of State Route 198 from 0.3 mile west of the Lovers Lane Undercrossing to 0.5 mile east of it. The project additionally covers Lovers Lane from 0.3 mile south of the undercrossing to 0.2 mile east of Road 146 (Sol Road) on State Route 216. See Figures 1-1 and 1-2.

The operational improvements consist of widening Lovers Lane below the undercrossing and improving the following four intersections: Lovers Lane (State Route 216) at Mineral King Avenue, Lovers Lane at State Route 198 on the eastbound on-ramps and off-ramps, Lovers Lane at Noble Avenue, and State Route 198 on the westbound on-ramps and off-ramps at Mineral King Avenue.

The project also proposes to extend the life of the existing pavement along State Route 216 by rehabilitating the existing pavement and including all pertinent standards as required by the 3R Program (resurfacing, restoration, and rehabilitation).

State Route 216 has been identified as one of the most heavily traveled corridors in the City of Visalia's jurisdiction. To improve the operational efficiency and to accommodate the current and higher projected traffic volumes, improvements to this major travel corridor are needed.

Figure 1-1 Project Vicinity Map

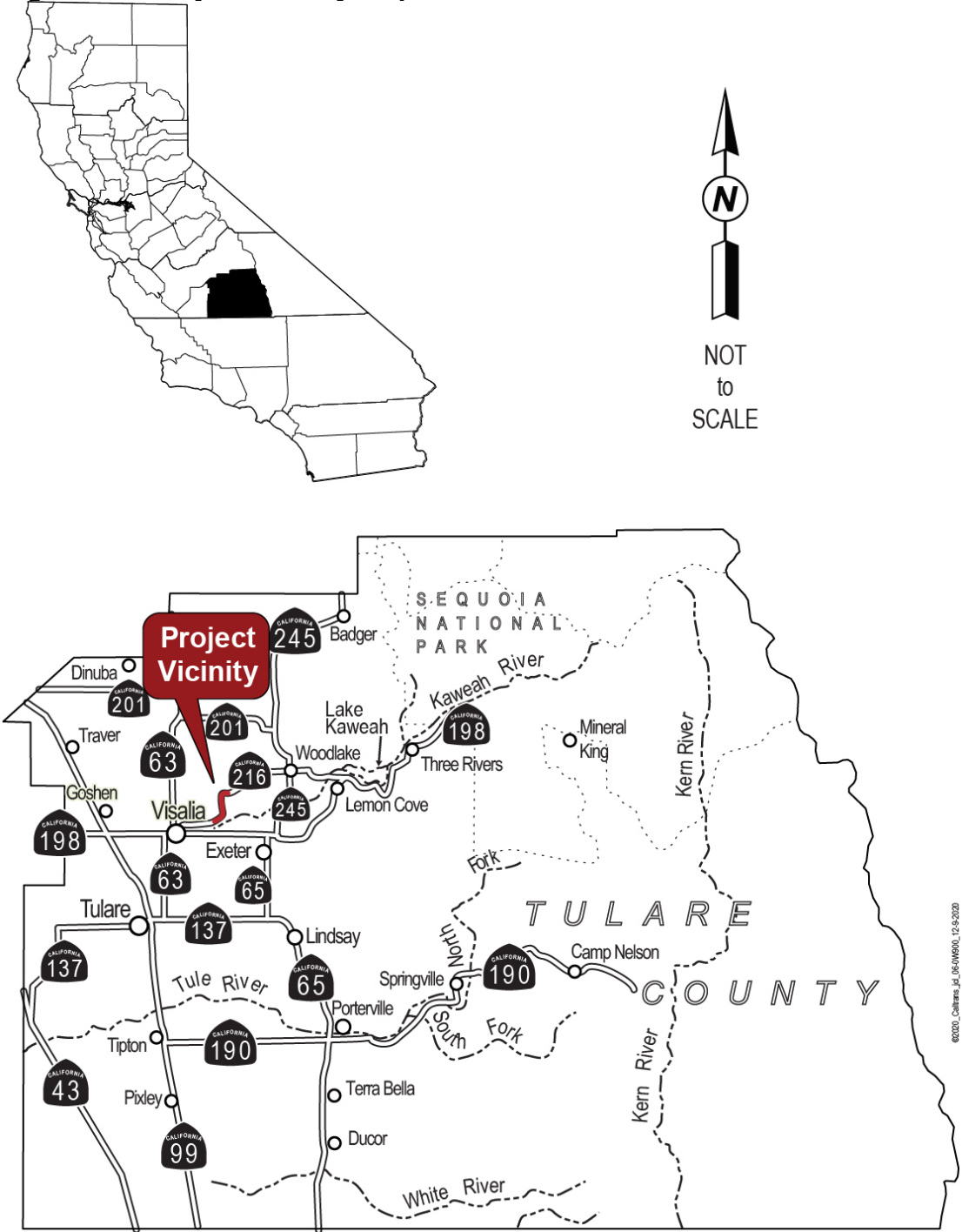
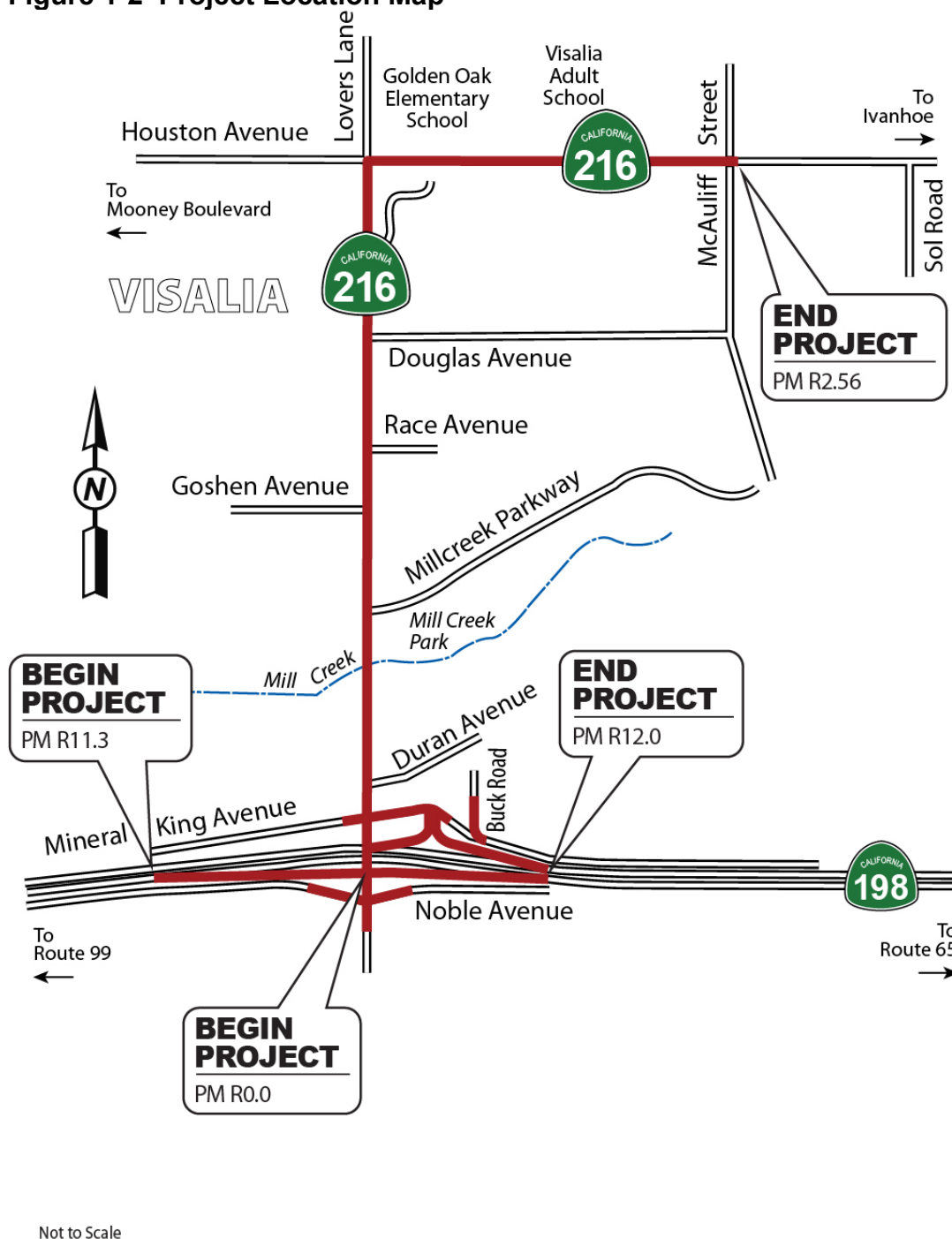


Figure 1-2 Project Location Map

Project History and Background

Originally, this project proposed to rehabilitate about 3 miles of State Route 216 in the City of Visalia from Mineral King Avenue to 0.2 mile east of Sol Road. In 2019, this project was combined with the Lovers Lane Operational Improvements Project (06-0U870) due to project proximity and similar construction schedules.

The purpose of the project is to improve operations on Lovers Lane and the State Route 198 interchange between Nobel Avenue and Mineral King Avenue and State Route 216 (Houston Avenue) to meet existing and projected traffic volumes. The existing highway serves growing residential, school, and commuter traffic. Without improvements, increased congestion and potential for accidents are expected.

Traffic projections show increased congestion and accident potential during the planning horizon years of 2021 and 2031. Traffic generators in the project vicinity include six schools and new subdivisions.

Congestion occurs due to travel and traffic patterns associated with school functions and working commuters. Factors contributing to traffic congestion include school events; narrow, varying widths of the existing road; lane configurations at intersections; and numerous driveways.

Overview of State Routes 198 and 216 in the Project Area

State Route 198

State Route 198 follows an east-west alignment through the project area with an interchange at Lovers Lane. There are sidewalks on both sides of Lovers Lane through the interchange, which is on flat terrain and is situated in an urban area with a variety of low-density residential and retail/service commercial land designations. Along Lovers Lane, the land use north of Mineral King Avenue is residential; immediately south of Noble Avenue is commercial.

State Route 216

State Route 216 follows a north-south alignment then transitions into an east-west alignment at the intersection of State Route 216 and Houston Avenue in the project area. State Route 216 on Houston Avenue eastbound transitions from a four-lane highway to a two-lane divided highway at the intersection of State Route 216 and Sol Road.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of this project is to restore the existing facility on State Route 216 along Lovers Lane from Mineral King Avenue to Houston Avenue to a state of good repair and extend the pavement service life of State Route 216 along Houston Avenue from Lovers Lane to McAuliff Street. The project also proposes intersection improvements to reduce congestion, delays, and

improve the Level of Service at the Lovers Lane Undercrossing of State Route 198 between Noble Avenue and Mineral King Avenue.

1.2.2 Need

The existing facility on State Route 216 along Lovers Lane from Mineral King Avenue to Houston Avenue is experiencing moderately extensive pavement deterioration, which causes unacceptable ride quality. The pavement has deteriorated to the extent that rehabilitation is needed. State Route 216 along Houston Avenue from Lovers Lane to McAuliff Street is experiencing minor pavement distress. If left uncorrected, the pavement will deteriorate to the extent that a major roadway rehabilitation will be needed.

At the Lovers Lane Interchange, the ramp intersections have been experiencing traffic congestion, excessive vehicle delays, and queuing (long line of vehicles) due to increased traffic volumes. Without these improvements, the facility will operate at an unacceptable Level of Service at some locations.

Traffic Volumes

Traffic volume and quality of traffic flow are used to analyze freeway operation 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 within a 24-hour period.
- Quality of traffic flow is represented as Level of Service. Level of Service ranges from A to F. Level of Service A indicates free-flowing traffic, while Level of Service F indicates gridlock and stop-and-go conditions. Caltrans strives to provide a minimum Level of Service C/D in urban areas.
- A traffic analysis was performed for existing conditions (2016), implementation year (2026), and design-year conditions (2035).

Tables 1.1 and 1.2 show existing and future traffic volumes as annual average daily traffic on State Route 216. Tables 1.3 through 1.6 show future Levels of Service at the State Route 198 intersections. Long queues at the existing intersections will cause a potential overflow of traffic onto the highway mainline and increases in traffic volumes will cause longer delays.

Table 1.1 Existing and Future Traffic Volumes on State Route 216 from State Route 198 Junction to Millcreek Parkway

Year	Annual Average Daily Traffic Volumes
2016	16,700
2026	21,114
2035	26,076

Source: Caltrans Updated Traffic Operations Analysis 2019

Table 1.2 Existing and Future Traffic Volumes on State Route 216 from Millcreek Parkway to McAuliff Street

Year	Annual Average Daily Traffic Volumes
2016	13,800
2026	17,447
2035	21,547

Source: Caltrans Updated Traffic Operations Analysis 2019

Level of Service

Highway traffic flow is defined in terms of Level of Service. For highways, there are six defined Levels of Service, ranging from Level of Service A to Level of Service F. Level of Service A represents free traffic flow with low traffic volumes and high speeds. Level of Service F results in operations at low speeds due to traffic volumes that exceed the capacity of the facility. As shown earlier in Tables 1.1 and 1.2, future average daily traffic will increase between existing (2016) and future years 2026 and 2035. Tables 1.3 through 1.6 show future Levels of Service at the State Route 198 intersections for Alternatives 1A and 1B for future years 2021 and 2031. Traffic forecasts were collected from two separate studies—one in 2016 for the State Route 198 operational portion (south of Noble Avenue to Mineral King Avenue) and the other in 2019 for the State Route 216 rehabilitation portion (Mineral King Avenue to the east of McAuliff Street).

Table 1.3 Future Level of Service for Lovers Lane at Mineral King Avenue

Year	Level of Service Morning/Evening Alternative 1A	Level of Service Morning/Evening Alternative 1B
2021	C/D	C/C
2031	D/D	C/C

Source: Caltrans Traffic Operational Analysis 2016

The future Level of Service at Mineral King Avenue will decrease for Alternative 1A and will remain unchanged for Alternative 1B.

Table 1.4 Future Level of Service for Lovers Lane at Eastbound Ramps

Year	Level of Service Morning/Evening Alternative 1A	Level of Service Morning/Evening Alternative 1B
2021	B/C	B/C
2031	B/D	B/D

Source: Caltrans Traffic Operational Analysis 2016

The future Level of Service at the eastbound ramps will decrease for Alternative 1A and Alternative 1B.

Table 1.5 Future Level of Service for Lovers Lane at Noble Avenue

Year	Level of Service Morning/Evening Alternative 1A	Level of Service Morning/Evening Alternative 1B
2021	C/D	C/C
2031	D/D	D/D

Source: Caltrans Traffic Operational Analysis 2016

The future Level of Service at Noble Avenue will decrease for Alternative 1A and Alternative 1B.

The at-grade intersection at westbound Mineral King Avenue is eliminated in Table 1.6.

Table 1.6 Future Level of Service for State Route 198 Westbound Ramps at Mineral King Avenue

Year	Level of Service Morning/Evening Alternative 1A	Level of Service Morning/Evening Alternative 1B
2021	D/C	Not Available
2031	F/F	Not Available

Source: Caltrans Traffic Operational Analysis 2016

The future Level of Service for State Route 198 westbound ramps at Mineral King Avenue will decrease for Alternative 1A. The Level of Service for Alternative 1B is not available because the at-grade intersection at Mineral King Avenue will be eliminated as a part of this project. See preliminary design plans in Appendix D for more information.

Existing Roadway

Lovers Lane Operational Improvements

Lovers Lane Between Nobel Avenue and Mineral King Avenue

Lovers Lane is a four-lane divided conventional highway running in a north-south direction. The roadbed consists of two 12-foot travel lanes with paved shoulders varying from 4 feet to 5 feet on the northbound and 4 feet to 5 feet on the southbound. The posted speed limit for this first segment is 45 miles per hour. The existing pavement is in fair or poor condition and will continue to deteriorate. There are sidewalks as well as Americans with Disabilities Act curb ramps at major intersections.

Lovers Lane at Mineral King Avenue

The southbound through movement has a Level of Service D and long queuing due to insufficient storage length for the left-turn movement. In addition, queues were seen on the westbound left-turn movement with Level of Service E caused by the existing traffic signal.

Lovers Lane at Eastbound Ramps

The overall intersection Level of Service is D. However, the northbound through movement has a Level of Service F due to long queuing and delay time mainly caused by close spacing with the downstream intersection. Queuing was seen on the eastbound left-turn movement due to increased volumes from the nearby left-turn lane. In addition, queues were seen on the southbound left-turn movement with Level of Service E due to insufficient storage length and proximity to the intersection at Lovers Lane and Noble Avenue.

Lovers Lane at Noble Avenue

Excessive queuing is the dominant problem at this intersection. Excessive queuing was seen on the permitted eastbound left-turn movement, as well as the westbound right-turn movement. The morning westbound right-turn movement experiences significant delay requiring drivers to wait through multiple signal cycles; the observed queue extended 1,200 feet. Blockage at the intersection was seen at the eastbound ramp terminal due to the southbound left-turn movement. In addition, queues were seen on the southbound left-turn movement with Level of Service E due to insufficient storage length and proximity to the Lovers Lane and eastbound 198 off-ramp intersection. The southbound left-turn lane extends back to the eastbound ramp termini intersection.

State Route 198 Westbound Ramps at Mineral King Avenue

This is an unsignalized “T” intersection with stop sign control on the northbound movement. Long travel time was seen for the northbound left-turn movement due to no control in the east-west direction and for the westbound through movement because there is no left-turn lane. Due to the stop sign for off-ramp traffic and no through movement restrictions along Mineral King Avenue, off-ramp traffic creates a queue that backs up onto the mainline, resulting in Level of Service F.

State Route 216 (Lovers Lane)

This portion of State Route 216 within the project limits runs in two segments. The first segment of the project, from post mile R0.1 to post mile 1.95, is a four-lane divided conventional highway running in a north-south direction. The roadbed consists of two 12-foot travel lanes with paved shoulders varying from 4 feet to 5 feet on the northbound side and 4 feet to 9 feet on the southbound side. The raised median width ranges from about 17 to 18 feet wide. The posted speed limit at this first segment is 45 miles per hour. The

existing pavement is in fair or poor condition and will continue to deteriorate. There are sidewalks throughout this segment except for a small area on the southbound side of the highway across from Millcreek Parkway. Curb ramps exist at major intersections. The second segment of the highway runs in an east-west direction from post mile 1.96 (Houston Avenue intersection) to the end of the project. From post mile 1.96 to post mile 2.56 (west of the McAuliff Street intersection), the highway is a four-lane divided facility with bicycle lanes in each direction. The posted speed limit along this segment is 40 miles per hour except for the segment within the school area. The signs, stripes, and pavement condition are still in good condition. This segment of the project was just recently upgraded from a two-lane to a four-lane mixed-use facility (project 06-43070).

1.3 Project Description

This section describes the proposed action and the build and no-build alternatives developed to meet the purpose and need of the project while avoiding/minimizing environmental impacts. Caltrans, in cooperation with the City of Visalia, is proposing several operational improvements on State Route 198 and State Route 216 in Tulare County.

The operational improvements consist of widening Lovers Lane below the State Route 198 undercrossing between the State Route 198 eastbound on-ramps and off-ramps and Mineral King Avenue. Additional work also includes improving the following four intersections: Lovers Lane (State Route 216) at Mineral King Avenue, Lovers Lane at State Route 198 on the eastbound on-ramps and off-ramps, Lovers Lane at Noble Avenue, and State Route 198 on the westbound on-ramps and off-ramps at Mineral King Avenue.

The project also proposes to extend the life of the existing pavement along State Route 216 (Lovers Lane) by rehabilitating the existing pavement and including all pertinent standards as required by the 3R Program (resurfacing, restoration, and rehabilitation). State Route 216 (Houston Avenue) between Lovers Lane and McAuliff Street will be overlaid to extend the service life of the roadway. Figure 1-1 shows the project vicinity map, and Figure 1-2 shows the project location map.

1.4 Project Alternatives

Considering the present and the projected future traffic conditions, other local needs, and constraints, the following alternatives have been developed and analyzed based on constructability and cost-effectiveness.

1.4.1 Build Alternatives

Two build alternatives—Alternative 1A and Alternative 1B—are being considered.

Common Design Features of the Build Alternatives

The following are the common design features of the build alternatives (Alternative 1A and Alternative 1B):

- Rehabilitate the existing pavement.
- Build continuous sidewalk and Class 2 bicycle lanes through Lovers Lane and State Route 216.
- Install and/or update Americans with Disabilities Act ramps as needed.
- Install four drainage inlets to discharge to the proposed stormwater basin across from Mill Creek Park on State Route 216.

At the Lovers Lanes Undercrossing

- Build a curtain and a retaining wall.
- Extend the existing left-turn lanes in both directions on Lovers Lane between the eastbound and westbound ramps.
- Install a dedicated right-turn lane on Lovers Lane to Mineral King Avenue.
- Remove the raised curb median and restripe the existing pavement to accommodate two-way left-turn lanes under the undercrossing.

At the Lovers Lane/Noble Avenue Intersection

- Build a second left-turn lane to the southbound and northbound approaches at the intersection of Lovers Lane and Noble Avenue.
- Build a second eastbound and westbound receiving lane on Noble Avenue.
- Build a northbound designated right-turn lane on Lovers Lane and on the eastbound and westbound right-turn lane on Noble Avenue.
- Build a bicycle lane on northbound Lovers Lane.
- Remove the raised curb median on Lovers Lane.
- Rebuild traffic signals as needed.

At the Lovers Lane/State Route 198 Eastbound Ramps Intersection

- Build eastbound, southbound, and northbound right-turn lanes at the intersection.
- Remove the raised curb median.
- Rebuild traffic signals as needed.

At the Lovers Lane/Mineral King Avenue Intersection

- Remove the raised median on Lovers Lane.
- Add a second southbound left-turn lane on Lovers Lane.
- Build a second eastbound receiving lane to force traffic onto the westbound on-ramp at Mineral King Avenue.
- Build a northbound designated right-turn lane on Mineral King Avenue.
- Rebuild the traffic signals as needed.

At the Mineral King Avenue/State Route 198 Westbound Ramps Intersection

- Build westbound left-turn channelization.
- Build a designated right-turn lane from Mineral King Avenue to the State Route 198 westbound on-ramp.

This project contains several 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 project. These measures are addressed in more detail in the Environmental Consequences sections in Chapter 2.

Unique Features of Build Alternative 1B

At the Mineral King Avenue/Buck Road Intersection

Alternative 1B will close Mineral King Avenue at Buck Road, providing traffic along Buck Road sole access to Mineral King Avenue. Additionally, the westbound on-ramps and off-ramps will be rebuilt to accommodate additional storage that provides improved operations. All traffic from the westbound off-ramp will be moved to the signalized intersection at Lovers Lane and Mineral King Avenue. All traffic from Lovers Lane at the Mineral King Avenue intersection, heading in the eastbound direction, will only have access to the westbound on-ramp (see Appendix D).

The total project cost for Alternative 1A, including structures and roadway work, is estimated to be \$29,440,000.

The total project cost for Alternative 1B, including structures and roadway work, is estimated to be \$30,397,000.

1.4.2 No-Build (No-Action) Alternative

The No-Build Alternative will not make any changes to the existing facility, and therefore will not address the purpose and need of the project. With the No-Build Alternative, longer motorist delays, excessive congestion, and queuing at the existing intersections within the project limits will be expected.

1.5 Comparison of Alternatives

When alternatives are evaluated, the purpose and need of the project, as well as the locations where environmental impacts could occur, need to be considered.

Alternative 1A

Alternative 1A will widen Lovers Lane below the State Route 198 undercrossing, improve traffic operations at four intersections, and extend the life of the existing pavement along State Route 216.

Alternative 1B

In addition to the improvements proposed in Alternative 1A, Alternative 1B proposes to close Mineral King Avenue at Buck Road (see Appendix D). The current westbound off-ramp is currently experiencing excessive congestion and traffic backups onto the State Route 198 mainline. The westbound on-ramp is also experiencing excessive congestion and traffic backups onto Mineral King Avenue. By eliminating the existing stop sign at the State Route 198 westbound off-ramp, traffic operations will be improved. By restricting local traffic access on Mineral King Avenue between Lovers Lane and Buck Road, additional traffic storage will be achieved by extending the on-ramps and off-ramps (about 300 feet) to the Lovers Lane/Mineral King Avenue intersection.

Both build alternatives will satisfy the purpose and need of the project because they will restore the facility to a state of good repair, improve traffic flow, address current and future traffic operational needs, and alleviate congestion.

The No-Build Alternative will not satisfy the purpose or need of the project because it will not address the projected increases in traffic volume over time, which will result in longer motorist delays, excessive congestion, long lines of vehicles at the existing intersections within the project limits, and potential traffic backups onto the State Route 198 mainline in the City of Visalia. The No-Build Alternative will not result in any construction or changes to existing conditions. Therefore, it will not result in any temporary, permanent, or indirect impacts on environmental resources.

1.6 Identification of a Preferred Alternative

The following text has been added since the draft environmental document: After the completion of the public review and comment period, the benefits and impacts of Alternative 1A and Alternative 1B versus the No-Build Alternative were compared. Both Alternative 1A and Alternative 1B will satisfy

the purpose and need of the project, will improve traffic flow, address current and future traffic operational needs, and alleviate congestion.

A Caltrans Project Development Team identified Alternative 1B as the preferred alternative. Alternative 1B is the superior alternative because it will provide enhanced overall operations at the Lovers Lane Undercrossing compared to Alternative 1A. According to engineering studies, the Level of Service of Alternative 1A will fail in the year 2031, 6 years after the completion of construction. The Level of Service of Alternative 1B is unlikely to fail in the year 2031 due to increased storage length and improved operations at the on-ramps and off-ramps.

The No-Build Alternative will not satisfy the purpose or need of the project because it will not address the projected increases in traffic volume over time, which will result in longer motorist delays, excessive congestion, long lines of vehicles at the existing intersections within the project limits, and potential traffic backups onto the State Route 198 mainline in the City of Visalia. With the No-Build Alternative, traffic volume will continue to increase over time, resulting in traffic delays and excessive congestion within the project limits.

1.7 Permits and Approvals Needed

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

Agency	Permit/Approval	Status
San Joaquin Valley Unified Air Pollution Control District	National Emission Standards for Hazardous Air Pollutants Notification	The contractor will be required to notify the air district 10 days before the start of construction.
California Department of Fish and Wildlife	California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement	Application to be submitted during the project's final design phase.
U.S. Army Corps of Engineers	Clean Water Act Section 404 Nationwide Permit	Application to be submitted during the project's final design phase.
Regional Water Quality Control Board	Clean Water Act Section 401 Water Quality Certification	Application to be submitted during the project's final design phase.

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.

- Existing and Future Land Use—The rehabilitation project will not change or impact existing land use. (Project Description)
- Consistency with State, Regional, Local Plans and Programs—The project is consistent with state, regional, and local plans.
- Coastal Zone—The project is not in the coastal zone. (Field visit, February 13, 2020)
- Wild and Scenic Rivers—There are no wild or scenic rivers in the project area. (Field visit, February 13, 2020)
- Parks and Recreational Facilities—No parks or recreational facilities will be affected by the project. Mill Creek Park is near the project, located on the corner of State Route 216 (Lovers Lane) and Millcreek Parkway. The project will not affect access to the park. (Field visit, September 19, 2017, Appendix A)
- Farmland—No farmland will be affected by the project. (Field visit, February 13, 2020)
- Timberlands—No timberlands are present within or next to the proposed project area. (Field visit, February 13, 2020)
- Growth—The project will improve operational efficiency and rehabilitate an existing facility and does not propose to make any changes to accessibility or add capacity; therefore, the project is not expected to induce or affect growth patterns.
- Community Character and Cohesion—An established community will not be affected due to the nature of the proposed project; thus, community character and cohesion will not be affected.
- Environmental Justice—No minority or low-income populations that could be adversely affected by the project exist in the area. Therefore, this project is not subject to the provisions of Executive Order 12898. (2019 Census Data; Field visit, February 13, 2020)

- Cultural—No historic properties will be affected by this project, and no historic resources are present within the project area. (Historic Property Survey Report, November 17, 2020)
- Tribal Cultural Resources—No tribal cultural resources are present within the project area. (Archeological Survey Report, November 17, 2020)
- Hydrology and Floodplain—Two short segments are within the 100-year base floodplain in an area designated as Flood Zone AE. The roadway rehabilitation proposed through these two segments will not have an impact on the 100-year floodplain. (Floodplain Evaluation, September 30, 2020)
- Geology/Soils/Seismicity/Topography—No project impacts related to geology, soils, seismicity, or topography are expected. There are no major topographic or geologic features within the project area.
- Mineral Resources—The project is not in land that is classified as a Mineral Resource Zone according to the State Geologist. (California Department of Conservation Mineral Land Classification Interactive Map, July 2020)
- Air Quality—The improvements proposed for this project are exempt from the requirement that a conformity determination be made (intersection reconfiguration) according to 40 Code of Federal Regulations Section 93.127 Table 3. This project may proceed toward implementation even in the absence of a conforming transportation plan and Transportation Improvement Program. (Air Compliance Studies, November 17, 2020)
- Noise—This project is not a Type 1 project as defined in Section 23 Code of Federal Regulations Section 772 because it will not increase the existing traffic capacity or alter the location of the highway. No further investigation is needed to proceed with the project. No sensitive receptors for noise impacts are present in the project area. See Section 2.2.5 Noise for temporary construction noise impacts. (Noise Compliance Studies, August 24, 2020)
- Population and Housing—The project will not impact population or housing. It will not affect population growth because it will not build new homes or businesses or relocate homes or businesses. The project does not propose to increase lane capacity or extend any roads since it is only an operational improvement and rehabilitation project. (Field Visit, February 13, 2020)
- Public Services (Parks and Schools)—There are four schools near the project. Golden Oak Elementary School at 1700 North Lovers Lane, Visalia Adult School at 3110 East Houston Avenue, Golden West High School at 1717 North McAuliff Street, and Village Preschool at 1414 North McAuliff Street. The schools will not be impacted by project activities. Construction will occur in the summer when school is not in session. (Field Visit, February 13, 2020)

- Fisheries Resources—This project is outside of the jurisdiction of the National Marine Fisheries Service. Therefore, a National Marine Fisheries Service species list is not required, and no effect on National Marine Fisheries Service species is expected.
- Wildfire—This project is not within or near a very high fire hazard severity zone. (California Department of Forestry and Fire Protection Online Fire Hazard Severity Zone Maps)

2.1 Human Environment

2.1.1 Relocations and Real Property Acquisition

Regulatory Setting

The Caltrans Relocation Assistance Program is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), and Title 49 Code of Federal Regulations Part 24. The purpose of the Relocation Assistance Program is to ensure that persons displaced because of a transportation project are treated fairly, consistently, and equitably so that such persons will not suffer disproportionate injuries because of projects designed for the benefit of the public. Please see Appendix F for a summary of the Relocation Assistance Program.

All relocation services and benefits are administered without regard to race, color, national origin, persons with disabilities, religion, age, or sex. Please see Appendix B for a copy of the Caltrans Title VI Policy Statement.

Affected Environment

The information used in this discussion is gathered from the Caltrans Right-of-Way Data Sheets completed in November 2020.

Lovers Lane Operational Improvements

New right-of-way/Temporary Construction Easement acquisition is needed at the southwest corner of Lovers Lane and Noble Avenue and the 7-Eleven gas station at the southeast corner of Lovers Lane and Noble Avenue.

State Route 216 Rehabilitation Improvements

New right-of-way is expected to be required at the northeast and northwest corners of Lovers Lane and Mineral King Avenue to accommodate the widening at Mineral King Avenue. Residential properties along the northeast and northwest corners of Lovers Lane and Mineral King Avenue will be affected. Intersection curb ramps along State Route 216 will be upgraded to standard and installed where none currently exist.

Environmental Consequences

Alternative 1A and Alternative 1B

Throughout the planning process, Caltrans made it a priority to reduce the amount of right-of-way required for this project. The build alternatives were analyzed, and the following acquisitions will be needed.

The build alternatives will require the partial acquisition of new right-of-way from 11 parcels. The total acreage of the new right-of-way that will be required for Alternative 1A is about 0.26 acre. Alternative 1B will require about 0.29 acre. Alternative 1A and 1B will also require temporary construction easements from 15 parcels. The total acreage of the temporary construction easements for Alternative 1A will be about 0.07 acre and 0.05 acre for Alternative 1B. The new right-of-way that will be required from the parcels is shown below in Table 2.1.

Table 2.1 Proposed Right-of-Way Acquisition

Alternative 1A Assessor's Parcel Number	Alternative 1A Right-of-Way (acre)
103-170-026	0.061
103-170-022	0.02
103-170-024	0.091
103-170-028	0.057
098-090-039	0.005
100-090-007	0.002
101-030-012	0.005
103-260-004	0.002
098-060-024	0.006
098-050-060	0.005
103-226-004	0.01

Source: Caltrans' Updated Right-of-Way Data Sheet, November 2020

Alternative 1B Assessor's Parcel Number	Alternative 1B Right-of-Way (acre)
103-170-026	0.051
103-170-022	0.053
103-170-024	0.102
103-170-028	0.057
098-090-039	0.005
100-090-007	0.002
101-030-012	0.005
103-260-004	0.002
098-060-024	0.006
098-050-060	0.005
103-226-004	0.01

Source: Caltrans' Updated Right-of-Way Data Sheet, November 2020

Avoidance, Minimization, and/or Mitigation Measures

All activities will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended.

Acquisitions for construction easements are temporary, and the land will be returned to the nearby property owner after project completion.

2.1.2 Utilities and Emergency Services

Affected Environment

The information used in this discussion is gathered from the Caltrans Right-of-Way Data Sheet completed in November 2020.

Lovers Lane Operational Improvements

Utilities

Utilities in the project area are owned and administered by several different entities. The Southern California Gas Company provides natural gas service, and Southern California Edison provides electrical transmission lines and distribution lines. The City of Visalia provides sewer and storm drain services. The California Water Service Company provides water service. The American Telephone and Telegraph Corporation provides telephone and telecommunications services. An irrigation canal, which the Tulare Irrigation District operates, runs east to west and is next to the intersection of Lovers Lane and Mineral King Avenue.

Emergency Services

Police and fire services for the City of Visalia are provided through the City of Visalia Police Department and the City of Visalia Fire Department. The American Ambulance of Visalia provides ambulance services for the City of Visalia and the surrounding area. The Tulare County Sheriff's Office provides public protection and criminal investigations that occur within the unincorporated areas of Tulare County. The closest substations are in the City of Visalia and the City of Porterville. The Visalia Fire Department Fire Station Number 56 serves the project area and sits about 1 mile south of the project site. The California Highway Patrol has specific jurisdiction over State Routes 198 and 216 and all public roads in unincorporated parts of Tulare County.

State Route 216 Rehabilitation Improvements

Utilities

Utilities in the project area are owned and administered by several different entities. The Southern California Gas Company provides natural gas service, and Southern California Edison provides electrical transmission lines and distribution lines. The City of Visalia provides sewer and storm drain services. The California Water Service Company provides water service. The American Telephone and Telegraph Corporation provides telephone and telecommunications services. An irrigation canal, which the Tulare Irrigation District operates, runs east to west and is next to the intersection of Lovers Lane and Mineral King Avenue.

Emergency Services

Police and fire services for the City of Visalia are provided through the City of Visalia Police Department and the City of Visalia Fire Department. The American Ambulance of Visalia provides ambulance services for the City of Visalia and the surrounding area. The Tulare County Sheriff's Office provides public protection and criminal investigations that occur within the unincorporated areas of Tulare County. The closest substations are in the City of Visalia and the City of Porterville. Visalia Fire Department Fire Station Number 56 serves the project area and sits about 1 mile south of the project site. The California Highway Patrol has specific jurisdiction over State Routes 198 and 216 and all public roads in unincorporated parts of Tulare County.

Environmental Consequences

Alternative 1A and Alternative 1B

Utilities

Utility relocation currently includes three transmission poles, four distribution poles, one vault, one American Telephone and Telegraph Corporation/Pacific Bell Telephone Company manhole, one water main, and one Southern California Gas Company transmission line.

Emergency Services

During construction, fire protection, law enforcement, ambulance services, and other public services may be detoured to local roads but will be given priority access. Upon completion of the project, emergency response times are expected to improve.

Avoidance, Minimization, and/or Mitigation Measures

During the design phase of the project, a more detailed study will be conducted to determine the necessary relocation of utilities. Caltrans will meet with affected utility providers to coordinate the details for relocations and easements to avoid or minimize any interruption in service.

A detailed Traffic Management Plan will be developed during the Plans, Specifications, and Estimates phase of the project to minimize delays and maximize safety during construction. The Traffic Management Plan may include, but is not limited to, the following:

- Release of information through brochures and mailers, press releases and media alerts, and planned lane closure notices from the Caltrans website.
- Use of portable changeable message signs.
- Incident management through the Construction Zone Enhanced Enforcement Program and the Transportation Management Plan.

The Construction Zone Enhanced Enforcement Program is a program that uses California Highway Patrol officers during construction to improve the

safety of construction crews and the motoring public. The officers may be used for traffic control and provide needed emergency response support services. Caltrans coordinates and manages road user information such as identifying the fixed changeable message signs and highway advisory radio on the State Highway System that will be used during construction.

2.1.3 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 the 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 expected pedestrian and/or bicycle traffic presents a potential conflict with motor vehicle 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 the application of the Americans with Disabilities Act requirements to federal-aid projects, including Transportation Enhancement Activities.

Affected Environment

Lovers Lane Operational Improvements

The following traffic projections were collected in 2016 for the Lovers Lane Operational Improvements Project (06-0U870). Traffic projections for the Lovers Lane Rehabilitation project were collected in 2019 (Mineral King Avenue to the east of McAuliff Street).

Traffic and Transportation

In 2016, Caltrans completed an operational analysis for the intersections at State Route 198 and Lovers Lane Interchange. The operational improvements will include improvements to four intersections within the area of the interchange. These intersections are Lovers Lane (State Route 216) at Mineral King Avenue, Lovers Lane at State Route 198 eastbound ramps, Lovers Lane at Noble Avenue, and State Route 198 westbound ramps at Mineral King Avenue.

Table 2.2 summarizes the type of intersection control and the morning and afternoon Level of Service for the existing year (2016).

Table 2.2 Existing Intersection Level of Service at the State Route 198 and Lovers Lane Interchange

Location	Traffic Control Type	Morning Level of Service 2016	Afternoon Level of Service 2016
Lovers Lane at Mineral King Avenue	Signal	D	D
Lovers Lane at Eastbound Ramps	Signal	D	D
Lovers Lane at Noble Avenue	Signal	E	E
State Route 198 Westbound Ramps at Mineral King Avenue	Signal	F	F

Source: Caltrans Traffic Operational Analysis 2016

Pedestrian Facilities

Pedestrian facilities such as sidewalks and pedestrian crossings were identified during field reviews for the project at the State Route 198 and Lovers Lane Interchange.

Bicycle Facilities

No bicycle facilities exist at the State Route 198 and Lovers Lane Interchange, but bicyclists still use the existing pedestrian facilities such as sidewalks and pedestrian crossings as bicycle facilities.

State Route 216 Rehabilitation Improvements

In 2019, Caltrans completed an operational analysis for pavement rehabilitation on State Route 216. The operational improvements will include the short-term improvements for two segments within the project area. These segments are State Route 216 from State Route 198 Junction to Millcreek Parkway and State Route 216 from Millcreek Parkway to McAuliff Street.

Tables 2.3 and 2.4 summarize the morning and afternoon Levels of Service for the existing year (2016).

Table 2.3 Existing Level of Service for State Route 216 from State Route 198 Junction to Millcreek Parkway

Morning Level of Service 2016	Afternoon Level of Service 2016
C	C

Source: Caltrans' Traffic Operations Analysis 2016

Table 2.4 Existing Level of Service for State Route 216 from Millcreek Parkway to McAuliff Street

Morning Level of Service 2016	Afternoon Level of Service 2016
B	C

Source: Caltrans' Traffic Operations Analysis 2016

Pedestrian Facilities

Pedestrian facilities such as sidewalks and pedestrian crossings were identified during field reviews for the project on State Route 216. While sidewalks and pedestrian crossings were identified, certain sections of State Route 216 currently do not have sidewalks or curb and gutter.

Bicycle Facilities

No bicycle facilities exist on State Route 216 and Lovers Lane, but bicyclists still use the existing pedestrian facilities such as sidewalks and pedestrian crossings as bicycle facilities.

Environmental Consequences

Lovers Lane Operational Improvements

Traffic and Transportation

Tables 2.5 through 2.16 show the traffic conditions with and without the project for the current year and future conditions.

Table 2.5 Level of Service for Lovers Lane at Mineral King Avenue No-Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
1	D	D	E	E

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.6 Level of Service for Lovers Lane at Mineral King Avenue (Alternative 1A) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
1	C	D	D	D

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.7 Level of Service for Lovers Lane at Mineral King Avenue (Alternative 1B) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
1	C	C	C	C

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.8 Level of Service for Lovers Lane at Eastbound Ramps No-Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
2	D	D	E	F

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.9 Level of Service for Lovers Lane at Eastbound Ramps (Alternative 1A) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
2	B	C	B	D

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.10 Level of Service for Lovers Lane at Eastbound Ramps (Alternative 1B) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
2	B	C	B	D

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.11 Level of Service for Lovers Lane at Noble Avenue No-Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
3	E	E	F	F

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.12 Level of Service for Lovers Lane at Noble Avenue (Alternative 1A) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
3	C	D	D	D

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.13 Level of Service for Lovers Lane at Noble Avenue (Alternative 1B) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
3	C	C	D	D

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.14 Level of Service for State Route 198 Westbound Ramps at Mineral King Avenue No-Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
4	C	D	F	F

Source: Caltrans' Traffic Operational Analysis 2016

Table 2.15 Level of Service State Route 198 Westbound Ramps at Mineral King Avenue (Alternative 1A) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
4	D	C	F	F

Source: Caltrans' Traffic Operational Analysis 2016

In Table 2.16, the at-grade intersection at westbound Mineral King Avenue will be eliminated.

Table 2.16 Level of Service for State Route 198 Westbound Ramps at Mineral King Avenue (Alternative 1B) Build Alternative

Location	Morning Level of Service 2021	Afternoon Level of Service 2021	Morning Level of Service 2031	Afternoon Level of Service 2031
4	Not Available	Not Available	Not Available	Not Available

Source: Caltrans' Traffic Operational Analysis 2016

Based on the data presented, without the project, the Level of Service at Location 1 will worsen to Level of Service E by 2031 for both morning and afternoon traffic. Location 2 Level of Service will worsen to E for morning traffic and F for afternoon traffic in 2031. Location 3 Level of Service will worsen to F for both morning and afternoon traffic in 2031, and Level of Service at Location 4 for Alternative 1A will deteriorate to F for morning and afternoon traffic by 2031. The Level of Service for Alternative 1B at Location 4 is not available because the at-grade intersection will be eliminated. Without the project, traffic is expected to be congested and operate with considerable delays.

With the project, all four project locations will see an improved Level of Service for the construction year. The Level of Service is expected to decrease for the future conditions at each project location.

With the project, both build alternatives will see an improved Level of Service because of the operational improvements for the construction year. Alternative 1A will meet the operational needs on Lovers Lane and maintain the existing local circulation on Mineral King Avenue. Alternative 1B proposes a higher Level of Service than Alternative 1A, meets all the project's operational needs, but proposes to eliminate local circulation on Mineral King Avenue.

Construction impacts on traffic and transportation will not be substantial. Access to and from State Route 198 and State Route 216 will be available during construction.

Complete Streets

Addressing the safety and mobility needs of bicyclists, pedestrians, and transit users within the project limits will be part of this project and facilitated by creating “complete streets,” which will require collaboration among Caltrans’ functional units and stakeholders during the design phase of the project. Complete streets, as defined by the Federal Highway Administration, are streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are traveling as drivers, pedestrians, bicyclists, or public transportation riders.

Pedestrian Facilities

The project will upgrade all sidewalks and install or update Americans with Disabilities Act curb ramps for the entire project limits.

Bicycle Facilities

The project will install Class 2 bike facilities on Lovers Lane from Noble Avenue to the Mineral King Avenue intersection. Bike friendly drainage grates will be installed where applicable.

State Route 216 Rehabilitation Improvements

Traffic and Transportation

The 3R portion of this project will not change the existing alignment or capacity of State Route 216, so the project will not have any permanent impacts on traffic and transportation.

Construction impacts on traffic and transportation will not be substantial. Access to and from State Route 198 and State Route 216 will be available during construction.

Pedestrian Facilities

The project will upgrade all sidewalks and install or update Americans with Disabilities Act curb ramps for the entire project limits.

Bicycle Facilities

The project will install Class 2 bike facilities on State Route 216 from Mineral King Avenue to Houston Avenue. Parking on the west side of Lovers Lane between Mineral King Avenue and Millcreek Parkway will be eliminated to widen the existing pavement and accommodate the proposed lane configuration.

Avoidance, Minimization, and/or Mitigation Measures

Traffic and Transportation

A Traffic Management Plan will be developed to handle local traffic patterns and reduce delay, congestion, and the likelihood of accidents during construction. The Traffic Management Plan includes notifying the public of construction activities via media outlets, using changeable message signs and construction strategies, and using the Central Valley Transportation Management Center, which reduces congestion by monitoring traffic and informing the public via media outlets, such as radio and television. Traffic delays are expected to be minimal because most of the build alternatives will be built on new alignments. By building the project in phases and rerouting traffic to local roads, disruption of local and regional traffic will be minimized with both build alternatives.

Pedestrian Facilities

Curb ramps that comply with the Americans with Disabilities Act requirements will be provided at all improved intersections or local road intersections.

Bicycle Facilities

Class 2 bike lanes will be provided along Lovers Lane from Noble Avenue to Houston Avenue.

2.1.4 Visual/Aesthetics

Regulatory Setting

The National Environmental Policy Act (NEPA) 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 NEPA (23 U.S. Code 109[h]), directs that final decisions on projects are to be made in the best overall public interest considering adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) 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 recycle 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 this project in September 2020. The visual impact assessment was prepared in accordance with the guidelines in the Federal Highway Administration's Visual Impact Assessment for Highway Projects. (FHWA 2015)

Visual Setting

The project is on State Route 216 between State Route 198 and McAuliff Street in the City of Visalia in Tulare County, California. The project is in the San Joaquin Valley of Central California. The landscape is characterized by flat terrain with native trees, planted street trees, and non-native ornamental plantings. The land use within the corridor is primarily suburban residential but also includes churches and schools.

There are native oak trees within the corridor that can be considered scenic resources. The route is not an eligible State Scenic Highway.

Visual Characteristics

The visual character of the project will be somewhat compatible with the existing visual character of the corridor. The roadway dominates the character of the corridor. The homes along Lovers Lane were built when the road was only two lanes wide. Over time the roadway has been widened, causing the visual scale to become unbalanced. Narrow front yards provide little to no buffer from the busy street. In the segment of Lovers Lane, where there are large oaks and mature tree plantings, the scale between the roadway and the trees is more balanced. The roadway edges are defined by the vertical element of the trees. The trees in the median create a vertical separation between the two directions of travel. They also provide visual interest, although there is a lack of spring and fall color based on the species of trees. All the trees reduce glare from the paved surfaces by providing shade.

Houston Avenue was developed concurrently with the roadway, using more modern planning guidelines. Therefore, the roadway and the development along it is in better balance than the segment on Lovers Lane. The street trees define the road edges. At maturity, the trees will create visual mass. The vertical element of the trees will also balance the wideness of the road. Currently, the plantings are relatively young, providing interest for pedestrians and drivers. Also providing interest at ground level is colored and stamped concrete and rock blanket paving.

Visual Quality

The project will alter the visual quality of the existing corridor. There is nothing particularly memorable about the views in the project corridor. The big exceptions are the heritage oaks, typically found throughout the city and along the creeks. Sections of the corridor lack street trees, sidewalks, or curbs and gutters. These missing elements create visual intrusions and a lack

of unity in the landscape. Overall, the loss of large-scale trees will have a detrimental impact on the visual quality of Lovers Lane.

Environmental Consequences

Alternative 1A and Alternative 1B

The build alternatives will upgrade Lovers Lane to current standards. The travel lanes will be widened; bike lanes and sidewalks will be added.

Tree planting areas will need to be removed, and the median planter will need to be narrowed to achieve this upgrade. These activities will result in the removal of 46 existing trees, including 14 Valley Oaks. There will be a resulting loss of color, texture, and pattern diversity on this segment of the route; the view will have more hard edges and be less balanced.

Local values include the importance of oak preservation. The City of Visalia's Valley Oak Tree ordinance is in place to protect these trees and establishes policies for the care, trimming, and removal of Valley Oaks.

The build alternatives will not make any significant changes to the visual resources on Houston Avenue.

No-Build Alternative

Under the No-Build Alternative, the project will not be built, and the project site will remain unaltered. Therefore, there will not be a change in visual quality.

Avoidance, Minimization, and/or Mitigation Measures

This section describes avoidance, minimization, and/or mitigation measures to address specific visual impacts. These will be designed and implemented with concurrence from the Caltrans District 6 Landscape Architect.

The following measures to avoid or minimize visual impacts will be incorporated into the project:

- Minimize tree removal. Remove only those trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses, such as construction staging areas or temporary stormwater conveyance systems.
- Add Complete Streets pedestrian and bicycle elements such as green-colored pavement and high visibility crosswalks.
- Add aesthetic paving elements to sidewalks and median islands.

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

- Tree removal will require replanting onsite, replanting within the Caltrans right-of-way along the same watershed, or replanting at another offsite location. Heritage oak trees will be replanted at a 10 to 1 ratio, while other trees will be replanted at a 3 to 1 ratio.

2.2 Physical Environment

2.2.1 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the U.S. from any point source unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System Permit. This act and its amendments are known today as the Clean Water Act. Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of stormwater from municipal and industrial/construction point sources to comply with the National Pollutant Discharge Elimination System Permit scheme. The following are important Clean Water Act sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request.
- Section 402 establishes the National Pollutant Discharge Elimination System, a permitting system for the discharges (except for dredged or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards administer this permitting program in California. Section 402(p) requires permits for discharges of stormwater from industrial/construction and municipal separate storm sewer systems.
- Section 404 establishes a permit program for the discharge of dredged or fill material into waters of the U.S. This permit program is administered by the U.S. Army Corps of Engineers.

The goal of the Clean Water Act is “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects.

Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers' Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which will have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that will have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 Code of Federal Regulations 320.4. A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the Clean Water Act and regulates discharges to waters of the State. Waters of the State include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Also, it prohibits discharges of "waste" as defined, and this definition is broader than the Clean Water Act definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

The State Water Resources Control Board and Regional Water Quality Control Boards are responsible for establishing the water quality standards (objectives and beneficial uses) required by the Clean Water Act and

regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable Regional Water Quality Control Board Basin Plan. In California, Regional Water Quality Control Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect those uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the State Water Resources Control Board identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with Clean Water Act Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (National Pollutant Discharge Elimination System Permits or Waste Discharge Requirements), the Clean Water Act requires the establishment of Total Maximum Daily Loads. Total Maximum Daily Loads specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The State Water Resources Control Board administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, Total Maximum Daily Loads, and National Pollutant Discharge Elimination System Permits. Regional Water Quality Control Boards are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

Section 402(p) of the Clean Water Act requires the issuance of Pollutant Discharge Elimination System permits for five categories of stormwater discharges, including Municipal Separate Storm Sewer Systems. A Municipal Separate Storm Sewer System is defined as “any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over stormwater, that is designed or used for collecting or conveying stormwater.” The State Water Resources Control Board has identified Caltrans as an owner/operator of a Municipal Separate Storm Sewer System under federal regulations. The Caltrans Municipal Separate Storm Sewer System permit covers all Caltrans rights-of-way, properties, facilities, and activities in the state. The State Water Resources Control Board or the Regional Water Quality Control Board issues National Pollutant Discharge

Elimination System Permits for 5 years, and permit requirements remain active until a new permit has been adopted.

The Caltrans Municipal Separate Storm Sewer Systems Permit, Order Number 2012-0011-DWQ (adopted on September 19, 2012, and effective on July 1, 2013), as amended by Order Number 2014-0006-EXEC (effective January 17, 2014), Order Number 2014-0077-DWQ (effective May 20, 2014) and Order Number 2015-0036-EXEC (conformed and effective April 7, 2015) has three basic requirements:

1. Caltrans must comply with the requirements of the Construction General Permit (see below);
2. Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges; and
3. Caltrans stormwater discharges must meet water quality standards through the implementation of permanent and temporary (construction) Best Management Practices, to the maximum extent practicable, and other measures as the State Water Resources Control Board determines to be necessary to meet the water quality standards.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The Statewide Stormwater Management Plan assigns responsibilities within Caltrans for implementing stormwater management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The plan describes the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices. The proposed project will be programmed to follow the guidelines and procedures outlined in the latest Statewide Stormwater Management Plan to address stormwater runoff.

Construction General Permit

Construction General Permit, Order Number 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order Number 2010-0014-DWQ (effective February 14, 2011) and Order Number 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of

less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to develop Stormwater Pollution Prevention Plans; implement sediment, erosion, and pollution prevention control measures; and obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, and 3. Risk levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project will require compulsory stormwater runoff, power of hydrogen and turbidity monitoring, and before construction and after construction aquatic biological assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Stormwater Pollution Prevention Plan. In accordance with the Caltrans Statewide Stormwater Management Plan and Standard Specifications, a Water Pollution Control Program is necessary for projects with Statewide Stormwater Management Plan less than 1 acre.

Section 401 Permitting

Under Section 401 of the Clean Water Act, any project requiring a federal license or permit that may result in a discharge to a water of the U.S. must obtain a 401 Certification, which certifies that the project will comply with state water quality standards. The most common federal permits triggering 401 Certification are Clean Water Act Section 404 permits issued by the U.S. Army Corps of Engineers. The 401 permit certifications are obtained from the appropriate Regional Water Quality Control Board, depending on the project location, and are required before the U.S. Army Corps of Engineers issues a 404 permit.

In some cases, the Regional Water Quality Control Board may have specific concerns with discharges associated with a project. As a result, the Regional Water Quality Control Board may issue a set of requirements known as Waste Discharge Requirements under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. Waste Discharge Requirements can be issued to address both permanent and temporary discharges of a project.

Affected Environment

A Water Compliance Study was completed for the project in August 2019 to evaluate the potential effect of the project on water quality and stormwater runoff.

The project area is transected by two watercourses—Mill Creek, a natural watercourse that crosses under State Route 216 south of Millcreek Parkway and flows westerly; and Evans Ditch, a human-made irrigation canal that crosses the interchange at State Route 198 and Lovers Lane diagonally and flows southwesterly. Evans Ditch originates from Mill Creek east of the project and was built to deliver water southwest of the City of Visalia.

Lovers Lane Operational Improvements

This location contains Evans Ditch, a human-made irrigation canal that crosses the interchange at State Route 198 and Lovers Lane diagonally and flows southwesterly.

State Route 216 Rehabilitation Improvements

This location contains Mill Creek. Mill Creek crosses through the project area south of Mill Creek Park through a box culvert. Mill Creek consists of two forks that flow into the Kaweah River, 2 miles east of the project footprint. The northern fork is a natural streambed, while the southern fork—Evans Ditch—is bordered by cement and contains no natural banks. Mill Creek is a willow, slow-moving canal the City of Visalia uses primarily for drainage purposes.

Environmental Consequences

Alternative 1A and Alternative 1B

The operational improvements and rehabilitation work proposed by this project are not likely to cause long-term water quality impacts. No long-term water quality impacts for surface water and groundwater are expected. However, short-term impacts to groundwater quality could occur due to accidental spills or poor management when handling hazardous materials, fuels, and other chemicals used during construction. These activities should be expected and addressed in the design and construction phases of the project.

Caltrans' Standard Specifications Section 13.1 requires the contractor to address all potential water quality impacts that may occur during construction. Potential impacts such as erosion, accidental spills of hazardous materials, and disruption of natural drainage patterns must be eliminated or minimized to the maximum extent practicable during the design and construction phases of the project by incorporating the appropriate permanent and temporary Best Management Practices into the project.

Since the project is expected to disturb more than 1 acre of soil, the following is required:

- A Notification of Intent will be submitted to the appropriate Regional Water Quality Control Board at least 30 days before the start of construction.
- A Stormwater Pollution Prevention Plan will be prepared and implemented during construction to the satisfaction of the Resident Engineer.

- A Notice of Termination will be submitted to the Regional Water Quality Control Board upon completion of construction and site stabilization. A project will be considered complete when the criteria for final stabilization in the Construction General Permit are met.

Avoidance, Minimization, and/or Mitigation Measures

To mitigate against short-term construction and long-term operation and maintenance water quality impacts associated with the implementation of the project, the following recommended avoidance and minimization measures should be incorporated into the appropriate project phases and implemented in consultation with regulatory agencies.

1. The project will comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ), which became effective July 1, 2013, and if applicable, the Construction General Permit (Order 2009-0009-DWQ).
2. Before any ground-disturbing activities, the contractor will be required to prepare a Stormwater Pollution Prevention Plan (per the Construction General Permit Order 2009-0009-DWQ) that includes erosion control measures and construction waste containment measures so that waters of the State are protected during and after project construction. The project Stormwater Pollution Prevention Plan will be continuously updated to adapt to changing site conditions during the construction phase. The following temporary Construction Site Best Management Practices are expected:
 - a. Fiber rolls and/or silt fence for perimeter control.
 - b. Water that has been in contact with wet concrete will not be discharged onto land until it has been tested and treated (if required).
 - c. Any proposed discharge to receiving waters will require a permit from the Central Valley Regional Water Quality Control Board.
3. Cast-in-place concrete structures should have enough time to cure before the rainy season or be covered to prevent contact with rain.
4. Concrete treated permeable base should not be used as a permeable material for underdrain systems that discharge to waterways.
5. Some of the work areas could be within the 100-year floodplain zone. All materials such as rock or geotextile fabric used to stabilize temporary access routes will be completely removed when construction is completed.
6. The project will incorporate pollution prevention and design measures consistent with the 2015 Caltrans Stormwater Management Plan to meet water quality objectives. This Plan has been revised to comply with the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ). In addition to the Best Management Practices already included, the following permanent

Stormwater Treatment Best Management Practices should be considered where feasible:

- a. Energy dissipation devices such as rock slope protection or check dams.
 - b. Bioengineered stream bank stabilization methods such as willow wattles or brush layering.
7. Environmentally Sensitive Areas will be designated and clearly delineated on the contract plans during the design phase to avoid potential discharges and unauthorized disturbances to the creeks, streams, channels, and protected riparian areas.

By incorporating proper and accepted engineering practices and Best Management Practices, the project will not produce significant impacts on water quality during construction or its operation.

2.2.2 Paleontology

Regulatory Setting

Paleontology is a natural science focused on the study of ancient animal and plant life as it is preserved in the geologic record as fossils. A number of federal statutes specifically address paleontological resources, their treatment, and funding for mitigation as a part of federally authorized projects. Because the proposed project will receive federal funding, the following statutes apply:

- 16 U.S. Code 431-433 (the “Antiquities Act”) prohibits appropriating, excavating, injuring, or destroying any object of antiquity situated on federal land without the permission of the Secretary of the Department of Government having jurisdiction over the land. Fossils are considered “objects of antiquity” by the Bureau of Land Management, the National Park Service, the Forest Service, and other federal agencies.
- 23 U.S. Code 1.9(a) requires that the use of federal-aid funds must be in conformity with federal and state law.
- 23 U.S. Code 305 authorizes the appropriation and use of federal highway funds for paleontological salvage as necessary by the highway department of any state, in compliance with 16 U.S. Code 431-433 above and state law.
- Public Resources Code Section 5097.5 states that no person will knowingly and willfully excavate upon, remove, destroy, injure, or deface and vertebrate paleontological site, situated on public lands (i.e., owned by or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof).

Under California law, paleontological resources are protected by the California Environmental Quality Act (CEQA, 1970). In addition, the Tulare

County General Plan (2012) has established mitigation policies and implementation measures for the protection and preservation of paleontological resources.

Affected Environment

Caltrans completed a Paleontological Identification Report for the project in October 2020 and a Paleontological Evaluation Report/Preliminary Mitigation Measures in November 2020. Based on the findings of the reports, it was determined that a scientifically significant paleontological resource was present throughout the area and that the resource will be impacted by the project. The paleontological resource was identified as the Modesto Formation.

During the construction of the Plainsburg/Arboleda Freeway Project in Merced County and the South Stockton 6-Lane project in San Joaquin County, thousands of vertebrate fossils were discovered at localities attributed to the Modesto Formation. The discovery provided valuable information related to stratigraphic correlation, relative geologic age determination, plant and animal diversity, and paleoclimatology. Fossils recovered from the Modesto Formation included Columbian mammoth, giant ground sloth, American llama, ancient bison, dire wolf, cougar, and numerous species of small mammals, birds, and reptiles.

As classified according to Caltrans' guidelines, the Modesto Formation is identified as having a "High Potential" to contain scientifically significant nonrenewable paleontological resources.

Environmental Consequences

Alternative 1A and Alternative 1B

Excavation extending more than 3 feet below the ground surface will impact undisturbed sediments of the Modesto Formation. Depending upon the depth of excavation, which is expected to be at least 10 feet, the Modesto Formation could also be impacted. The excavation activities associated with this project include the construction of a stormwater detention basin across the street from Mill Creek Park on State Route 216. Excavation in the Modesto Formation will have the potential to impact scientifically significant fossil resources. Please see Appendix G for preliminary stormwater detention basin location mapping.

Avoidance, Minimization, and/or Mitigation Measures

Due to the potential to affect scientifically significant nonrenewable paleontological resources, mitigation is necessary to minimize the impact to a less than significant level. To accomplish this, a Paleontological Mitigation Plan will be prepared before construction by a Caltrans-supplied consultant. The plan will recommend the measures required to minimize the potential impacts of the project. The following measures are to include (as applicable):

- Identifying and acknowledging construction site safety protocols.
- Conducting paleontological worker environmental awareness training for all earth-moving personnel and supervisors.
- Conducting mitigation field monitoring of excavation into undisturbed sediments of the Modesto Formation. Excavations from 3 feet to 6 feet below the ground surface are to be spot-checked. Continuous or full-time monitoring is required for excavations greater than 3 feet.
- Establishing a protective 25-foot radius buffer zone around fossil discovery locations.
- Notification of the Resident Engineer upon fossil discovery.
- Processing bulk soil samples for microfossil identification.
- Use of plaster casting to stabilize and preserve macrofossils.
- Preparation of salvaged fossils for identification to the lowest taxonomic level (preparation for an exhibition is prohibited).
- Curation of salvaged fossils at a receiving museum or academic institution.
- Preparation of a Paleontological Mitigation Report following completion of all paleontological monitoring activities, documenting compliance with all mitigation measures.

2.2.3 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, substances, 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 Act of 1980 and the Resource Conservation and Recovery Act of 1976. The purpose of the Comprehensive Environmental Response, Compensation and Liability Act, often referred to as “Superfund,” is to identify and cleanup 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 entities. Other federal laws include:

- Community Environmental Response Facilitation Act
- Clean Water Act
- Clean Air Act

- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substances 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 pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is also authorized by the federal government to implement 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 is vital if it is found, disturbed, or generated during project construction.

Affected Environment

Initial Site Assessment

An Initial Site Assessment was completed for the project area on September 3, 2020. The Initial Site Assessment identified and evaluated possible hazardous waste sites and includes the following tasks:

- Review of previous environmental reports about the project site, including the original Initial Site Assessment.
- Geologic evaluation regarding naturally occurring asbestos within the project limits.
- Review of government databases of hazardous waste sites.
- Preparation of a written report summarizing the records search results.

Records Search

The following text has been added since the draft environmental document: A hazardous materials/wastes site records search was conducted.

The Cortese List is a compilation of several government environmental databases compiled by federal, state, and local government agencies of contaminated and potentially contaminated sites. This list was reviewed as part of the initial screening for this project. The list, or a property's presence on the list, has a bearing on the local permitting process and compliance with CEQA. There were two sites in the project area listed on the Cortese List.

Two facilities were listed on one database, GeoTracker, within the project boundaries. Chevron/Flyers (515 South Lovers Lane) and 7-Eleven (518 South Lovers Lane) are closed Leaking Underground Storage Tank Sites. The cases were closed by the regulatory agencies on October 24, 1997, and July 22, 1997, respectively. Chevron/Flyers and 7-Eleven are existing permitted gas stations. New right-of-way/Temporary Construction Easement acquisition is required at the 7-Eleven gas station. Additional right-of-way/Temporary Construction Easement is not required at the Chevron/Flyers. No other facilities were listed on the other databases.

Preliminary Site Investigation

The following text has been added since the draft environmental document: The project's Initial Site Assessments indicated that a Preliminary Site Investigation should be conducted to address aerially deposited lead in surface soils in several locations. The first location is in the proposed excavated areas along State Route 216 and on State Route 198; the second is in petroleum hydrocarbons at the 7-Eleven gas station within the proposed right-of-way/Temporary Construction Easement area, and the third is in asbestos-containing materials and lead-based paint on the Lovers Lane Undercrossing. The purpose of conducting a Preliminary Site Investigation at the 7-Eleven gas station within the proposed right-of-way/Temporary Construction Easement area is to identify any contamination before the acquisition.

Stantec Consulting Services conducted a Preliminary Site Investigation from December 2020 through January 2021.

Aerially Deposited Lead

The following text has been added since the draft environmental document: A Preliminary Site Investigation was completed to evaluate lead concentrations in surface soils next to the highways for proper handling and disposal. Forty boreholes were drilled next to the highways. Samples were taken from each borehole at the surface to 1 foot and 1 foot to 2 feet below ground surface. A total of 80 samples were collected. Total lead concentrations ranged from 2.3 milligrams per kilogram to 380 milligrams per kilogram with an average total

lead value of 27.3 milligrams per kilogram, well below the screening level residential limit of 80 milligrams per kilogram. Soluble lead values ranged from 0.36 milligrams per liter to 20 milligrams per liter with an average soluble lead value of 1.3 milligrams per liter, below the regulatory value of 5 milligrams per liter for California hazardous waste.

Asbestos-Containing Materials and Lead-Based Paint

The following text has been added since the draft environmental document: A Preliminary Site Investigation was completed to evaluate asbestos-containing materials/lead-based paint on structures for proper handling and disposal. Eight samples of suspect asbestos-containing materials were collected (concrete, felt associated with expansion joints, asphalt, weep hole liner, and paint). Asbestos was not detected in any of the samples. Lead-based graffiti abatement paint on the east abutment wall exceeded the soluble lead regulatory value of 5 milligrams per liter. If modification of the bridge disturbs this paint, the paint and stripping media would be classified as a California hazardous waste. Special handling, storage, transportation, and disposal will be required. If paint is in good condition and removed along with structural components, it can be removed with little to no special handling before renovation or modification. No other painted surfaces were seen at the bridge structure.

Thermoplastic Striping/Paint/Markings and Treated Wood Waste

The following text has been added since the draft environmental document: Yellow and white pavement striping and markings may contain levels of lead. Yellow thermoplastic striping and yellow-painted markings may contain elevated concentrations of lead chromate and hexavalent chromium manufactured before 2005 and painted markings manufactured before 1997.

Treated wood waste such as signposts and guardrails contain elevated concentrations of hazardous chemicals due to the chemical preservatives on the wood products.

Environmental Consequences

Alternative 1A and Alternative 1B

The build alternatives will require the acquisition of right-of-way from several parcels at the intersection of State Route 216 and Mineral King Avenue. The following parcel was identified as a potential hazardous waste issue in the Initial Site Assessment Update.

The following text has been added since the draft environmental document:

- Assessor's Parcel Number 101-030-012 (7-Eleven gas station): The Preliminary Site Investigation results determined the soil from this parcel within the proposed right-of-way/Temporary Construction Easement area was nonhazardous and not impacted by petroleum hydrocarbons.

Aerially Deposited Lead

The following text has been added since the draft environmental document: Aerially deposited lead from the historical use of leaded gasoline exists along roadways throughout California. There is the likely presence of soils with elevated concentrations of lead as a result of aerially deposited lead on the state highway system right-of-way within the limits of the project alternatives. Soil determined to contain lead concentrations exceeding stipulated thresholds must be managed under the July 1, 2016, Aerially Deposited Lead Agreement between Caltrans and the California Department of Toxic Substances Control. The agreement allows such soils to be safely reused within the project limits as long as all requirements of the agreement are met.

The Preliminary Site Investigation results determined that total lead and soluble lead concentrations were below the regulatory levels. Soil from project boundaries would be considered nonhazardous/nonregulated soil. However, health and safety measures during ground-disturbing activities during construction would be implemented to minimize lead exposure to workers and/or the public.

Asbestos-Containing Materials and Lead-Based Paint

The following text has been added since the draft environmental document: Renovation work for the project would impact the Lovers Lane Undercrossing.

The results from the Preliminary Site Investigation determined asbestos was not detected in any of the samples collected. The California Occupational Safety and Health's asbestos standard does not apply for construction activities since no asbestos was detected. If modification of the bridge disturbs the lead-based graffiti abatement paint on the east abutment wall, the paint and stripping media would be classified as a California hazardous waste. Special handling, storage, transportation, and disposal will be required. If paint is in good condition and removed along with structural components, it can be removed with little to no special handling before renovation or modification. No other painted surfaces were seen at the bridge structure.

Thermoplastic Striping/Paint/Markings and Treated Wood Waste

The following text has been added since the draft environmental document: State Route 198 and State Route 216 have yellow and/or white pavement striping and markings that may contain levels of lead. Yellow thermoplastic striping and yellow-painted markings may contain elevated concentrations of lead chromate and hexavalent chromium manufactured before 2005 and painted markings manufactured before 1997.

There are signposts and guardrails within the project limits. Treated wood waste such as signposts and guardrails contain elevated concentrations of

hazardous chemicals due to the chemical preservatives on the wood products.

Avoidance, Minimization, and/or Mitigation Measures

No mitigation is required for hazardous waste impacts; however, avoidance and minimization measures will be required.

The following text has been added since the draft environmental document: Applicable Caltrans' Standard Special Provisions and/or Non-Standard Special Provisions addressing proper handling and disposal of aerially deposited lead, pavement striping, paint or markings, and treated wood waste will be provided during the Plans, Specifications, and Estimates phase of the project before construction. A lead compliance plan will also be required.

Asbestos-Containing Materials and Lead-Based Paint

The following text has been added since the draft environmental document: Asbestos-containing materials were not detected. A Standard Special Provision and/or Non-Standard Special Provision for proper handling and disposal of lead on the bridge structure will also be provided during the project's Plans, Specifications, and Estimates phase.

2.2.4 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 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. The National Ambient Air Quality Standards and State Ambient Air Quality Standards have been established for six transportation-related criteria pollutants that have been linked to potential health concerns: carbon monoxide, nitrogen dioxide, ozone, sulfur dioxide, and particulate matter, which is broken down for regulatory purposes into particles of 10 micrometers or smaller and particles of 2.5 micrometers and smaller. In addition, national and state standards exist for lead, and state standards exist for visibility-reducing particles, sulfates, hydrogen sulfide, and vinyl chloride.

The National Ambient Air Quality Standards 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 state and federal 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 the 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 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. The U.S. Environmental Protection Agency 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, nitrogen dioxide, ozone, Particulate Matter 10 and Particulate Matter 2.5, and in some areas (although not in California), sulfur dioxide. California has nonattainment or maintenance areas for all of these transportation-related “criteria pollutants” except sulfur dioxide, and also has a nonattainment area for lead; 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 Plans) and 4 years (for the Federal Transportation Improvement Programs).

Regional Transportation Plans and Federal Transportation Improvement Programs conformity uses travel demand and emission models to determine whether or not the implementation of those projects will 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, Federal Highway Administration, and Federal Transit Administration make the determinations that the Regional Transportation Plans and Federal Transportation Improvement Programs 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 Plans and/or Federal Transportation Improvement Programs 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 Plans and Federal Transportation Improvement Programs, then the 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 Plans and Transportation Improvement Programs; 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 in carbon monoxide and particulate matter nonattainment or maintenance areas to examine localized air quality impacts.

Affected Environment

An Air Quality Report was prepared for the project in November 2020.

The project sits within the San Joaquin Valley Air Basin in Tulare County. According to 40 Code of Federal Regulations Section 93.127 Table 3, the improvements proposed for this project—intersection channelization projects—are exempt from the requirement that a conformity determination be made. This project may proceed toward implementation even in the absence of a conforming transportation plan and Transportation Improvement Program. This project will not interfere with the implementation of any Traffic Control Measures.

Environmental Consequences

During construction, the project will generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. However, the largest percentage of pollutants will be windblown dust generated during excavation, grading, hauling, and various other activities. The impacts of these activities will vary each day as construction progresses. Dust and odors during construction could cause occasional annoyance and complaints from residents along the state right-of-way.

Avoidance, Minimization, and/or Mitigation Measures

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 emission impacts during construction. 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, regulations, and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.

Some minimization measures for short-term construction-related emissions include:

- Application of the most stringent available regulations or best practices even if not required by local/state regulations at the site (identify).
- Possible designation of areas where construction equipment servicing and storage are not allowed (near sensitive receptors).
- Construction staging
- Temporary programs to reduce detour- and construction-related traffic congestion, such as special transit programs and subsidies.

A construction equipment emission reduction program to encourage or require the contractor to use cleaner (newer) diesel engines or retrofit older engines.

2.2.5 Noise

Regulatory Setting

The California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) 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 CEQA and NEPA.

California Environmental Quality Act

CEQA requires a strictly existing versus build analysis to assess whether a proposed project will have a noise impact. If a proposed project is determined to have a significant noise impact under CEQA, then CEQA 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 NEPA/Title 23 Part 772 of the Code of Federal Regulations noise analysis; please see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 Code of Federal Regulations 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 Code of Federal Regulations 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 will occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 A-weighted decibels) is lower than the noise abatement criteria for commercial areas (72 A-weighted decibels). The following table lists the noise abatement criteria for use in the NEPA/23 Code of Federal Regulations 772 analysis.

In Table 2.17 below, undeveloped lands are permitted for activity categories B and C.

Table 2.17 Noise Abatement Criteria

Activity Category	Noise Abatement Criteria, 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.
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.
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-D or F.
F	No Noise Abatement Criteria—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 warehouses.
G	No Noise Abatement Criteria—Reporting Only	Undeveloped lands that are not permitted.

Figure 2-1 lists the noise levels of common activities to enable readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

Figure 2-1 Noise Levels of Common Activities

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet Fly-over at 300m (1000 ft)	110	Rock Band
Gas Lawn Mower at 1 m (3 ft)	100	
Diesel Truck at 15 m (50 ft), at 80 km (50 mph)	90	Food Blender at 1 m (3 ft)
Noisy Urban Area, Daytime	80	Garbage Disposal at 1 m (3 ft)
Gas Lawn Mower, 30 m (100 ft)	70	Vacuum Cleaner at 3 m (10 ft)
Commercial Area		Normal Speech at 1 m (3 ft)
Heavy Traffic at 90 m (300 ft)	60	Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (Background)
Quiet Suburban Nighttime	30	Library
Quiet Rural Nighttime	20	Bedroom at Night, Concert Hall (Background)
	10	Broadcast/Recording Studio
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

According to 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 12 A-weighted decibels 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 decibel 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 will likely be incorporated into the project. Caltrans' Traffic Noise Analysis Protocol sets forth the criteria for determining when an abatement measure is reasonable and feasible. The feasibility of noise abatement is basically an engineering concern. Noise

abatement must be predicted to reduce noise by at least 5 A-weighted decibels 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 A-weighted decibels at one or more impacted receptors; 2) the cost of noise abatement; and 3) the viewpoints of benefitted receptors (including property owners and residents of the benefitted receptors).

Affected Environment

A Traffic Noise Compliance Study Memorandum was completed for the project on August 24, 2020.

The areas within the project limits and next to the project in both locations (State Route 198 and State Route 216) are urban. Land uses designated for these areas are residential and commercial. The project is not a Type 1 project, and noise analysis is not required. Construction noise impacts are noted below.

Environmental Consequences

Noise from construction activities may periodically dominate the noise environment in the immediate area. However, adverse noise impacts from construction are not expected because construction will be done in accordance with Caltrans' Standard Specifications Section 14.8.02 and applicable local noise standards. Construction noise will be short-term, intermittent, and overshadowed by local traffic noise.

Avoidance, Minimization, and/or Noise Abatement Measures

The following are possible control measures that can be implemented to minimize noise disturbances at sensitive areas during construction:

1. All equipment will 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 will 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.
2. Construction methods or equipment that will provide the lowest level of noise impact (for example, avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) should be used.

3. Idling equipment will be turned off.
4. Truck loading, unloading, and hauling operations will be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.

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

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

Certain construction activities such as clearing and compacting could cause intermittent localized concern from vibration in the project area. During certain construction phases, processes such as earthmoving with bulldozers, the use of vibratory compaction rollers, demolition activities, or pavement breaking may cause construction-related vibration impacts such as human annoyance or, in some cases, building damages.

The following are procedures that can be used to minimize the potential impacts from construction vibration:

1. 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).
2. The owner of a building close enough to a construction vibration source that damage to that structure due to vibration is possible will be entitled to a pre-construction building inspection to document the pre-construction condition of that structure.
3. Conduct vibration monitoring during vibration-intensive activities.

A combination of the noise abatement 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 avoidance, minimization, and/or noise abatement measures will reduce the construction impacts; however, temporary increases in vibration will likely occur at some locations.

2.3 Biological Environment

2.3.1 Natural Communities

Natural communities generally consist of unaltered landscapes dominated by native vegetation. These communities support a diversity of wildlife species, including special-status species.

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed in the Threatened and Endangered Species Section 2.3.5. Wetlands and Other Waters are also discussed in Section 2.3.2.

Affected Environment

This section focuses on the issues covered in the Natural Environment Study prepared for the project in August 2020.

The action area for the project is defined as the area that may be directly, indirectly, temporarily, or permanently affected by construction and construction-related activities. It includes the project footprint and a surrounding buffer.

The action area is highly disturbed, mostly consisting of weedy species of vegetation, and is surrounded by a mix of residential, urban, and agricultural development. Residential developments, four schools, undeveloped fields, and the Mill Creek Park surround the action area from its south end at East Noble Avenue to its north end at McAuliff Street. As the action area continues east of North McAuliff Street, the surrounding land use is a mix of residential development, annual and perennial grasslands, and agricultural fields.

The Great Valley Oak Riparian Forest is the only natural community of concern within the action area.

Great Valley Oak Riparian Forest

Valley Oak Riparian Forests are native to California. The Valley Oak may be the largest oak tree in North America. It is widely distributed in the Central Valley, the inner Coast Ranges, and the Transverse Ranges, from bottomland areas up to 5,600 feet in elevation. Valley Oaks have the potential to support a vast array of wildlife, including songbirds, migratory waterfowl, raptors, herons, and egrets, as well as small mammals, such as squirrels. Mature Valley Oaks are massive in size and can live up to 600 years if favorable conditions are present (lack of fire, drought, and disease). This large winter deciduous tree has blunt, deep lobed leaves that are covered by soft hairs. Cone-shaped acorns measuring up to 2 inches ripen in early autumn.

Environmental Consequences

Alternative 1A and Alternative 1B

Great Valley Oak Riparian Forest

Four large Valley Oaks were identified along the banks of Mill Creek (post mile 0.26) just south of the Millcreek Parkway and State Route 216 intersection. Three of them are growing on the banks of Mill Creek, and one is growing in the highway median where State Route 216 crosses over Mill Creek. The three oaks that Caltrans staff had access to were measured at 49.75, 29.75, and 14.5 inches in diameter at breast height. The other oak was not able to be measured but was assumed to be a heritage oak by comparing its size to the oaks measured. Heritage oaks have a diameter at breast height of 24 inches or greater, classifying three out of four oaks as heritage oaks.

The build alternatives will propose tree removal for all four of the Valley Oak trees along the banks of Mill Creek.

Avoidance, Minimization, and/or Mitigation Measures

In addition to the Best Management Practices, the following avoidance and minimization measures will be implemented:

1. Vegetation removal will be reduced to the minimal amount necessary to complete the work.
2. The removal of oak trees will be completed outside of the nesting bird season (February 1 to September 30). If that is not possible, tree removal will not start without prior approval from the project biologist after completion of nesting bird surveys.

Caltrans will compensate for the removal of the four oak trees according to the conditions of the Lake and Streambed Alteration Agreement issued by the California Department of Fish and Wildlife. Typical mitigation required by the California Department of Fish and Wildlife uses a 10 to 1 and 3 to 1 compensation ratio, which will result in the planting of 33 Valley Oak trees. If Caltrans is unable to replant the 33 Valley Oak trees onsite within its own right-of-way, then a planting site within the project watershed will be sought.

The final planting location will be coordinated with and approved by the California Department of Fish and Wildlife prior to permit acquisition.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 U.S. Code 1344), is the primary law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas, and other waters that may be used in interstate or foreign commerce. The lateral limits of jurisdiction over non-tidal water bodies extend to the ordinary high-water mark in the absence of adjacent wetlands. When adjacent wetlands are present, Clean Water Act jurisdiction extends beyond the ordinary high-water mark to the limits of the adjacent wetlands. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

Section 404 of the Clean Water Act establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters will be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers with oversight by the U.S. Environmental Protection Agency.

The U.S. Army Corps of Engineers issues two types of 404 permits: General and Individual. There are two types of General permits: Regional and Nationwide. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Regional or Nationwide Permit may be permitted under one of the U.S. Army Corps of Engineers' Individual permits. There are two types of Individual permits: Standard permits and Letters of Permission. For Individual permits, the U.S. Army Corps of Engineers' decision to approve is based on compliance with U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (40 Code of Federal Regulations 230), and whether permit approval is in the public interest. The Section 404(b)(1) Guidelines were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of

Engineers, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which will have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a “least environmentally damaging practicable alternative” to the proposed discharge that will have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as Federal Highway Administration and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction and (2) the proposed project includes all practicable measures to minimize harm. A Wetlands Only Practicable Alternative Finding must be made.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards, and the California Department of Fish and Wildlife. In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify the California Department of Fish and Wildlife before beginning construction. If the California Department of Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Department of Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks or the outer edge of riparian vegetation, whichever is wider. Wetlands under the jurisdiction of the U.S. Army Corps of Engineers may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Department of Fish and Wildlife.

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for more details.

Affected Environment

A Natural Environment Study was completed for the project in August 2020. Two canals—Mill Creek and Evans Ditch—are both defined as hydrologic resources in the action area. Both are mapped as a canal/ditch by the U.S. Geological Survey National Map. No wetlands were identified in the action area.

Mill Creek

Mill Creek crosses through the project area in the northern portion of the project site. Mill Creek is a tributary to the Kaweah River and flows into it northeast of the project site. Mill Creek receives a significant portion of the flow in the form of runoff from residential runoff and stormwater runoff during the rainy season and helps to prevent local flooding.

An aquatic resource delineation was conducted on June 9, 2020, to identify the Ordinary High-Water Marks of Mill Creek. An Aquatic Resource Delineation Report will be submitted to the U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife before permit acquisition.

Evans Ditch

Evans Ditch crosses through the project area south of Mill Creek at East Mineral King Avenue. It forks off Mill Creek 0.6 mile east of the project area and flows east to west. Evans Ditch receives a significant portion of the flow in the form of stormwater runoff during the rainy season that helps to prevent local flooding.

Environmental Consequences

Alternative 1A and Alternative 1B

Mill Creek

The build alternatives will replace the Mill Creek culvert, which includes the headwalls and the culvert itself; this will result in about 0.07 acre of temporary impacts to the waters of the U.S. The work will result in only temporary impacts to the channel banks as well, which consist of mostly grass and invasive weeds. No permanent impacts are expected as a result of the project.

Evans Ditch

No impacts to Evans Ditch are expected as a result of the project.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures have been included in the project to further avoid and minimize impacts to Mill Creek:

1. A Stormwater Pollution Prevention Plan will be prepared for the project.

2. Any portions of Mill Creek that can be avoided during construction will be protected with an Environmentally Sensitive Area demarcation. All Environmentally Sensitive Areas will be identified in the construction plans and included in the construction contract.

Mitigation for temporary impacts to Mill Creek is expected as a requirement of the 1600, 401, and 404 permits from the California Department of Fish and Wildlife, Regional Water Quality Control Board, and the U.S. Army Corps of Engineers, respectively. Mitigation is expected to be completed through the purchase of conservation credits from the National Fish and Wildlife Foundation or other In-Lieu Fee/banking program, or habitat will be created as a part of a permittee-responsible project which is expected to include restoration and replanting.

2.3.3 Plant Species

Regulatory Setting

The U.S. Fish and Wildlife Service and California Department of Fish and Wildlife have regulatory responsibility for the protection of special-status plant species. "Special-status" species are selected for protection because they are rare and/or subject to population and habitat declines. Special-status is a general term for species that are provided varying levels of regulatory protection. The highest level of protection is given to threatened and endangered species; these are species that are formally listed or proposed for listing as endangered or threatened under the Federal Endangered Species Act and/or the California Endangered Species Act. Please see the Threatened and Endangered Species Section 2.3.5 in this document for detailed information about these species.

This section of the document discusses all other special-status plant species, including California Department of Fish and Wildlife species of special concern, U.S. Fish and Wildlife Service candidate species, and California Native Plant Society rare and endangered plants.

The regulatory requirements for the Federal Endangered Species Act can be found at 16 U.S. Code Section 1531, et seq. See also 50 Code of Federal Regulations Part 402. The regulatory requirements for the California Endangered Species Act can be found in California Fish and Game Code, Section 2050, et seq. Caltrans projects are also subject to the Native Plant Protection Act, found at California Fish and Game Code, Sections 1900-1913, and the California Environmental Quality Act, found at California Public Resources Code, Sections 21000-21177.

Affected Environment

A Natural Environment Study was completed for the project in August 2020. This section describes special-status plants that may occur or have the potential to occur within the Biological Study Area.

Special-status plants are considered to be of “special concern” based on federal, state, or local laws regulating their development, limited distributions, and/or the presence of habitat required by the special-status plants occurring onsite.

Botanical surveys were completed on February 25, April 16, and June 9, 2020. The surveys conducted by the project biologist showed the potential for six special-status plant species to occur. While the special-status plant species have the potential to occur within the project area, the likelihood is very low.

Environmental Consequences

While the special-status plant species have the potential to occur within the project area, the likelihood is very low. Considering the low habitat value of the types of vegetation in the project area and the fact that it is subjected to regular maintenance and activity from residents, these habitat types normally have very little potential to support habitat for special-status species.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans proposes the following avoidance and minimization measure to ensure the project will not result in measurable impacts to the six special-status plant species identified during the 2020 botanical surveys:

- Pre-construction surveys for botanical species will be conducted during the blooming season before the start of construction.

2.3.4 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts on wildlife. The U.S. Fish and Wildlife Service, the National Oceanic and Atmospheric Administration’s National Marine Fisheries Service, and the California Department of Fish and Wildlife are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in the Threatened and Endangered Species Section 2.3.5. All other special-status animal species are discussed here, including California Department of Fish and Wildlife fully protected species and species of special concern, and U.S. Fish and Wildlife Service or National Oceanic and Atmospheric Administration’s National Marine Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act

- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600-1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

Affected Environment

This section presents a broader view of special-status animal species than the more focused discussion found in the Threatened and Endangered Species Section 2.3.5. The discussion is based on the Natural Environment Study that was prepared in August 2020.

Western Spadefoot Toad (*Spea hammondi*)

The western spadefoot is a toad listed as a California State Species of Special Concern. These toads have stocky bodies with short legs and are relatively small; adults range from 1.5 inches to 2.5 inches long. This nocturnal species is known for its vertically elliptical pupils, which are easily seen in bright light but are otherwise round at night. Western spadefoots are named for the hardened black wedge-shaped tubercles, or “spades,” present on their hind feet, which allow them to dig and burrow in the soil.

Western spadefoots spend most of their life underground; they enter the water only to breed. Breeding typically occurs one to two days after heavy rains, and the breeding season is generally from January to May. Breeding can occur inside pools of ephemeral streams, vernal pools, roadside ditches, stock ponds, and rain-filled puddles. For eggs to successfully transform into viable young, water must be present for at least 30 days, and pools must typically be free of predators such as bullfrogs, crayfish, fish, and California tiger salamanders.

No western spadefoot toads or burrows were seen during surveys in 2020, but the habitat in Mill Creek in the project area could be suitable; however, the habitat is highly disturbed with trash and non-native invasive plants. Mill Creek is also used for drainage by the City of Visalia, so pooling rarely occurs. The most recent reported observation is from 2005 at the Stone Corral Ecological Reserve, more than 8 miles north of the project area.

Burrowing Owl (*Athene cunicularia*)

The burrowing owl is listed as a California State Species of Special Concern. These small owls range from 7.5 inches to 10 inches tall, with a wingspan of 21 inches to 24 inches. They have long legs and short tails. They have yellow eyes, white eyebrows and lack the ear tufts seen on other owls. Adult burrowing owls are brown with white or buff brown-flecked chests, a white chin, and a spotted back. Juveniles lack chest stripes, and young burrowing owls have fewer spots.

Burrowing owls are found from Central America to North America and in most of California; year-round populations are found across the Central Valley and in southeastern California. Burrowing owls are found in dry, open grasslands, rangelands, agricultural lands, desert habitats, and pinyon-juniper and ponderosa pine habitats, up to 9,000 feet above sea level. In California, burrowing owls have not been seen above 5,300 feet above sea level. Burrowing owls may also be found in urban vacant lots, airports, golf courses, and fairgrounds within urban areas and will adopt the burrows of other burrowing animals in addition to digging their own.

Burrowing owls eat insects but occasionally eat small mammals such as mice, ground squirrels, bats, small birds, lizards, and snakes. However, insects make up 90 percent of their diet.

The main threat to burrowing owls is habitat loss due to human encroachment and development or agricultural conversion and the poisoning of ground squirrel populations.

The nearest California Natural Diversity Database records of the burrowing owl were reported 8 miles north of the project area in 2007.

Habitats most likely to support burrowing owls within the project area are the disturbed areas near agricultural fields and the non-native annual and perennial grassland. However, regular disturbance of these habitats by human activity reduces the likelihood of burrowing owls being present. No burrowing owls or their signs were seen during surveys in 2020.

Burrowing owls are a species of special concern and are protected under the Migratory Bird Treaty Act. No critical habitat has been designated for the burrowing owl.

Migratory Birds

The project location is surrounded by suitable nesting habitat for a variety of migratory birds.

Cliff Swallows (Petrochelidon pyrrhonota)

Cliff swallows were seen nesting in the Mill Creek culvert on June 9, 2020.

Environmental Consequences

Western Spadefoot Toad (Spea hammondi)

Temporary and permanent impacts to riparian and terrestrial habitats are expected, but no impacts to this species are expected.

Burrowing Owl (Athene cunicularia)

No impacts to this species are expected. While project work could add to the regular farming-related disturbance of this habitat, the ongoing farm work will

likely ensure that no burrowing owls will stay in the project area. Because no burrowing owls or their signs were found during surveys, the expected temporary impacts are negligible. No habitat suitable for burrowing owls will be permanently altered by the project, and no work is planned within such habitat, so no permanent impacts are expected.

Cliff Swallows (Petrochelidon pyrrhonota)

Potential impacts may occur to cliff swallows who use the Mill Creek culvert for nesting.

Avoidance, Minimization, and/or Mitigation Measures

Western Spadefoot Toad (Spea hammondi)

A qualified biologist will perform pre-construction surveys 30 days before any ground disturbance. Construction equipment staging areas will be surveyed and cleared by a qualified biologist before use. Staging will occur in pre-disturbed areas.

No compensatory mitigation is proposed.

Burrowing Owl (Athene cunicularia)

The following avoidance and minimization measures have been included in the project to protect the burrowing owl:

1. Pre-construction surveys will be conducted no more than 30 days before the start of construction activities, unless these activities begin outside the nesting season (February 1 to September 30).
2. If construction activities extend into more than one nesting season, additional nesting surveys will be required at the start of each nesting season before work can continue.
3. If a burrowing owl is found nesting in or near the project footprint, a no-work buffer of 100 feet will be applied until a qualified biologist has confirmed that the young have fledged. A qualified biological monitor will be required for all work within that buffer to ensure work does not disturb the nest.
4. A buffer variance may be approved by the biologist if it is determined that work can continue without disturbing the burrowing owls.

No compensatory mitigation is proposed.

Cliff Swallows (Petrochelidon pyrrhonota)

The following avoidance and minimization measures have been included in the project to protect the cliff swallows:

1. Pre-construction surveys will be conducted no more than 30 days before the start of construction activities, unless these activities begin outside the nesting season (February 1 to September 30).
2. A qualified biologist will provide worker environmental awareness training to all workers who enter the project site before performing any project-related work or activities. The training will discuss the federally listed species with the potential to occur on the project, as well as areas of designated critical habitat, the laws that protect the species and/or critical habitat, and project measures implemented to reduce effects to these species and their habitat and/or critical habitat.

No compensatory mitigation is proposed.

2.3.5 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 the 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 U.S., 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

The discussion on threatened and endangered species is based on the Natural Environment Study prepared in August 2020 and involves plants and animals that are formally listed as endangered under the Federal Endangered Species Act or the California Endangered Species Act.

The U.S. Fish and Wildlife Service provided Caltrans with an updated species list for the project in June 2021. This list is found in the Natural Environment Study.

The following is a discussion about the breeding season, habitat requirements, and recorded occurrences for only the threatened and endangered species and their associated designated critical habitats that may be affected by the project. Critical habitat is a habitat area essential to the conservation of a listed species, though the area need not actually be occupied by the species at the time it is designated. No designated critical habitat is found in the project area.

California Jewelflower (Caulanthus californicus)

The California jewelflower is a federally threatened and state endangered annual plant. It is ranked 1B.1 by the California Native Plant Society's rare and endangered plant inventory.

The California jewelflower is an annual herb that belongs to the mustard family (*Brassicaceae*). It is a native species that is endemic to California. This species is found in shadscale scrub, valley grassland, or pinyon-juniper woodland in non-alkaline soil. It blooms maroon and white flowers, usually

from mid-March to May. This species is threatened by agriculture, urbanization, energy development, grazing, and possibly by non-native plants.

No records for the California jewelflower occur within 5 miles of the project area, and the nearest recorded occurrence dates to 1932. Habitat within the project area is potentially suitable but unlikely to be appropriate due to weedy species and the disturbed environment. Surveys performed in 2020 found no California jewelflower plants.

Considering the low habitat value of the vegetation in the project area and the fact that the area is subjected to regular maintenance and activity from residents in the area, these habitat types normally have very little potential to support habitat for special-status species. Impacts on these vegetation types are not expected.

California Tiger Salamander (Ambystoma californiense)

The California tiger salamander is listed as federally threatened, state threatened, and is on the California Department of Fish and Wildlife watch list. Five genetically distinct California tiger salamander populations occur throughout California's Central Valley, Sierra Nevada, Coast Ranges, and San Francisco Bay. The Central Valley population is found below about 1,500 feet.

The California tiger salamander is 6 inches to 9.5 inches long, with a broadly rounded snout. It is a large, stocky terrestrial salamander with random white or yellowish circle markings on its black body.

The species frequents annual grasslands, foothills, oak savanna, and edges of mixed woodland, where it spends most of its life underground in ground squirrel or gopher burrows. It emerges only after rains to gather at breeding pools or ponds for spawning. The species uses vernal pools as breeding sites but, due to habitat destruction, the California tiger salamander has been found in livestock ponds and other perennial ponds.

Massive migrations to breeding ponds occur during winter rains, with migration patterns and distances identified upwards of 1.4 miles. Seasonal wetlands that are used by California tiger salamanders for breeding typically must hold water for a minimum of 10 to 12 weeks to allow enough time for salamander larvae to fully change.

No California tiger salamanders were found during general wildlife surveys in 2020. The only suitable habitats near the project area are the non-native annual and perennial grasslands, but no burrows were found within those areas within the project area. Based on the U.S. Fish and Wildlife Service's National Wetlands Inventory, the nearest possible pond for the species to

breed is 2 miles north of the project area in rural habitat. The nearest recorded observation was made in 2011, 9 miles north of the project area.

San Joaquin Kit Fox (Vulpes macrotis mutica)

The San Joaquin kit fox is listed as a federal endangered species by the U.S. Fish and Wildlife Service and state threatened by the California Department of Fish and Wildlife. In the past, the San Joaquin kit fox ranged in semiarid habitats throughout the Central Valley and arid grasslands of the nearby foothills. The species' current range has been reduced from its previous northern extent, and existing populations have become fragmented.

San Joaquin kit foxes prefer valley and foothill grasslands, or grassy open-stage habitats with scattered shrubs, in areas with loose-textured soils, with a suitable prey base. Some populations have adapted to different conditions in areas where their habitat has been altered by development. They may live near and forage in tilled and fallow fields but have been reported to be permanently displaced by lands that are intensively irrigated. San Joaquin kit foxes have been impacted by the loss and fragmentation of their habitat from development, vehicle mortalities, rodenticides, pesticides, shootings, and predation by coyotes, bobcats, red foxes, American badgers, feral dogs, and large raptors.

San Joaquin kit foxes are mostly nocturnal and stay active throughout the year. They use dens for shelter, reproduction, protection from predators, and temperature regulation. Their dens typically have a distinct keyhole-shaped entrance. These foxes eat white-footed mice, insects, California ground squirrels, kangaroo rats, San Joaquin antelope squirrels, and black-tailed hares. California Natural Diversity Database records for the San Joaquin kit fox occur within 5 miles of the project area but date back to 1975.

Non-native annual and perennial grasslands, which may support San Joaquin kit foxes, are present in the project area. The regular disturbance of these habitats by human activity reduces the likelihood of San Joaquin kit foxes being present. Survey results support this, as no San Joaquin kit foxes, no potential burrows, or any signs were found in the project area. If a San Joaquin kit fox was present within the project area, it will likely be a transient rather than an inhabitant of the area.

There have been no documented occurrences of San Joaquin kit foxes in the project area. Non-native annual and perennial grasslands, which may support San Joaquin kit foxes, are present within the project area. Regular disturbance of these habitats by human activity reduces the likelihood of San Joaquin kit foxes being present. Survey results support this, as no San Joaquin kit foxes, no potential burrows, or any signs were found during surveys. It is more likely that any San Joaquin kit foxes present within the project area will be a transient rather than an inhabitant of the area.

Brian Cypher, an associate director and research ecologist for the Endangered Species Recovery Program in California, who has been involved with research and conservation efforts on animals and plants in the San Joaquin Valley since 1990, was emailed on May 29, 2020, about the likelihood of San Joaquin kit fox presence near the project area. Cypher stated that “the potential for kit foxes being in that area is very low,” and “decent chance you might see gray foxes in that area, but kits are unlikely.”

Swainson's Hawk (Buteo swainsoni)

The Swainson's hawk is listed as a California state threatened species. It is a summer migrant in the Central Valley, with about 95 percent of its habitat occurring in the Central Valley. The species inhabits grasslands, alfalfa fields, and livestock pastures where it forages on mice, gophers, ground squirrels, rabbits, amphibians, reptiles, birds, and occasionally fish.

Nests are typically made of sticks, bark, and fresh leaves and are usually placed near the top of a solitary tree or in a small grove of trees along a stream. This species also occasionally nests on power poles, transmission towers, or in orchards. Breeding occurs from late March to late August. Nests occur in open riparian habitats with scattered trees or small groves in sparsely vegetated flatlands.

Populations of this species are very rare within this area of Tulare County, and very few sightings have been confirmed in recent years. A suitable nesting area is present within 0.5 mile of the project, and the latest observations (2012) have been recorded within a 10-mile radius of the project footprint.

Evidence of Swainson's hawks or their nests were not seen within the project area during the migratory bird surveys, but protocol-level surveys were not conducted for this species. Potential nesting areas were identified within the project limits but are composed of only a few individual eucalyptus trees on the southern end of the project site. The open land next to the project area likely offers a suitable prey base for foraging, especially during field disking periods.

Tree removal is expected for this project. The habitat in the project area is residential and high in activity. There is possible foraging habitat within the project area, so there is potential for this species to be present.

A 2081 Incidental Take Permit from the California Department of Fish and Wildlife is not expected.

Environmental Consequences

State and federally listed species that have the potential to occur on or near the project site and could be affected by the project include the California

jewelflower, California tiger salamander, San Joaquin kit fox, and Swainson's hawk.

California Jewelflower (Caulanthus californicus)

This species was not found in the project area during botanical surveys, so no direct effects to this species are expected from the project. Habitat within the project area is potentially suitable but unlikely to be appropriate due to weedy species and the disturbed environment. This species may be affected directly through soil disturbance associated with clearing, grubbing, and grading activities, as well as the operation of heavy equipment. An indirect effect to this species may be the introduction or spread of invasive plant species within the project footprint through soil disturbance or construction equipment.

For Alternative 1A and Alternative 1B, temporary and permanent impacts are not expected for the California jewelflower because the species is unlikely to be found in the project area based on the 2020 surveys and available literature and database information.

Considering the low habitat value of the types of vegetation in the project area and the fact that it is subjected to regular maintenance as well as activity from residents in the area, these habitat types normally have very little potential to support habitat for special-status species. Impacts on these vegetation types are not expected.

California Tiger Salamander (Ambystoma californiense)

For Alternative 1A and Alternative 1B, temporary and permanent impacts are not expected for the California tiger salamander, based on California Natural Diversity Database results and the project description, and because no burrows were found during wildlife surveys.

Considering the low habitat value within the project area and the fact that it is not near any pond or pool, it is highly unlikely for this species to be present.

San Joaquin Kit Fox (Vulpes macrotis mutica)

For Alternative 1A and Alternative 1B, temporary and permanent impacts are not expected for the San Joaquin kit fox, based on California Natural Diversity Database results and the project description, and because no potential dens were found during wildlife surveys.

Considering the low habitat value within the project area and the fact that it is subjected to vehicular disturbances, these habitat types normally have very little potential to support habitat for San Joaquin kit foxes.

Swainson's Hawk (Buteo swainsoni)

For Alternative 1A and Alternative 1B, no impacts to this species are expected. No nesting Swainson's hawks have been documented or seen within the project area, so direct impacts to individual birds or nests are not

expected. However, four Valley Oak trees will be removed to build the project along Mill Creek and in the median just south of Millcreek Parkway. Additionally, potential foraging habitats—the non-native annual grasslands to the west of Millcreek Parkway and East Goshen Avenue and the agricultural fields to the north of Comstock Street—may be present. But it is highly unlikely due to the small area of habitat and the high volume of activity in the area.

Nine species were identified on federal species lists or were thought to have the potential to occur and were considered in the Federal Endangered Species Act determinations. Caltrans is required to determine if the project will involve—and possibly affect—proposed or listed species and/or their critical habitat. The Federal Endangered Species Act determinations are summarized in Table 2.18.

Table 2.18 Federal Endangered Species Act Effect Findings for Species Occurring or Known to Occur in the Action Area

Common Name	Scientific Name	Status	Effect Determination
Tipton Kangaroo Rat	<i>Dipodomys nitratoide</i> <i>nitratoide</i>	Federally Endangered	No Effect
California Jewelflower	<i>Caulanthus californicus</i>	Federally Endangered	No Effect
California Tiger Salamander	<i>Ambystoma californiense</i>	Federally Threatened	No Effect
San Joaquin Kit Fox	<i>Vulpes macrotis mutica</i>	Federally Endangered	No Effect
Blunt-Nosed Leopard Lizard	<i>Gambelia sila</i>	Federally Endangered	No Effect
Giant Garter Snake	<i>Thamnophis gigas</i>	Federally Threatened	No Effect
California Red-Legged Frog	<i>Rana draytonii</i>	Federally Threatened	No Effect
Delta Smelt	<i>Hypomesus transpacificus</i>	Federally Threatened	No Effect
Vernal Pool Fairy Shrimp	<i>Branchinecta lynchi</i>	Federally Threatened	No Effect

Source: Natural Environment Study, August 2020

Avoidance and minimization measures will reduce the potential for adverse effects to federally listed species.

Avoidance, Minimization, and/or Mitigation Measures

California Jewelflower (Caulanthus californicus)

The following avoidance and minimization measure is proposed for the California jewelflower:

1. Pre-construction surveys for botanical species will be conducted during the blooming season before the start of construction.

Because of the low likelihood of occurrence and relatively small impact area, compensatory mitigation for the California jewelflower is not proposed.

California Tiger Salamander (Ambystoma californiense)

The following avoidance and minimization measure is proposed for the California tiger salamander:

1. A qualified biologist will conduct pre-construction surveys 30 days before any ground disturbance. Construction equipment staging areas will be surveyed and cleared by a qualified biologist before use. Staging will occur in pre-disturbed areas.

The proposed activities are not expected to impact the species or their habitat; therefore, no compensatory mitigation is proposed.

Swainson's Hawk (Buteo swainsoni)

The following avoidance and minimization measures have been proposed for the project to protect this species:

1. Pre-construction Swainson's hawk surveys will be conducted to ensure no birds are nesting in or next to the project footprint. If any nesting pairs are detected, additional avoidance and minimization measures will be implemented to avoid impacting birds, which may include but are not limited to the establishment of a protective Environmentally Sensitive Area and a 500-foot "no-work" buffer and having a biological monitor present during construction activities that occur within the buffer. A Caltrans biologist may approve buffer variances.
2. Before any ground disturbance, the contractor, all employees of the contractor, subcontractors, and subcontractors' employees will attend an employee education program conducted by a qualified biologist. The program will consist of a brief presentation on Swainson's hawks, their life history, legislative protection, and measures to avoid impacts to the species during project implementation.
3. If a Swainson's hawk nest is discovered within or near the project right-of-way, avoidance and minimization measures will be implemented, and, if necessary, the California Department of Fish and Wildlife will be consulted.

The proposed activities are not expected to impact the species or their habitat; therefore, no compensatory mitigation is proposed.

San Joaquin Kit Fox (Vulpes macrotis mutica)

The following avoidance and minimization measures are proposed for the San Joaquin kit fox:

1. Pre-construction surveys will be completed no more than 30 days before the start of any ground-disturbing activities to determine the potential for the presence of the San Joaquin kit fox within the project footprint. A qualified biologist will perform the surveys. Surveys will attempt to identify San Joaquin kit foxes or their presence within 200 feet of proposed permanent impacts. Potential dens in the right-of-way will be avoided as best as possible. If potential dens cannot be avoided, they will be monitored and excluded. Construction equipment staging areas will be surveyed and cleared by a Caltrans-approved biologist before use. Staging will occur in pre-disturbed areas.
2. If any San Joaquin kit foxes are seen during project activities, they will be allowed to leave the area unharmed and of their own volition, and Caltrans will notify the U.S. Fish and Wildlife Service.

The proposed activities are not expected to impact the species or their habitat; therefore, no compensatory mitigation is proposed.

2.3.6 Invasive Species

Regulatory Setting

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

Affected Environment

This section focuses on the issues covered in the Natural Environment Study prepared for the project in August 2020.

Several non-native species were identified in the Biological Study Area. Twelve species are listed as invasive by the California Department of Food and Agriculture and the California Invasive Plant Council. Table 2.19 lists the

12 invasive species seen in the Biological Study Area along with their California Department of Food and Agriculture and California Invasive Plant Council ratings.

Table 2.19 Invasive Species in the Biological Study Area

Common Name	Scientific Name	Food and Agriculture Rating	Invasive Plant Council Rating
Tree of heaven	<i>Ailanthus altissima</i>	Not Applicable	Moderate
Wild oats	<i>Avena fatua</i>	Not Applicable	Moderate
Ripgut brome	<i>Bromus diandrus</i>	Not Applicable	Moderate
Yellow star-thistle	<i>Centaurea solstitialis</i>	C	High
Bermudagrass	<i>Cynodon dactylon</i>	C	Moderate
Foxtail barley	<i>Hordeum jubatum</i>	Not Applicable	Moderate
Tree tobacco	<i>Nicotiana glauca</i>	Not Applicable	Moderate
Olive	<i>Olea europaea</i>	Not Applicable	Limited
Castor bean	<i>Ricinus communis</i>	Not Applicable	Limited
Russian thistle	<i>Salsola tragus</i>	C	Limited
London rocket	<i>Sisymbrium irio</i>	Not Applicable	Moderate
Puncturevine	<i>Tribulus terrestris</i>	C	Limited

Source: Natural Environment Study, August 2020

Of the species listed, the Russian thistle, yellow star-thistle, bermudagrass, and puncturevine are the only species assigned with a rating of C by the California Department of Food and Agriculture. This rating designated these species as a pest of known economic or environmental detriment and, if present in California, they are usually widespread. If found in the state, they are subject to regulations designed to retard spread or to suppress at the discretion of the individual county agricultural commissioner. There is no state-enforced action other than providing for pest cleanliness.

The following are invasive species ratings assigned by the California Invasive Plant Council:

- **High:** Species with severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. They are identified as having moderate to high rates of dispersal and establishment, and most are widely distributed.
- **Moderate:** Species with substantial and apparent, but generally not severe, ecological impacts on physical processes, plant and animal communities, and vegetation structure. They are identified as having moderate to high rates of dispersal, though their establishment is generally dependent upon disturbance. Their size and distribution may range from limited to widespread.
- **Limited:** Species that are invasive, but their impacts are minor on a statewide level, or there was not enough information to justify a higher score. They are identified as having low to moderate rates of invasiveness. Their size and distribution are generally limited, but they may be locally persistent and problematic.

The yellow star-thistle is the only invasive species in the Biological Study Area with a rating of High by the California Invasive Plant Council.

Environmental Consequences

Alternative 1A and Alternative 1B

An indirect impact that could occur due to construction activities is a further reduction of available habitat due to the introduction or spread of invasive species within the project footprint.

In compliance with Executive Order 13112 on Invasive Species and guidance from the Federal Highway Administration, the landscaping and erosion control included in the project will not use species listed as invasive. None of the species on the California list of invasive species is used by Caltrans for erosion control or landscaping. All equipment and materials will be inspected for the presence of invasive species and cleaned if necessary. In areas of sensitivity, extra precautions will be taken if invasive species are found in or next to the construction areas. These include the inspection and cleaning of construction equipment and eradication strategies to be implemented should an invasion occur.

A Standard Special Provision will be included in the construction contract that requires construction equipment and vehicles to be cleaned before entering and exiting the project.

Avoidance, Minimization, and/or Mitigation Measures

The following measures will be implemented for the project to prevent the further spread of these species, as well as the introduction of new invasive species:

1. All areas disturbed by project construction will be re-seeded with duff collected from non-native grassland during clearing and grubbing activities, followed by a native mix of hydroseed and compost.
2. Additional specifications to prevent the spread of or to eradicate invasive species may be included in the construction contract.

Chapter 3 CEQA 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 (NEPA) and the California Environmental Quality Act (CEQA). 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 and the Memorandum of Understanding dated December 23, 2016, 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 a lower level of documentation will be required. NEPA requires that an Environmental Impact Statement be prepared when the proposed federal action (the 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 judgment 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 effects 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 proposed project. Potential impact determinations include Significant and Unavoidable Impact, Less Than Significant 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.

“No Impact” determinations in each section are based on the scope, description, and location of the project as well as the appropriate technical report, and no further discussion is included in this document.

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

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

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

No Impact—There are no scenic vistas within the project area. (Visual Impact Assessment, September 2020)

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 area is not within a state scenic highway designated area. (Visual Impact Assessment, September 2020)

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, will the project conflict with applicable zoning and other regulations governing scenic quality?

Less Than Significant with Mitigation Incorporated—The visual impacts are expected to be moderate. The project will not substantially degrade the existing visual character or quality of public views. The project will impact Valley Oak trees in the median and heritage Valley Oak trees that have been identified by local agencies as sensitive visual resources. Any tree removed for the project will be replaced at a 10 to 1 or 3 to 1 ratio. The replacement planting will be in conformance with Caltrans policy. The project will not conflict with applicable zoning and other regulations governing scenic quality. (Visual Impact Assessment, September 2020)

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

No Impact—The project will not create a new source of substantial light or glare that will adversely affect day or nighttime views in the area. (Visual Impact Assessment, September 2020)

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.

Will 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 nonagricultural use?

No Impact—There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance in the project area.

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

No Impact—The project will not conflict with existing zoning for agricultural use or a Williamson Act contract.

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

No Impact—There is no forest land or timberland in the project area.

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.

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

No Impact—The project will not have any direct or indirect impacts that will result in conversion of farmland to nonagricultural use or conversion of forest land to non-forest use. (Source: California Department of Conservation's Farmland Mapping and Monitoring Program)

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.

Will the project:

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

No Impact—The project will not conflict with or obstruct implementation of an air quality plan. (Air Quality Report, November 2020)

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 will not result in a cumulatively considerable net increase of any criteria pollutant because it is the type of project found by the U.S. Environmental Protection Agency to be neutral from an air quality or emissions standpoint and is exempt from conformity requirements according to 40 Code of Federal Regulations Section 93.127 Table 3. (Air Quality Report, November 2020)

c) Expose sensitive receptors to substantial pollutant concentrations?

No Impact—The project will not expose sensitive receptors to substantial pollutant concentrations. (Air Quality Report, November 2020)

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

No Impact—The project will not result in other emissions that will adversely affect a substantial number of people. (Air Quality Report, November 2020)

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Will 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, U.S. Fish and Wildlife Service?

Less Than Significant Impact—While the likelihood that special-status species be found on the project site is low, Caltrans will adopt avoidance and minimization efforts to ensure the project will not result in measurable impacts to these species. (Natural Environment Study, August 2020)

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

Less Than Significant with Mitigation Incorporated—Caltrans will adopt avoidance and minimization efforts to ensure the project will not result in measurable impacts to riparian habitats or natural communities. Mitigation for the removal of Valley Oaks consists of replanting 33 oak trees. (Natural Environment Study, August 2020)

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?

Less Than Significant with Mitigation Incorporated—Mitigation for temporary impacts to Mill Creek is expected as a requirement of the 1600, 401, and 404 permits from the California Department of Fish and Wildlife, Regional Water Quality Control Board, and the U.S. Army Corps of Engineers, respectively. Mitigation is expected to be completed through the purchase of conservation credits from the National Fish and Wildlife Foundation or other In-Lieu Fee/banking program, or habitat will be created as a part of a permittee-responsible project which is expected to include restoration and replanting. (Natural Environment Study, August 2020)

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?

No Impact—The California Essential Habitat Connectivity Project (Spencer et al., 2010) does not locate any natural habitat blocks or essential connectivity corridors within or near the project areas. (Natural Environment Study, August 2020)

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

Less Than Significant Impact—The City of Visalia's Valley Oak Tree ordinance is in place to protect these trees. It establishes policies for the care, trimming, and removal of Valley Oaks. The project will not conflict with the city ordinance because trees will be replanted.

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—There are no conservation plans in the project area according to the U.S. Fish and Wildlife Service's Environmental Conservation online system; therefore, the project is not in conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or regional or state habitat conservation plan. (Natural Environment Study, August 2020)

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Will the project:

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

No Impact—No Historical Resources are present in the project area. (Historic Property Survey Report, November 2020)

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

No Impact—No historical resources are present in the project area. (Historic Property Survey Report, November 2020)

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

No Impact—The project will not disturb human remains, including those interred outside of dedicated cemeteries. (Historic Property Survey Report, November 2020)

3.2.6 Energy

CEQA Significance Determinations for Energy

Will 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—The project will not result in wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation.

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

No Impact—The project will 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

Will 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—The project is not in a known earthquake fault area. (California Geological Survey, Seismic Hazard Zones, and Alquist-Priolo Earthquake Fault Zone Interactive Map January 2020)

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, January 2020)

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. (California Governor's Office of Emergency Services, My Hazards interactive map January 2020)

iv) Landslides?

No Impact—The project area will not be subject to landslides because of the generally flat topography and because the project will not involve large cuts and fills or steep excavation.

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

No Impact—Project construction will not result in substantial soil erosion or the loss of topsoil because the project will include appropriate Best Management Practices to prevent soil erosion or loss of topsoil.

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

No Impact—Project construction, which consists mostly of operational improvements on an existing facility, will not cause the area to become unstable, or cause landslides, lateral spreading, or collapse, or cause subsidence. The soil in the project area is not subject to liquefaction.

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 area is not on expansive soil and not subject to creating direct or indirect risks to life or property.

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 will not include septic tanks or alternative wastewater disposal systems; therefore, there will be no impact.

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

Less Than Significant with Mitigation Incorporated—Excavation extending greater than 1 foot below the ground surface will impact undisturbed sediments of the Modesto Formation. The excavation activities associated with this project, which is expected to be at least 10 feet, include the construction of a stormwater detention basin across the street from Mill Creek Park on State Route 216. Due to the potential to affect scientifically significant nonrenewable paleontological resources, mitigation is necessary to minimize the impact to a less than significant level. To accomplish this, a Paleontological Mitigation Plan will be prepared before construction by a Caltrans-supplied consultant. The plan will recommend the measures required to minimize the potential impacts of the project. (Paleontological Identification Report, September 2020)

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Will the project:

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

Less Than Significant Impact—The project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. Greenhouse gas emissions impacts of operational improvements projects such as this are considered less than significant under CEQA because there will be no increase in operational emissions. While some greenhouse gas emissions during the construction period will be unavoidable, with the implementation of standard conditions and Best Management Practices designed to reduce or eliminate emissions as part of the project, the impact will be less than significant. (Air Quality Report, November 2020)

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

No Impact—The project will not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (Air Quality Report, November 2020)

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Will 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—Applicable standard special 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 will be included in the construction contract to protect construction personnel and the public. (Initial Site Assessment, September 2020)

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?

Less Than Significant Impact—The implementation of applicable standard special 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 will reduce this risk. (Initial Site Assessment, September 2020)

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Less Than Significant Impact—Four schools are near the project: Golden Oak Elementary School at 1700 North Lovers Lane, Visalia Adult School at 3110 East Houston Avenue, Golden West High School at 1717 North McAuliff Street, and Village Preschool at 1414 North McAuliff Street. As stated in Section 2.2.3, Alternatives 1A and 1B will not involve the transport or use of hazardous materials, substances, or waste. The contractor will be required to comply with Caltrans standard specifications as well as the San Joaquin Valley Air Pollution Control District regulations to limit the amount of hazardous emissions emitted during construction. Alternatives 1A and 1B will also require site-specific investigations for hazardous materials and will provide recommendations for the proper disposal of hazardous materials if they are present. Therefore, impacts related to the emission or handling of hazardous materials near a school will be less than significant. (Initial Site Assessment, September 2020)

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, will 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, September 2020)

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, will the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact—The project will not result in a safety hazard or excessive noise for people living or working in the project area because there is no airport within 2 miles of the project.

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

No Impact—The project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

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

No Impact—The project is not in a very high fire hazard severity zone, according to the California Department of Forestry and Fire Protection's online map. There is the potential that construction activities could create an unintended fire. However, the project will use adequate precautions to prevent fire incidents during construction as part of the code of safe practices.

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Will the project:

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

No Impact—With the implementation of Best Management Practices and standard specifications, the project will 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 will be upheld.

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—The construction or operation of the project will not impede sustainable groundwater management of the basin because the project will not use groundwater or interfere with groundwater recharge.

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 will:

i) Result in substantial erosion or siltation onsite or offsite;

No Impact—Soils within the study area are composed of very well-drained alluvium with slow subsoil permeability and low potential for erosion. This soil tends to be evident in gently sloping environments. (U.S. Department of Agriculture, Natural Resources Conservation Service)

Project construction will not result in substantial soil erosion or the loss of topsoil because the project will include appropriate Best Management Practices to prevent soil erosion or loss of topsoil.

ii) Substantially increase the rate or amount of surface runoff in a manner which will result in flooding onsite or offsite;

No Impact—This project will not substantially increase the rate or amount of surface runoff in a manner that will result in flooding onsite or offsite.

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

Less Than Significant Impact—This project will require the preparation of a Stormwater Pollution Prevention Plan. The Stormwater Pollution Prevention Plan will be developed by the contractor and submitted to a Caltrans Resident Engineer for review and acceptance before the start of construction. The Stormwater Pollution Prevention Plan incorporates the applicable temporary Construction Site Best Management Practices for the project to reduce or eliminate pollutants in construction site stormwater runoff.

iv) Impede or redirect flood flows?

No Impact—The project will not alter the course of any channel or alter drainage patterns within the project study area.

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 will not be possible for project construction to cause inundation of an area by seiche, tsunami, or mudflow.

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

No Impact—The project will not conflict with or obstruct the implementation of a water quality control plan or sustainable groundwater management plan. Water quality during construction will be protected by provisions as described in the National Pollutant Discharge Elimination System Permit.

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Will the project:

a) Physically divide an established community?

No Impact—The project will not physically divide an established community.

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

No Impact—The project will not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted to avoid or mitigate an environmental effect.

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Will the project:

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

No Impact—The project will not result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state. The project is not in land that is classified as a Mineral Resource Zone according to the State Geologist. (California Department of Conservation Mineral Land Classification Interactive Map, January 2020)

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—This project will 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. (Tulare County General Plan 2030 Update)

3.2.13 Noise

CEQA Significance Determinations for Noise

Will 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?

No Impact—The project will not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies. (Caltrans Noise Study Report, August 2020)

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

No Impact—Equipment noise control measures will be implemented to avoid or minimize potential groundborne vibration or noise levels. Any increase in vibration and noise will be temporary during construction. (Caltrans Noise Study Report, August 2020)

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 2 miles of a public airport or public use airport, will 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. The project is in an area where such a plan has not been adopted or within 2 miles of a public airport or public use airport.

3.2.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Will 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 will not induce substantial unplanned population growth in the area, either directly or indirectly, because the project will not add capacity or extend roads or other infrastructure.

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

No Impact—The project will not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

3.2.15 Public Services

CEQA Significance Determinations for Public Services

a) Will 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 does not propose or require the provision of new governmental facilities or physical alteration of existing governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any public service.

Impacts on response times for emergency services will be negligible with the implementation of the Caltrans incident management plan. Priority will be given to emergency responders to pass through the project area to alleviate any delays.

3.2.16 Recreation

CEQA Significance Determinations for Recreation

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

No Impact—The purpose of the project is to relieve congestion and improve the flow of traffic in the project area. Parks and recreational facilities near the project area are not expected to receive increased usage.

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.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Will 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 will not conflict with any applicable plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Rather, the project will ensure the safe operation of the highway system for motorists, bicyclists, and emergency responders.

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

No Impact—The project will not conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) because it is an operational improvement project, so it will not have an impact on 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 design addresses existing operational deficiencies in the project area. The existing interchanges and roadway will be improved.

d) Result in inadequate emergency access?

No Impact—The project will have no long-term impacts to access. The project will be built in stages with traffic control and the use of a Traffic Management Plan. Project work could result in some delays for motorists. However, emergency access will always be available, and the Traffic Management Plan will cover all operational contingencies.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

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

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), 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, November 2020)

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 will consider the significance of the resource to a California Native American tribe.

No Impact—There are no resources in the project area that are significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, significance of a resource to a California Native American tribe. (Historic Property Survey Report, November 2020)

3.2.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Will the project:

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater 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 will require relocation of existing stormwater drainage, electrical power, and telecommunication facilities. These facilities will be relocated as needed within the project area, which will not cause significant environmental effects.

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

No Impact—The project will have sufficient water supplies for construction and will not require additional water supplies in future years.

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

No Impact—The project will not generate significant amounts of wastewater or require future capacity for wastewater treatment.

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 will 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.

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

No Impact—The construction contractor will be responsible for controlling/disposing of solid waste in accordance with federal, state, and local statutes and regulations.

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, will the project:

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

No Impact—This project is not within a very high fire hazard severity zone. (California Department of Forestry and Fire Protection's Online Fire Hazard Severity Zone Maps)

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—This project is not within a very high fire hazard severity zone. (California Department of Forestry and Fire Protection's Online Fire Hazard Severity Zone Maps)

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—This project is not within a very high fire hazard severity zone. (California Department of Forestry and Fire Protection's Online Fire Hazard Severity Zone Maps)

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—This project is not within a very high fire hazard severity zone. (California Department of Forestry and Fire Protection’s Online Fire Hazard Severity Zone Maps)

There is the potential that construction activities could create an unintended fire. However, the contractor will 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 with Mitigation Incorporated—The project has the potential to affect several special-status species and their associated habitat within the project area. In addition, the project will result in temporary and permanent impacts on the existing natural community. However, the project has incorporated multiple avoidance, minimization, and/or mitigation measures that will reduce the potential for impacts or offset any expected impacts to less than significant. See Chapter 2 for additional details.

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.)

No Impact—The project does not have impacts that are individually limited but cumulatively considerable.

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

Less Than Significant Impact—During project construction, the project will have the potential to affect human beings due to temporary increases in noise

and air pollution (see Section 2.2.4 Air Quality and Section 2.2.5 Noise). However, avoidance and minimization measures will be implemented, which will reduce these potential effects to a less than significant level.

Project construction is also expected to result in temporary and minor traffic delays that could potentially affect the response times of emergency services or affect evacuation times in emergencies. However, these effects will be minimized with the implementation of the project's Transportation Management Plan, per Caltrans guidelines.

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 mainly 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. For more information, visit <https://www.fhwa.dot.gov/environment/sustainability/resilience/>. This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—“the triple bottom line of sustainability.” For more information, visit <https://www.sustainablehighways.dot.gov/overview.aspx>. 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 made at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects. The most important of these were 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 U.S. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy program on the basis of each manufacturer’s average fuel economy for the portion of its vehicles produced for sale in the U.S.

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 U.S. 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 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 Air Resources Board readopted 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 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 directs State entities under the direction of the Governor, including the 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 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 3 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 will 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 CEQA 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 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) 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 Executive 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 is within the City of Visalia. State Route 198 is the main transportation route to and through the area for both passenger and commercial vehicles. The nearest alternate route is State Route 216, a 19-mile route looping from the State Route 198 overcrossing freeway at Lovers Lane. Traffic counts are high due to travel and traffic patterns associated with school functions and work commuters. The Tulare County Association of Governments/Tulare County Transportation Authority guides transportation development. The Tulare County General Plan 2030 Update addresses greenhouse gases in the project area.

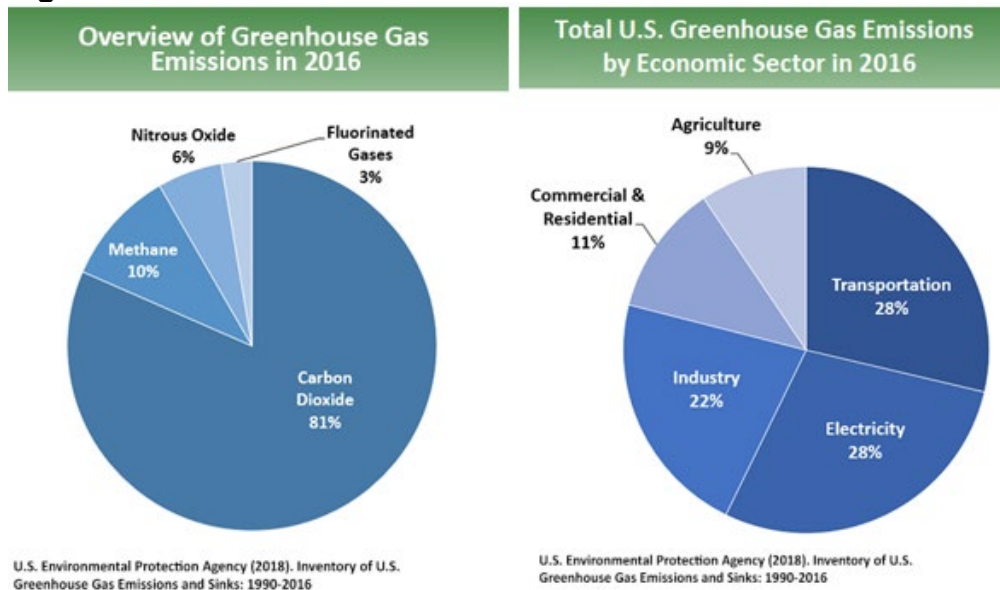
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are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

Board does so for the state, as required by Health and Safety Code Section 39607.4 National Greenhouse Gas Inventory.

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 U.S., 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 consist of carbon dioxide, 10 percent are methane, and 6 percent are nitrous oxide; the balance consists of fluorinated gases. (EPA 2018a) For more information, visit the U.S. Environmental Protection Agency’s 2018 Inventory of U.S. Greenhouse Gas Emissions and Sinks website at <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>. 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



3.3.3 State Greenhouse Gas Inventory

The 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. (ARB 2019a)

See Figures 3-2 and 3-3. For more information, refer to the July 2019 edition of the Greenhouse Gas Emission Inventory website at <https://www.arb.ca.gov/cc/inventory/data/data.html>.

Figure 3-2 California 2017 Greenhouse Gas Emissions

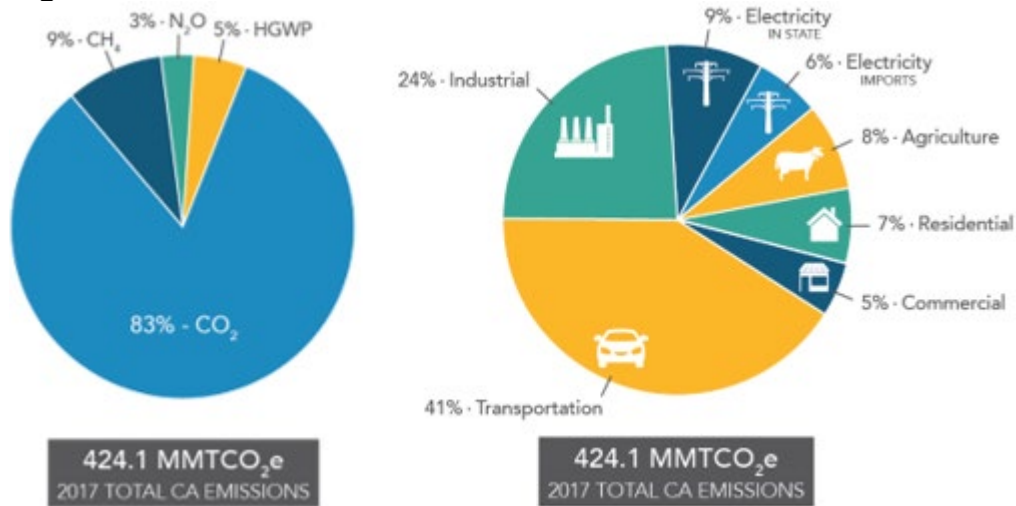
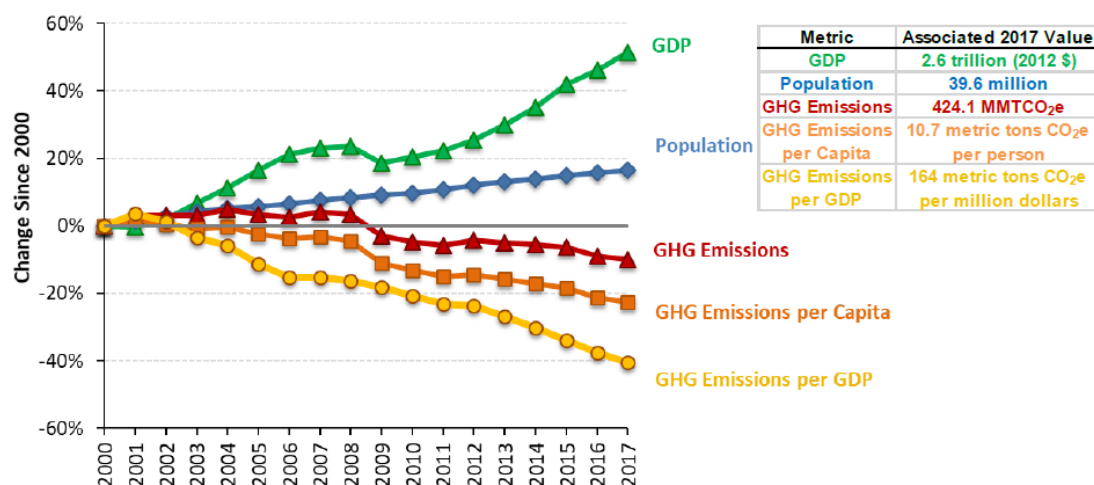


Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions since 2000 (Source: ARB 2019b)



Assembly Bill 32 requires the 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 5 years. The 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 Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation Plan/Sustainable Communities Strategies 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 County Association of Governments is the Metropolitan Planning Organization for the project area. The regional reduction targets for Tulare County are 5 percent by 2020 and 10 percent by 2035. The Tulare County Association of Governments' 2018 Regional Transportation Plan/Sustainable Communities Strategy details how the region will reduce greenhouse gas emissions to state-mandated levels over time. The project is not required to be listed in the Regional Transportation Plan/Sustainable Communities Strategy document because it is not considered a regionally significant project. 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.

The Tulare County Association of Governments participated in the Tulare County Regional Blueprint (Blueprint), adopted in 2009, which encourages smart growth principles, improving the existing public transportation system, and investing in active transportation infrastructure such as new bicycle and pedestrian paths. These strategies, together with transportation system management and trip reduction programs, are projected to reduce per capita passenger vehicle greenhouse gas emissions in the region.

3.3.4 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during the 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 are 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

The purpose of the project is to improve traffic operations, relieve congestion, and reduce excessive delays at intersections. The proposed improvements will not increase mainline capacity on State Route 198 or Lovers Lane. The reconfigured ramps and turn lanes will allow local and interregional traffic to move through the project intersections more efficiently. Complete streets elements will support pedestrian and bicycle travel. These changes generally do not cause an increase in operational greenhouse gas emissions. While some greenhouse gas emissions during construction will be unavoidable, the project, once completed, will not lead to an increase in operational greenhouse gas emissions.

The purpose of State Route 216 rehabilitation is to extend the life of the existing pavement and upgrade the road to current standards. This operational improvement will allow local traffic to move through this area more efficiently. While some greenhouse gas emissions during construction will be unavoidable, the project, once completed, will not lead to an increase in operational greenhouse gas emissions.

Construction Emissions

Construction greenhouse gas emissions will result from material processing, onsite construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence will, where possible, 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 lives, improved Traffic Management Plans, and changes in materials, the greenhouse gas emissions produced during project construction will be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Carbon dioxide emissions generated from construction equipment were estimated using the Caltrans Construction Emissions Tool. The estimated emissions will be about 1,125 tons.

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 will comply with all Air Resources Board emission reduction regulations. All projects also include Caltrans' Standard Specifications Section 14-9.02, Air Pollution Control, which requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes, including those of the San Joaquin Valley Air Pollution Control District.

The project will also implement Caltrans' standardized measures (such as Construction Site Best Management Practices) that apply to most or all Caltrans projects. Certain common regulations, such as equipment idling restrictions and development and implementation of a traffic control plan that reduce construction vehicle emissions, also help reduce greenhouse gas emissions.

CEQA Conclusion

While the project will result in greenhouse gas emissions during construction, it is expected that the project will not increase operational greenhouse gas emissions. The project will not conflict with any applicable plan, policy, or regulation adopted to reduce the emissions of greenhouse gases. With the implementation of construction greenhouse gas-reduction measures, the impact will 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.

3.3.5 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 Junior 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 3-4.

Figure 3-4 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 a reduction in 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 on forest lands, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the 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, issued in 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 our 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 (e.g., *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 will also be implemented in the project to reduce greenhouse gas emissions and potential climate change impacts from the project. Caltrans staff will enhance the environmental training provided for contractor staff by adding a module on greenhouse gas reduction strategies, including limiting equipment idling time as much as possible.

The contractor will be required to:

- Reduce construction waste and maximize the use of recycled materials wherever possible.
- Incorporate measures to reduce the use of potable water.
- Seek to operate construction equipment with improved fuel efficiency by:
 - Properly tuning and maintaining equipment.
 - Limiting equipment idling time.
 - Using the right-size equipment for the job.
- Caltrans' Standard Specifications Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Measures that reduce construction vehicle emissions also help reduce greenhouse gas emissions.

3.3.6 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 variability 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 the National Environmental Policy Act assignment, Caltrans is obligated to comply with all applicable federal environmental laws and Federal Highway Administration National Environmental Policy Act regulations, policies, and guidance.

The U.S. Global Change Research Program delivers a report to Congress and the president every 4 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.” (USGCRP 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 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. DOT 2011) For more information, visit the following website:

https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance/usdot.cfm.

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 strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. For more information, visit <https://www.fhwa.dot.gov/legisregs/directives/orders/5520.cfm>.

The Federal Highway Administration has developed guidance and tools for transportation planning that foster resilience to climate effects and sustainability at the federal, state, and local levels. (FHWA 2019) For more

information, visit

<https://www.fhwa.dot.gov/environment/sustainability/resilience/>.

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 latest 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., will 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 to date. 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* in 2010, with instructions for how state agencies could incorporate “sea-level rise 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. For more information, visit <http://www.opc.ca.gov/updating-californias-sea-level-rise-guidance/>.

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 multiagency, 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 expected climate change impacts.

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessments

Caltrans is conducting 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 the analysis of at-risk assets and the 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. Accordingly, direct impacts to transportation facilities due to projected sea-level rise are not expected.

Floodplains Analysis

The Caltrans Climate Change Vulnerability Assessment for District 6 expects climate change will bring less precipitation overall, falling in fewer but heavier individual events, and more rain than snow. (Caltrans July 2018) The report analyzed changes in 100-year storm precipitation depths, a metric commonly used in the design of transportation assets. Mapping of this precipitation change under a high-emissions scenario projects a less than 5 percent increase in 100-year precipitation in the project area around State Routes 198 and 216 through 2085.

The project floodplain evaluation report identifies two short segments of the project within the Federal Emergency Management Agency-designated Flood Zone AE, an area subject to the 1 percent annual chance (100-year) flood. The majority of the project is in a Zone X, 500-year floodplain. The floodplain evaluation report notes that large floods in the area result from heavy rains combined with snowmelt from the foothills and the Sierra Nevada, with Mill Creek the main source of flooding. This flooding is characterized as “shallow flooding,” sheet flow, or ponding with depths less than 3 feet.

The project will not alter the course of any channel or alter drainage patterns within the project study area. Stormwater Treatment Best Management Practices during construction and operation will reduce or prevent erosion or other effects of stormwater runoff. Drainage facilities on the new project elements will be designed to accommodate current and future increased runoff. The new facilities will be resilient to changes in precipitation under

future climate change scenarios. Most climate scientists predict increased frequency and intensity of rain events related to global climate change, although how frequent and how intense such storms are likely to be is unclear. For the project, two short segments are within the 100-year base floodplain in an area designated as Flood Zone AE. The roadway rehabilitation proposed through these two segments will not have a significant impact on the 100-year floodplain, based on the Floodplain Evaluation completed on September 30, 2020.

Wildfire

The project is not in a very high fire hazard severity zone. (California Department of Forestry and Fire Protection, 2007) The project is about 9 miles west of the westernmost boundary of the nearest fire hazard severity zone. Construction activities could create an unintended fire in roadside vegetation; however, precautions and Construction Site Best Management Practices will be implemented to prevent fire during construction. Caltrans' 2018 revised Standard Specifications Section 7-1.02M(2) mandates fire prevention procedures during construction, including a fire prevention plan. The project is not expected to experience or exacerbate the impacts of wildfires intensified by climate change.

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Appendix A Resources Evaluated Relative to the Requirements of Section 4(f): No-Use Determination

Section 4(f) of the Department of Transportation Act of 1966, codified in federal law at 49 U.S. Code 303, declares that “it is the policy of the U.S. Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites.”

This section of the document discusses parks, recreational facilities, wildlife refuges, and historic properties found within or next to the project area that do not trigger Section 4(f) protection because: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, or 4) the project does not permanently use the property and does not hinder the preservation of the property.

Resources Evaluated

This evaluation considered publicly owned recreational resources within 0.5 mile of the project site. Although no qualifying wildlife and waterfowl refuges are within 0.5 mile of the project area, one public park is present that allows the public access to the recreational facilities there.

Mill Creek Garden Park

Mill Creek Garden Park at North Lovers Lane and Millcreek Parkway in Visalia has picnic tables, barbeques, walking paths, open play areas, and a multipurpose field along Millcreek Parkway. The project will avoid impacting the park or access to the park, so Section 4(f) provisions do not apply.

The land will not be permanently incorporated into the transportation facility; there is no temporary occupancy of land that is adverse in terms of the statute’s preservationist purpose; there are no proximity impacts that will substantially impair the purpose of the land. For the purposes of Section 4(f), temporary construction easements do not constitute use, but no easements occur near the park.

There are no expected permanent adverse physical impacts, and no interference will occur with the protected activities, features, or attributes of the property on either a temporary or permanent basis.

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

Gavin Newsom, Governor

DEPARTMENT OF TRANSPORTATION

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Making Conservation
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November 2019

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."*

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/business-and-economic-opportunity/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 Business and Economic Opportunity, at 1823 14th Street, MS-79, Sacramento, CA 95811; (916) 324-8379 (TTY 711); or at Title.VI@dot.ca.gov.

A blue ink signature of Toks Omishakin, consisting of a stylized 'T' followed by a cursive 'O' and a horizontal line.

Toks Omishakin
Director

"Provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability"

Appendix C Avoidance, Minimization and/or Mitigation Summary

To ensure that all of the environmental measures identified in this document are executed at the appropriate times, the following mitigation program (as articulated on the proposed Environmental Commitments Record that follows) will be implemented. During project design, avoidance, minimization, and/or mitigation measures will be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits will be obtained prior to implementation of the project. During construction, environmental and construction/engineering staff will ensure that the commitments contained in the Environmental Commitments Record are fulfilled. Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. Because the following Environmental Commitments Record is a draft, some fields have not been completed; they will be filled out as each of the measures is implemented.

Note: Some measures may apply to more than one resource area. Duplicated or redundant measures have not been included in this Environmental Commitments Record.

Visual

The avoidance, minimization, and/or mitigation measures to address specific visual impacts will be designed and implemented with concurrence from the Caltrans District 6 Landscape Architect.

The following measures to avoid or minimize visual impacts will be incorporated into the project:

- Minimize tree removal. Remove only those trees and shrubs required for the construction of the new roadway facilities. Avoid removing trees and shrubs for temporary uses, such as construction staging areas or temporary stormwater conveyance systems.
- Add Complete Streets pedestrian and bicycle elements such as green-colored pavement and high visibility crosswalks.
- Add Aesthetic Paving elements to sidewalks and median islands.

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

- Tree removal will require replanting onsite, replanting within the Caltrans right-of-way along the same watershed, or replanting at another offsite location. Oak trees will be replanted at a 10 to 1 ratio, while other trees will be replanted at a 3 to 1 ratio.

Paleontology

Due to the potential to affect scientifically significant nonrenewable paleontological resources, mitigation is necessary to minimize the impact to a less than significant level. To accomplish this, a Paleontological Mitigation Plan will be prepared before construction by a Caltrans-supplied consultant. The plan will recommend the measures required to minimize the potential impacts of the project. The mitigation measures are to include (as applicable):

- Identifying and acknowledging construction site safety protocols.
- Conducting paleontological worker environmental awareness training for all earth-moving personnel and supervisors.
- Conducting mitigation field monitoring of excavation into undisturbed sediments of the Modesto Formation. Excavations from 1 foot to 3 feet below the ground surface are to be spot-checked. Continuous or full-time monitoring is required for excavations greater than 3 feet.
- Establishing a protective 25-foot radius buffer zone around fossil discovery locations.
- Notification of the Resident Engineer upon fossil discovery.
- Processing bulk soil samples for microfossil identification.
- Use of plaster casting to stabilize and preserve macrofossils.
- Preparation of salvaged fossils for identification to the lowest taxonomic level (preparation for an exhibition is prohibited).
- Curation of salvaged fossils at a receiving museum or academic institution.
- Preparation of a Paleontological Mitigation Report following completion of all paleontological monitoring activities, documenting compliance with all mitigation measures.

Real Property Acquisition

No mitigation measures are required for impacts to real property acquisitions. The following avoidance and minimization measures are required:

1. Caltrans will acquire property necessary for the project in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970.
2. Acquisitions for construction easements are temporary, and the land will be returned to the nearby property owner after project completion.
3. Property owners will be compensated for land acquisition and any landscaping and fencing that are removed from their properties.

Utilities and Emergency Services

During the design phase of the project, a more detailed study will be conducted to determine the necessary relocation of utilities. Caltrans will meet with the affected utilities to coordinate the details for relocations and easements to avoid or minimize any interruption in service.

A detailed Traffic Management Plan will be developed during the Plans, Specifications, and Estimates phase of the project to minimize delays and maximize safety during construction. The Traffic Management Plan may include, but is not limited to, the following:

- Release of information through brochures and mailers, press releases and media alerts, and planned lane closure notices from the Caltrans website.
- Use of portable changeable message signs.
- Incident management through the Construction Zone Enhanced Enforcement Program and the Transportation Management Plan.

The Construction Zone Enhanced Enforcement Program is a program that uses California Highway Patrol officers during construction to improve the safety of construction crews and the motoring public. The officers may be used for traffic control and provide needed emergency response support services. Caltrans coordinates and manages road user information such as identifying the fixed changeable message signs and highway advisory radio on the State Highway System that will be used during construction.

Traffic and Transportation

A Traffic Management Plan will be developed to handle local traffic patterns and reduce delay, congestion, and the likelihood of accidents during construction. The Traffic Management Plan includes notifying the public of construction activities via media outlets, using changeable message signs, construction strategies, and the use of the Central Valley Traffic Management Center, which reduces congestion by monitoring traffic and informing the public via media outlets, such as radio and television. Traffic delays are expected to be minimal because most of the build alternatives will be built on new alignments. By building the project in construction phases and rerouting traffic to local roads, disruption to local and regional traffic will be minimized with both of the build alternatives.

Pedestrian Facilities

Curb ramps that are compliant with the Americans with Disabilities Act requirements will be provided at all improved intersections or new local road intersections.

Bicycle Facilities

Class 2 bike lanes will be provided at the proposed rehabilitation locations.

Water Quality and Stormwater Runoff

Short-term construction and long-term operation and maintenance impacts to water quality will be avoided and minimized through the implementation of the following:

- The project will comply with the provisions of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ), which became effective July 1, 2013, and if applicable, the Construction General Permit (Order 2009-0009-DWQ).
- Before any ground-disturbing activities, the contractor will be required to prepare a Stormwater Pollution Prevention Plan (per the Construction General Permit Order 2009-0009-DWQ) that includes erosion control measures and construction waste containment measures so that waters of the State are protected during and after project construction. The project's Stormwater Pollution Prevention Plan will be continuously updated to adapt to changing site conditions during the construction phase. The following temporary Construction Site Best Management Practices are expected to be implemented:
 - Fiber rolls and/or silt fence for perimeter control.
 - Water that has been in contact with wet concrete will not be discharged onto land until it has been tested and treated (if required).
 - Any proposed discharge to receiving waters will require a permit from the Central Valley Regional Water Quality Control Board.
- Cast-in-place concrete structures should have enough time to cure before the rainy season or be covered to prevent contact with rain.
- Concrete treated permeable base should not be used as a permeable material for underdrain systems that discharge to waterways.
- Some of the work areas could be within the 100-year floodplain zone. All materials such as rock or geotextile fabric used to stabilize temporary access routes will be completely removed when construction is completed.
- The project will incorporate pollution prevention and design measures consistent with the 2015 Caltrans Stormwater Management Plan to meet water quality objectives. This Plan has been revised to comply with the requirements of the Caltrans Statewide National Pollutant Discharge Elimination System Permit (Order 2012-0011-DWQ). In addition to the Best Management Practices already included, the following permanent Stormwater Treatment Best Management Practices should be considered where feasible:

- Energy dissipation devices such as rock slope protection or check dams.
- Bioengineered stream bank stabilization methods such as willow wattles or brush layering.
- Environmentally Sensitive Areas will be designated and clearly delineated on the contract plans during the design phase to avoid potential discharges and unauthorized disturbances to the creeks, streams, channels, and protected riparian areas.

Hazardous Waste and Materials

No mitigation is required for hazardous waste impacts; however, avoidance and minimization measures will be required.

Aerially Deposited Lead

Applicable Caltrans' Standard Special Provisions and/or Non-Standard Special Provisions addressing proper handling and disposal of aerially deposited lead, pavement striping, paint or markings, and treated wood waste will be provided during the project's Plans, Specifications, and Estimates phase of the project before construction. A lead compliance plan will also be required.

Asbestos-Containing Materials and Lead-Based Paint

Asbestos-containing materials were not detected. A Standard Special Provision and/or Non-Standard Special Provision for proper handling and disposal of lead on the bridge structure will also be provided during the project's Plans, Specifications, and Estimates phase.

Biological Environment

Natural Communities

In addition to the Best Management Practices, the following avoidance and minimization measures will be implemented:

1. Vegetation removal will be reduced to the minimal amount necessary to complete the work.
2. The removal of oak trees will be completed outside of the nesting bird season (February 1 through September 30), or if that is not possible, tree removal will not start without prior approval from the project biologist after completion of nesting bird surveys.

Caltrans will compensate for the removal of the oak trees according to the conditions of the Lake and Streambed Alteration Agreement issued by the California Department of Fish and Wildlife. Typical mitigation required by the

California Department of Fish and Wildlife uses a 10 to 1 and a 3 to 1 compensation ratio, which will result in the planting of 33 Valley Oak trees. If Caltrans is unable to replant the 33 Valley Oak trees onsite within its own right-of-way, then a planting site within the project watershed will be sought. The final planting location will be coordinated with and approved by the California Department of Fish and Wildlife prior to permit acquisition.

Plant Species

Caltrans proposes the following avoidance and minimization measure to ensure the project will not result in measurable impacts to the six special-status plant species identified during the 2020 botanical surveys:

- Pre-construction surveys for botanical species will be conducted during the blooming season before the start of construction.

Animal Species

No compensatory mitigation is proposed for the western spadefoot or burrowing owls.

Western Spadefoot Toad (*Spea hammondi*)

The following avoidance and minimization measure has been included in the project to protect this species:

1. A qualified biologist will conduct pre-construction surveys 30 days before any ground disturbance. Construction equipment staging areas will be surveyed and cleared by a qualified biologist before use. Staging will occur in pre-disturbed areas.

Burrowing Owl (*Athene cunicularia*)

The following avoidance and minimization measures have been included in the project to protect this species:

1. Pre-construction surveys will be conducted no more than 30 days before the start of construction activities, unless these activities begin outside the nesting season (February 1 to September 31).
2. If construction activities extend into more than one nesting season, additional nesting surveys will be required at the start of each nesting season before work can continue.
3. If a burrowing owl is found nesting in or near the project footprint, a no-work buffer of 100 feet will be applied until a qualified biologist has confirmed that the young have fledged, and a qualified biological monitor will be required for all work within that buffer to ensure work does not disturb the nest.

4. A buffer variance may be approved by the biologist if it is determined that work can continue without disturbing the burrowing owls.

Wetlands and Other Waters

The following avoidance and minimization measures have been included in the project to further avoid and minimize impacts to Mill Creek:

1. A Stormwater Pollution Prevention Plan will be prepared for the project.
2. Any portions of Mill Creek that can be avoided during construction will be protected with an Environmentally Sensitive Area demarcation. All Environmentally Sensitive Areas will be identified in the construction plans and included in the construction contract.

Mitigation for temporary impacts to Mill Creek is expected to be completed through the purchase of conservation credits from the National Fish and Wildlife Foundation, or other In-Lieu Fee/banking program, or habitat will be created as a part of a permittee-responsible project which is expected to include restoration and replanting.

Threatened and Endangered Species

No compensatory mitigation is proposed for the California jewelflower, California tiger salamander, San Joaquin kit fox, and the Swainson's hawk.

California Jewelflower (Caulanthus californicus)

While the likelihood that the California jewelflower will be found during the construction of Alternative 1A or Alternative 1B is very small, Caltrans proposes the following avoidance and minimization measure to ensure the project will not result in measurable impacts to this species:

1. Pre-construction surveys for botanical species will be conducted during the blooming season before the start of construction.

California Tiger Salamander (Ambystoma californiense)

The following avoidance and minimization measure has been included in the project to protect this species:

1. A qualified biologist will conduct pre-construction surveys 30 days before any ground disturbance. Construction equipment staging areas will be surveyed and cleared by a qualified biologist before use. Staging will occur in pre-disturbed areas.

San Joaquin Kit Fox (Vulpes macrotis mutica)

The following avoidance and minimization measures have been included in the project to protect this species:

1. Pre-construction surveys will be completed no more than 30 days before the start of any ground-disturbing activities to determine the potential for the presence of the San Joaquin kit fox within the project footprint. A qualified biologist will perform the surveys. Surveys will attempt to identify San Joaquin kit foxes or their presence within 200 feet of proposed permanent impacts. Potential dens in the right-of-way will be avoided as best as possible. If potential dens cannot be avoided, they will be monitored and excluded. Construction equipment staging areas will be surveyed and cleared by a Caltrans-approved biologist before use. Staging will occur in pre-disturbed areas.
2. If any San Joaquin kit foxes are seen during project activities, they will be allowed to leave the area unharmed and of their own volition, and Caltrans will notify the U.S. Fish and Wildlife Service.

Swainson's Hawk (Buteo swainsoni)

The following avoidance and minimization measures have been included in the project to protect this species:

1. Pre-construction Swainson's hawk surveys will be conducted to ensure no birds are nesting in or next to the project footprint. If any nesting pairs are detected, additional avoidance and minimization measures will be implemented to avoid impacting birds, which may include but is not limited to the establishment of a protective Environmentally Sensitive Area and a 500-foot "no-work" buffer, and having a biological monitor present during construction activities that occur within the buffer. A Caltrans biologist may approve buffer variances.
2. Before any ground disturbance, the contractor, all employees of the contractor, subcontractors, and subcontractors' employees will attend an employee education program conducted by a qualified biologist. The program will consist of a brief presentation on Swainson's hawks, their life history, legislative protection, and measures to avoid impacts to the species during project implementation.
3. If a Swainson's hawk nest is discovered within or near the project right-of-way, avoidance and minimization measures will be implemented, and (if necessary) the California Department of Fish and Wildlife will be consulted.

Invasive Species

The following measures will be implemented into the project to prevent the further spread of invasive species and the introduction of new invasive species:

1. All areas disturbed by project construction will be reseeded with duff collected from non-native grassland during clearing and grubbing activities, followed by a native mix of hydroseed and compost.

2. Additional specifications to prevent the spread of or to eradicate invasive species may be included in the construction contract.

Construction Impacts

Air Quality

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 emission impacts during construction. 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, regulations, and statutes that apply to work performed under the contract, including those provided in Government Code Section 11017.

Some minimization measures for short-term construction-related emissions include:

- Application of the most stringent available regulations or best practices even if not required by local/state regulations at the site.
- Possible designation of areas where construction equipment servicing and storage are not allowed (near sensitive receptors).
- Construction staging.
- Temporary programs to reduce detour- and construction-related traffic congestion, such as special transit programs and subsidies.
- A construction equipment emission reduction program to encourage or require the contractor to use cleaner (newer) diesel engines or retrofit older engines.

Noise

The following are possible control measures that can be implemented to minimize noise disturbances at sensitive areas during construction:

- All equipment will 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 will 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 will provide the lowest level of noise impact (for example, avoid impact pile driving near residences and consider alternative methods that are also suitable for the soil condition) should be used.

- Idling equipment will be turned off.
- Truck loading, unloading, and hauling operations will be restricted so that noise and vibration are kept to a minimum through residential neighborhoods to the greatest possible extent.

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

- Once details of the construction activities become available, the contractor will 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 will be maintained with the community to minimize objections to unavoidable construction impacts. Frequent activity updates of all construction activities will be provided. A construction noise monitoring program to track sound levels and limit the impacts will be implemented.
- In case of construction noise complaints by the public, the Resident Engineer will coordinate with the construction manager, and the specific noise-producing activity may be changed, altered, or temporarily suspended, if necessary.
- Certain construction activities such as clearing and compacting could cause intermittent localized concern from vibration in the project area. During certain construction phases, processes such as earthmoving 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.

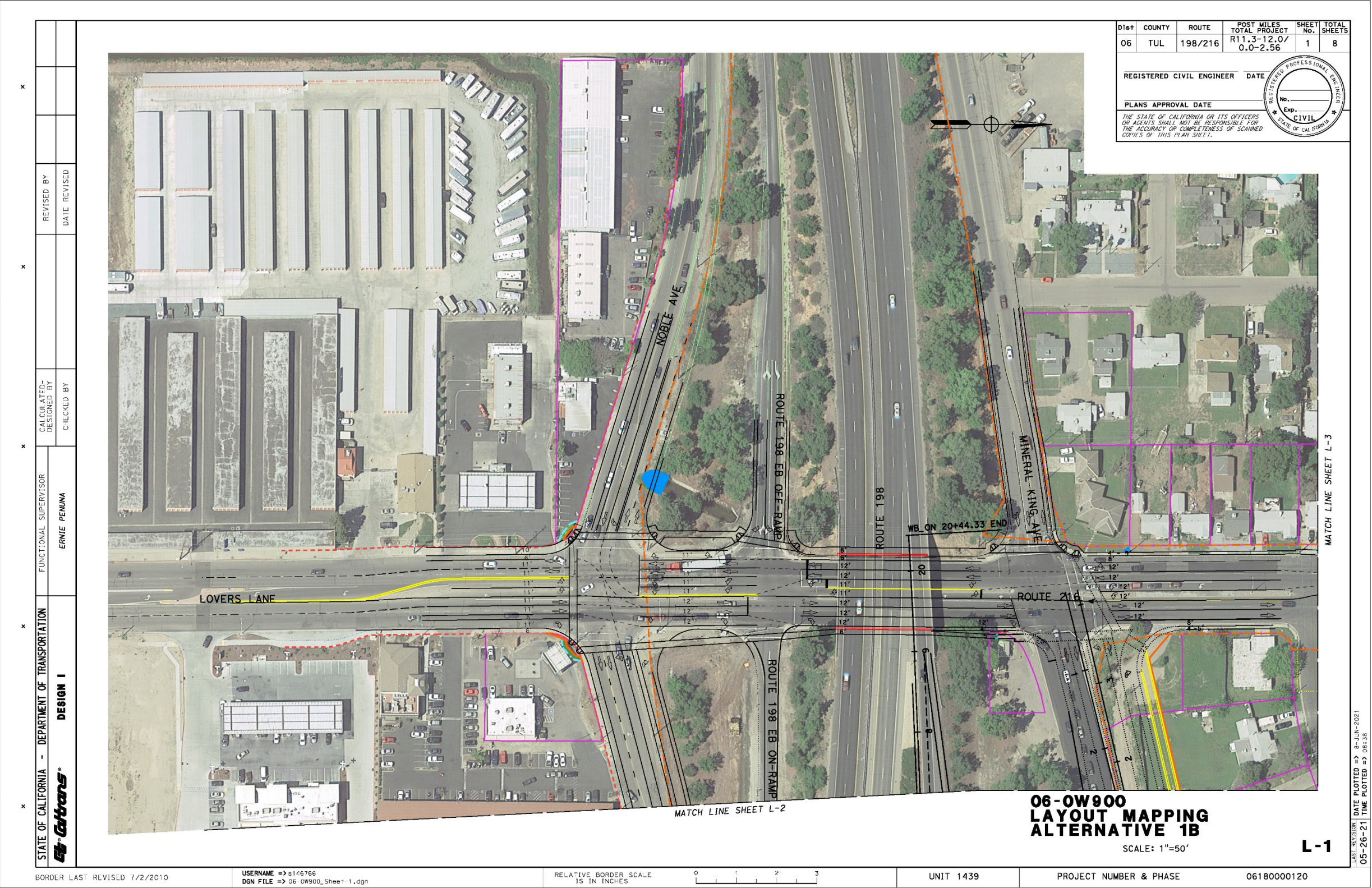
The following are procedures that can be used to minimize the potential impacts from construction vibration:

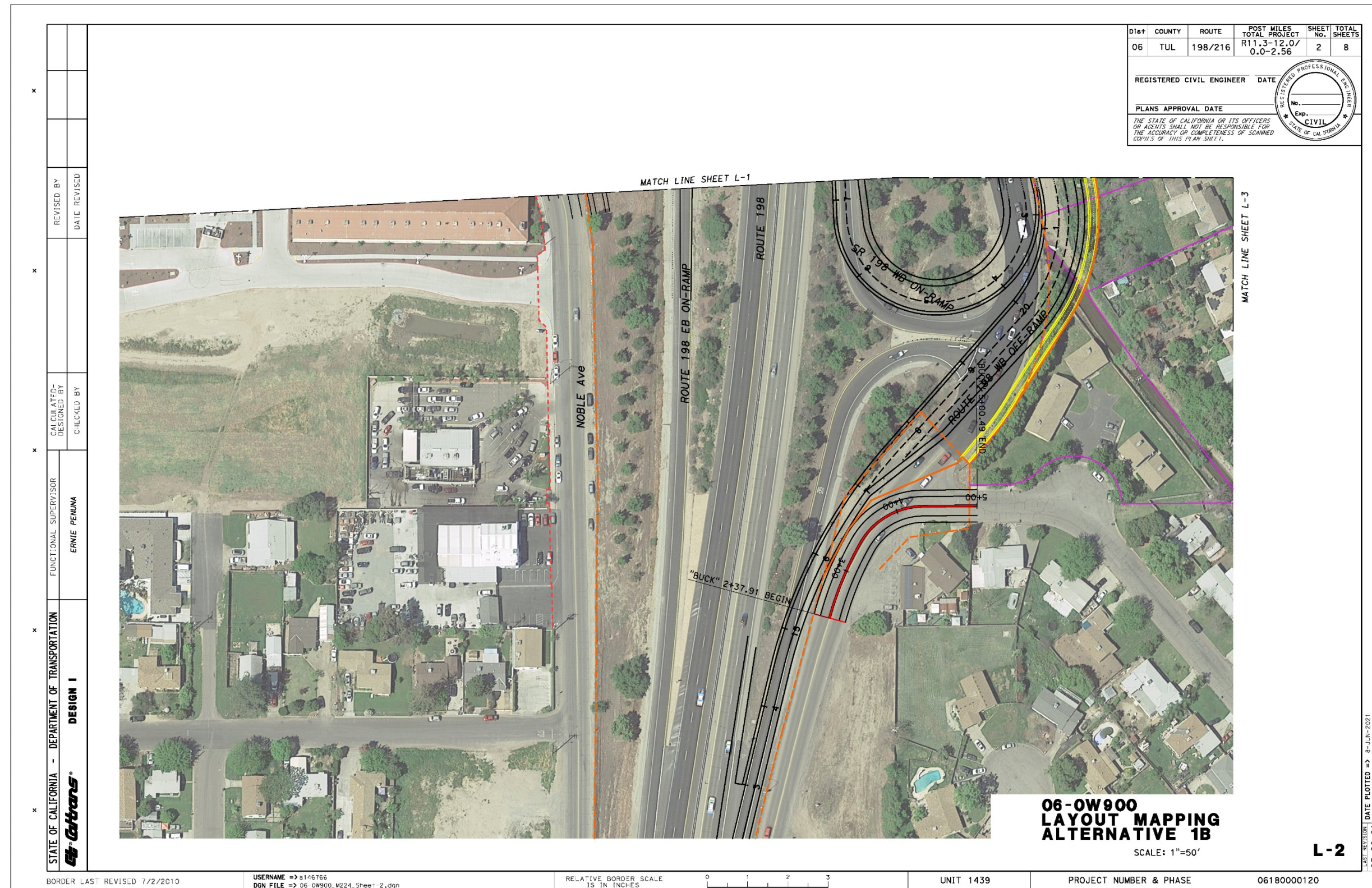
- Restrict the hours of vibration-intensive equipment or activities such as vibratory rollers so that impacts to residents are minimal (e.g., weekdays during daytime hours only when as many residents as possible are away from home).
- The owner of a building close enough to a construction vibration source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

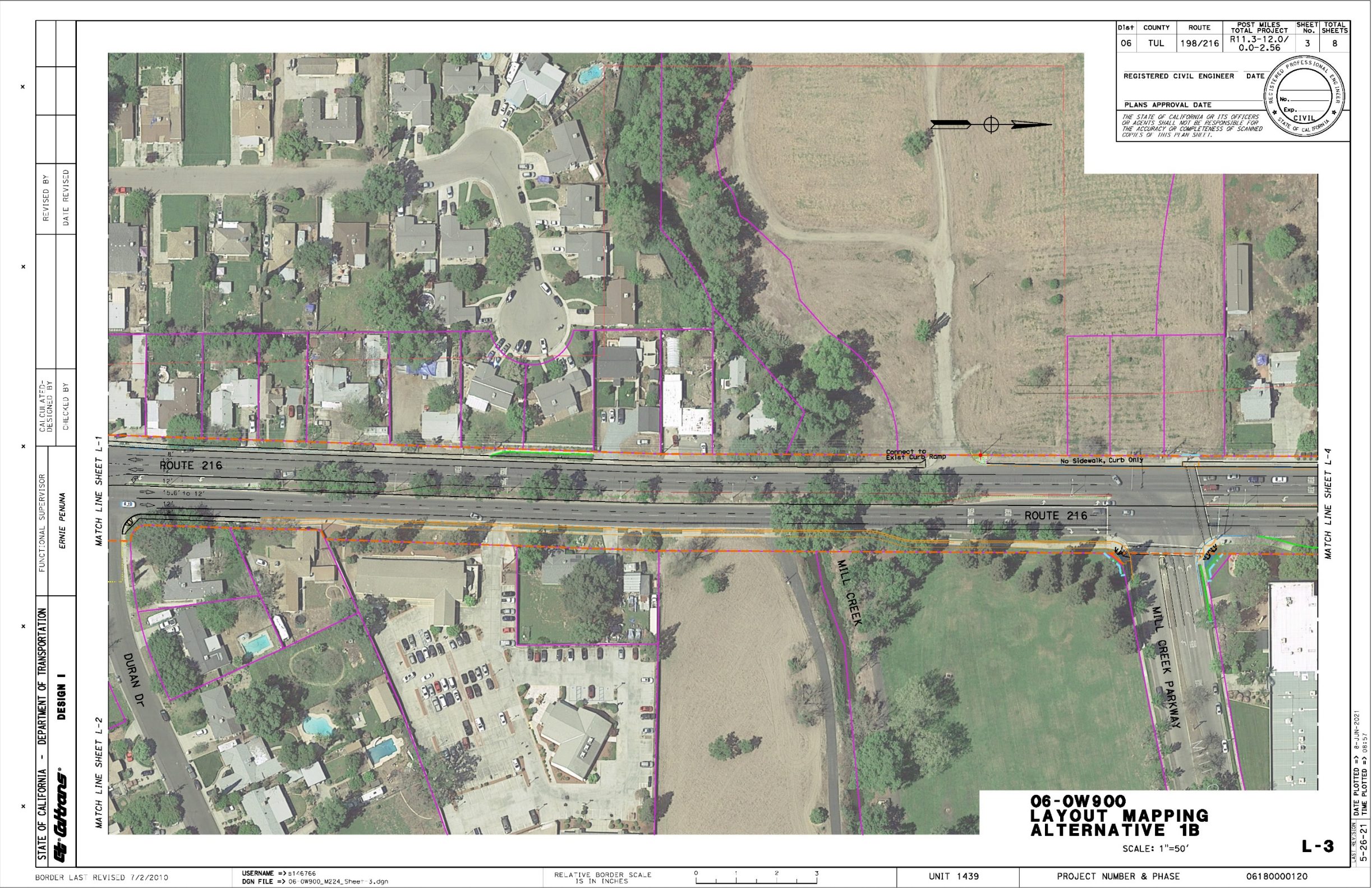
A combination of the mitigation techniques for equipment vibration control as well as administrative measures, when properly implemented, can be selected to provide the most effective means to minimize the effects of construction activity.

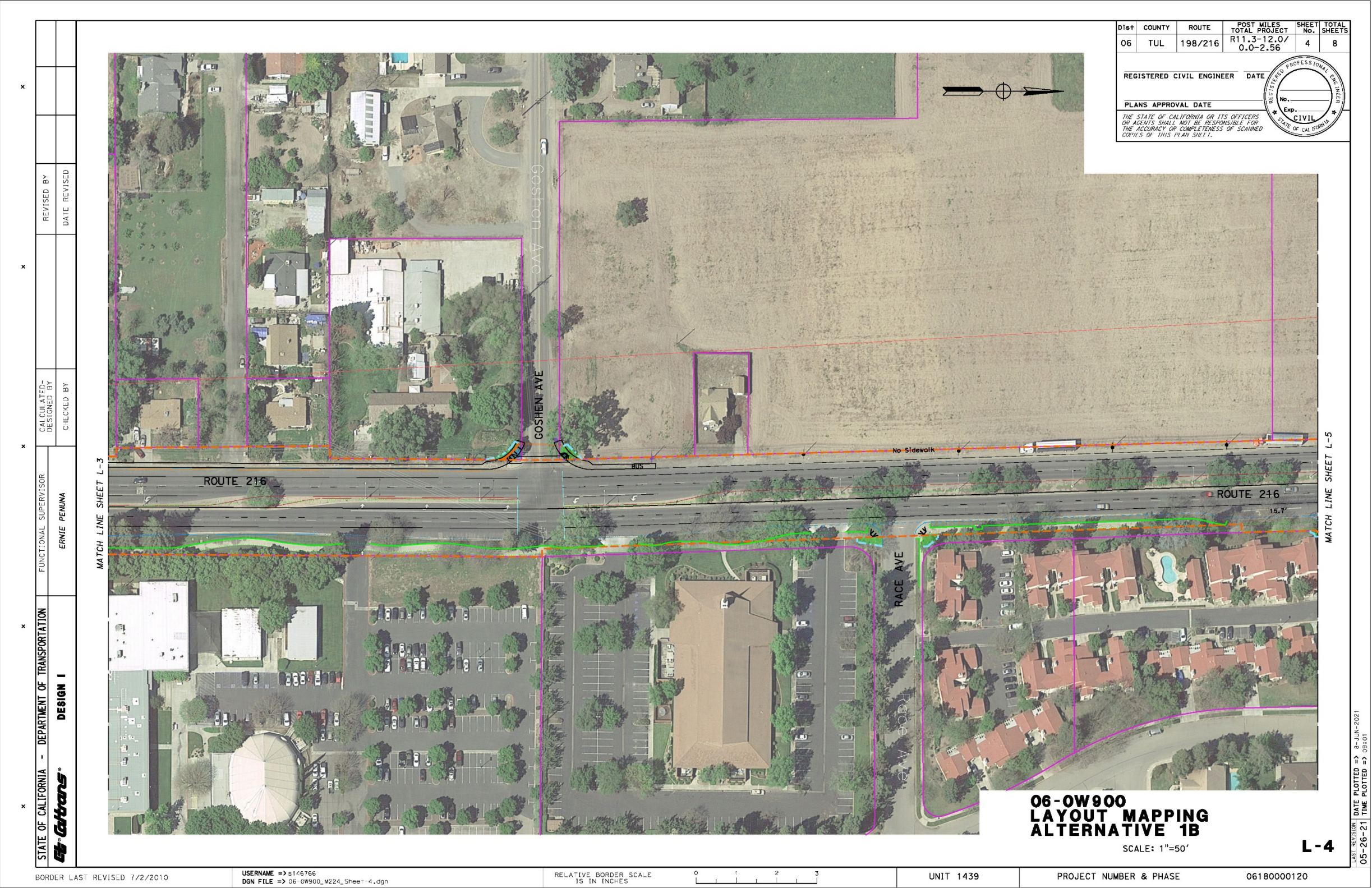
Application of the mitigation measures will reduce the construction impacts; however, temporary increases in vibration will likely occur at some locations.

Appendix D Preliminary Plans

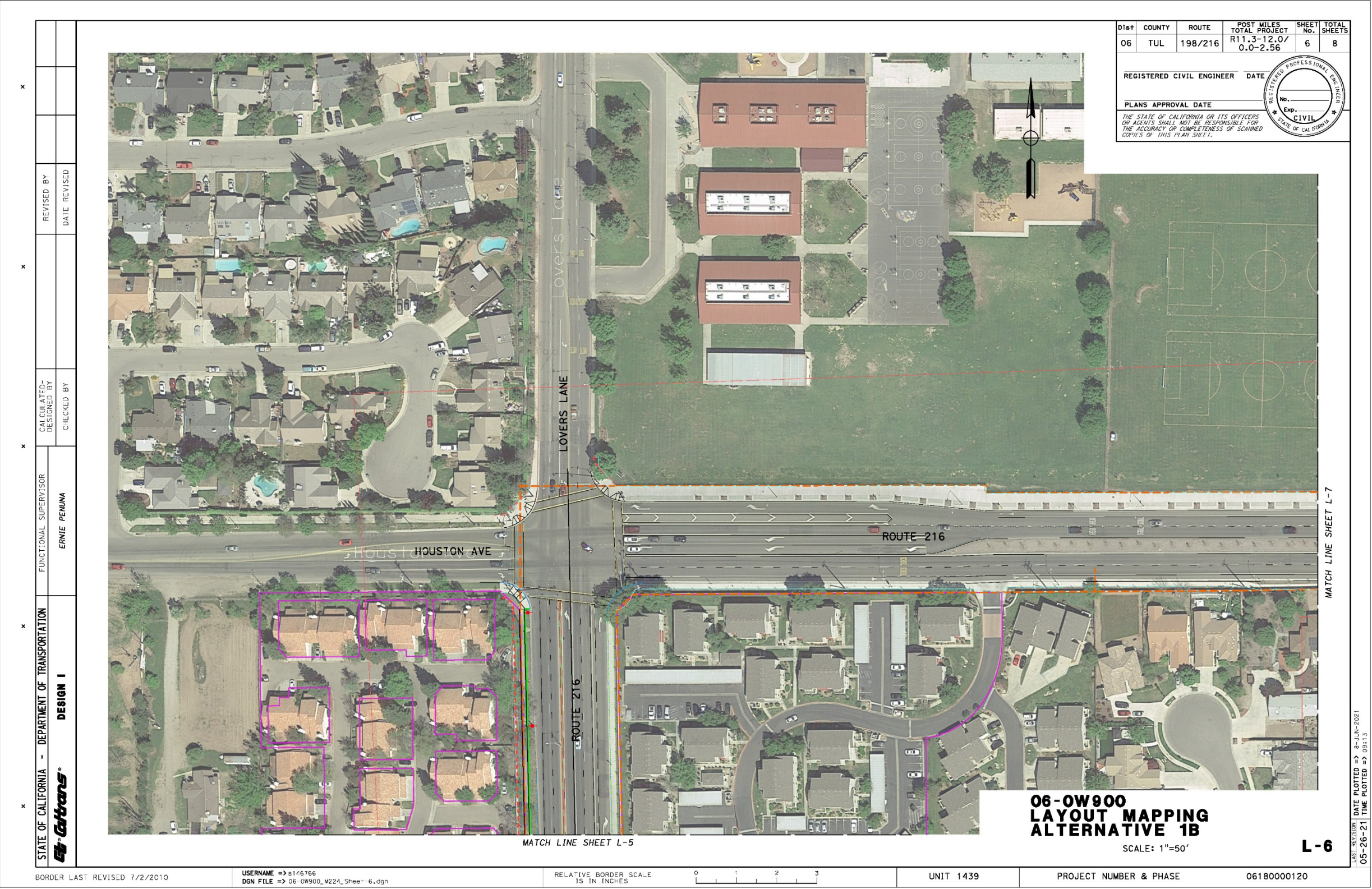


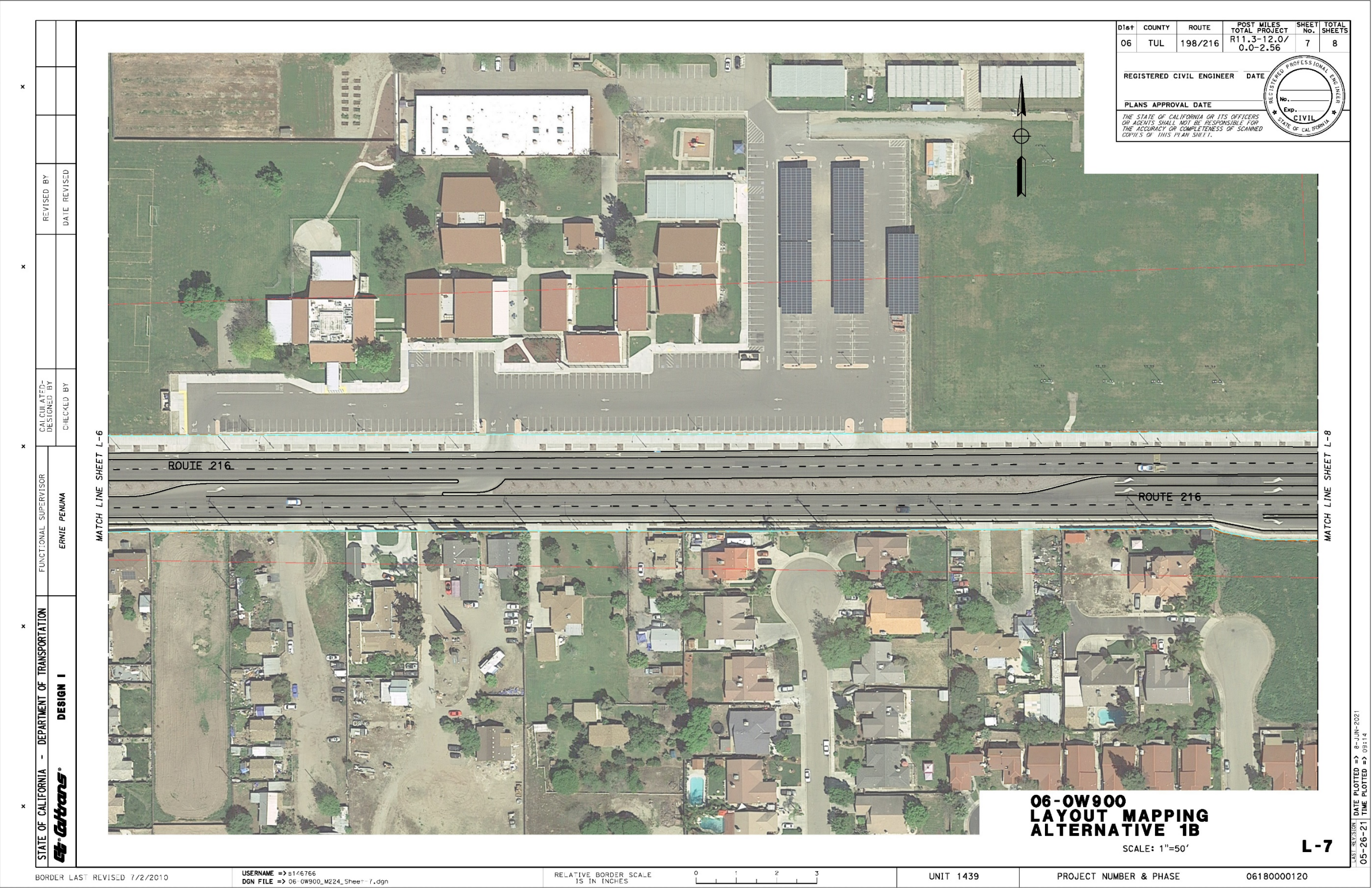














Appendix E Air Quality Conformity

Hildebrand, Maya@DOT

From: Vaughn, Joseph (FHWA) <Joseph.Vaughn@dot.gov>
Sent: Monday, October 19, 2020 4:12 PM
To: Hildebrand, Maya@DOT; Alex Marcucci; Bagde, Abhijit J@DOT; Ryan Niblock; Ahron Hakimi (ahakimi@kerncog.org); Arellano, Alexis@DOT; chesley sjcog.org; Anita Lee; Mahaney, Ann@DOT; Anna Myers; Johnson, Antonio (FHWA); Becky Napier (bnapier@kerncog.org); Ben Giuliani (BGiuliani@tularecog.org); Ben Raymond; Braden Duran; De Terra, Bruce W@DOT; Knecht, Carey@ARB; Chris Jasper; Christopher Xiong; Crystal Yunker; Deel, David@DOT; Cheser, Dawn@CATC; Debbie Trujillo; Derek Winning; Diane Nguyen (nguyen@sjcog.org); Dylan Stone (dylan@maderactc.org); Ed Flickinger; Edith Robles; Elisabeth Hahn; Elizabeth Wright (EWright@tularecog.org); Thompson, Erin M@DOT; Gabriel Gutierrez (ggutierrez@tularecog.org); Valencia, Gilbert@DOT; King, Heather@ARB; External, IOjeda@DOT; Kahrs, Jacqueline J@DOT; Gentry, Jamaica@DOT; Perrault, James R@DOT; Amanin, Jasmine (FHWA); Jeff Findley (Jeff@maderactc.org); Jennifer Soliz; Jessica Coria; Joseph Stramaglia (jstramaglia@kerncog.org); Swearingen, Joshua B@DOT; Kai Han (khan@fresnocog.org); Karina O'Connor (OConnor.Karina@epamail.epa.gov); Kasia Poleszczuk; Romero, Ken J@DOT; Mariant, Kevin B@DOT; Kevin Wing; Vu, Khanh D@DOT; Kim Klob (klob@sjcog.org); Kristine Cai (kcai@fresnocog.org); Lang Yu; Carr, Laura@ARB; Laura Lawrence; Kimura, Lezlie@ARB; Huy, Lima A@DOT; Mendibles, Lorena@DOT; Sanchez, Lucas@DOT; Evans, Marcus B@DOT; Mark Hays; Matt Fell; Navarro, Michael@DOT; Aljabiry, Muhaned M@DOT; Kalandiyur, Nesamani@ARB; Fung, Nicholas@DOT; patricia maderactc.org; Marquez, Paul Albert@DOT; Ramirez, Pedro@DOT; Martinez-Velez, Priscilla@DOT; Raquel Pacheco (rpacheco@kerncog.org); Rob Ball (rball@kerncog.org); Robert Phipps; Roberto Brady (RBrady@tularecog.org); Rochelle Invina; Tavit, Rodney A@DOT; Rory Mays; Rosa Park (rpark@stancog.org); Yazdi, Sadegh@DOT; Scherr, Sandra L@DOT; Santosh Bhattarai; Christian, Shalanda M@DOT; Martinez, Steven R@DOT; Suzanne Martinez; Vanderspek, Sylvia@ARB; Clemons, Tashia (FHWA); Matley, Ted (FTA); Ted Smalley (tsmalley@tularecog.org); terri.king co.kings.ca.us; Dumas, Thomas A@DOT; Tom Jordan; Tony Boren; Tray Wadsworth; Ty Phimmason (ty.phimmason@mcagov.org); Vincent Liu (vliu@kerncog.org); Tasat, Webster@ARB; Choi, Yoojoong@DOT
Subject: RE: Caltrans Lovers Lane 06-0W900 - PM 2.5 and PM 10 Hot-spot Conformity

EXTERNAL EMAIL. Links/attachments may not be safe.

FHWA concurs that this not a project of air quality concern (POAQC) . Thanks

Joseph Vaughn
Environmental Specialist
FHWA, CA Division
(916) 498-5346

Hildebrand, Maya@DOT

From: OConnor, Karina <OConnor.Karina@epa.gov>
Sent: Monday, October 19, 2020 4:45 PM
To: Hildebrand, Maya@DOT; Alex Marcucci; Bagde, Abhijit J@DOT; Ryan Niblock; Ahron Hakimi (ahakimi@kerncog.org); Arellano, Alexis@DOT; Andrew Chesley (chesley@sjcog.org); Lee, Anita; Mahaney, Ann@DOT; Anna Myers; Antonio Johnson; Becky Napier (bnapier@kerncog.org); Ben Giuliani (BGiuliani@tularecog.org); Ben Raymond; Braden Duran; De Terra, Bruce W@DOT; Knecht, Carey@ARB; Chris Jasper; Christopher Xiong; Crystal Yunker; Deel, David@DOT; Cheser, Dawn@CATC; Debbie Trujillo; Derek Winning; Diane Nguyen (nguyen@sjcog.org); Dylan Stone (dylan@maderactc.org); Ed Flickinger; Edith Robles; Elisabeth Hahn; Elizabeth Wright (EWright@tularecog.org); Thompson, Erin M@DOT; Gabriel Gutierrez (ggutierrez@tularecog.org); Valencia, Gilbert@DOT; King, Heather@ARB; External, IOjeda@DOT; Kahrs, Jacqueline J@DOT; Gentry, Jamaica@DOT; Perrault, James R@DOT; Jasmine Amanin; Jeff Findley (Jeff@maderactc.org); Jennifer Soliz; Jessica Coria; Joseph Stramaglia (jstramaglia@kerncog.org); Joseph Vaughn (Joseph.Vaughn@dot.gov); Swearingen, Joshua B@DOT; Kai Han (khan@fresnocog.org); Kasia Poleszczuk; Romero, Ken J@DOT; Mariant, Kevin B@DOT; Kevin Wing; Vu, Khanh D@DOT; Kim Kloebe (kloebe@sjcog.org); Kristine Cai (kcai@fresnocog.org); Lang Yu; Carr, Laura@ARB; Lawrence, Laura; Kimura, Lezlie@ARB; Huy, Lima A@DOT; Mendibles, Lorena@DOT; Sanchez, Lucas@DOT; Evans, Marcus B@DOT; Mark Hays; Matt Fell; Navarro, Michael@DOT; Aljabiry, Muhaned M@DOT; Kalandiyur, Nesamani@ARB; Fung, Nicholas@DOT; Patricia Taylor (patricia@maderactc.org); Marquez, Paul Albert@DOT; Ramirez, Pedro@DOT; Martinez-Velez, Priscilla@DOT; Raquel Pacheco (rpacheco@kerncog.org); Rob Ball (rball@kerncog.org); Robert Phipps; Roberto Brady (RBrady@tularecog.org); Rochelle Invina; Tavitas, Rodney A@DOT; Mays, Rory; Rosa Park (rpark@stancog.org); Yazdi, Sadegh@DOT; Scherr, Sandra L@DOT; Santosh Bhattarai; Christian, Shalanda M@DOT; Martinez, Steven R@DOT; Suzanne Martinez; Vanderspek, Sylvia@ARB; Tashia Clemons; Ted Matley (Ted.Matley@fta.dot.gov); Ted Smalley (tsmalley@tularecog.org); Terri King (terri.king@co.kings.ca.us); Dumas, Thomas A@DOT; tom.jordan@valleyair.org; Tony Boren; Tray Wadsworth; Ty Phimmasone (ty.phimmasone@mcagov.org); Vincent Liu (vliu@kerncog.org); Tasat, Webster@ARB; Choi, Yoojoong@DOT
Subject: RE: Caltrans Lovers Lane 06-0W900 - PM 2.5 and PM 10 Hot-spot Conformity

EXTERNAL EMAIL. Links/attachments may not be safe.

EPA concurs that this is not a project of air quality concern.

Thanks, Karina

Karina OConnor
 Air Planning Office
 US EPA Region 9 (AIR-2)
 75 Hawthorne St.
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Appendix F Summary of Relocation Benefits

California Department of Transportation Relocation Assistance Program

RELOCATION ASSISTANCE ADVISORY SERVICES

DECLARATION OF POLICY

“The purpose of this title is to establish a uniform policy for fair and equitable treatment of persons displaced as a result of federal and federally assisted programs in order that such persons shall not suffer disproportionate injuries as a result of programs designed for the benefit of the public as a whole.”

The Fifth Amendment to the U.S. Constitution states, “No Person shall...be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use without just compensation.” The Uniform Act sets forth in statute the due process that must be followed in Real Property acquisitions involving federal funds. Supplementing the Uniform Act is the government-wide single rule for all agencies to follow, set forth in 49 Code of Federal Regulations Part 24. Displaced individuals, families, businesses, farms, and nonprofit organizations may be eligible for relocation advisory services and financial benefits, as discussed below.

FAIR HOUSING

The Fair Housing Law (Title VIII of the Civil Rights Act of 1968) sets forth the policy of the U.S. to provide, within constitutional limitations, for fair housing. This act, and as amended, makes discriminatory practices in the purchase and rental of most residential units illegal. Whenever possible, minority persons shall be given reasonable opportunities to relocate to any available housing regardless of neighborhood, as long as the replacement dwellings are decent, safe, and sanitary and are within their financial means. This policy, however, does not require the Department to provide a person a larger payment than is necessary to enable a person to relocate to a comparable replacement dwelling.

Any persons to be displaced will be assigned to a relocation advisor, who will work closely with each displacee in order to see that all payments and benefits are fully utilized and that all regulations are observed, thereby avoiding the possibility of displacees jeopardizing or forfeiting any of their benefits or payments. At the time of the initiation of negotiations (usually the first written offer to purchase), owner-occupants are given a detailed explanation of the state’s relocation services. Tenant occupants of properties to be acquired are contacted soon after the initiation of negotiations and also are given a detailed explanation of the Caltrans Relocation Assistance Program. To avoid loss of possible benefits, no individual, family, business,

farm, or nonprofit organization should commit to purchase or rent a replacement property without first contacting a Department relocation advisor.

RELOCATION ASSISTANCE ADVISORY SERVICES

In accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, the Department will provide relocation advisory assistance to any person, business, farm, or nonprofit organization displaced as a result of the acquisition of real property for public use, so long as they are legally present in the U.S. The Department will assist eligible displacees in obtaining comparable replacement housing by providing current and continuing information on the availability and prices of both houses for sale and rental units that are “decent, safe, and sanitary.” Nonresidential displacees will receive information on comparable properties for lease or purchase (for business, farm, and nonprofit organization relocation services, see below).

Residential replacement dwellings will be in a location generally not less desirable than the displacement neighborhood at prices or rents within the financial ability of the individuals and families displaced, and reasonably accessible to their places of employment. Before any displacement occurs, comparable replacement dwellings will be offered to displacees that are open to all persons regardless of race, color, religion, sex, national origin, and consistent with the requirements of Title VIII of the Civil Rights Act of 1968. This assistance will also include the supplying of information concerning federal and state assisted housing programs and any other known services being offered by public and private agencies in the area.

Persons who are eligible for relocation payments and who are legally occupying the property required for the project will not be asked to move without first being given at least 90 days’ written notice. Residential occupants eligible for relocation payment(s) will not be required to move unless at least one comparable “decent, safe, and sanitary” replacement dwelling, available on the market, is offered to them by the Department.

RESIDENTIAL RELOCATION FINANCIAL BENEFITS

The Relocation Assistance Program will help eligible residential occupants by paying certain costs and expenses. These costs are limited to those necessary for or incidental to the purchase or rental of a replacement dwelling and actual reasonable moving expenses to a new location within 50 miles of the displacement property. Any actual moving costs in excess of the 50 miles are the responsibility of the displacee. The Residential Relocation Assistance Program can be summarized as follows:

Moving Costs

Any displaced person, who lawfully occupied the acquired property, regardless of the length of occupancy in the property acquired, will be eligible for reimbursement of moving costs. Displacees will receive either the actual reasonable costs involved in moving themselves and personal property up to a maximum of 50 miles or a fixed payment based on a fixed moving cost schedule. Lawful occupants who move into the displacement property after the initiation of negotiations must wait until the Department obtains control of the property in order to be eligible for relocation payments.

Purchase Differential

In addition to moving and related expense payments, fully eligible homeowners may be entitled to payments for increased costs of replacement housing.

Homeowners who have owned and occupied their property for 90 days or more prior to the date of the initiation of negotiations (usually the first written offer to purchase the property) may qualify to receive a price differential payment and may qualify to receive reimbursement for certain nonrecurring costs incidental to the purchase of the replacement property. An interest differential payment is also available if the interest rate for the loan on the replacement dwelling is higher than the loan rate on the displacement dwelling, subject to certain limitations on reimbursement based upon the replacement property interest rate.

Rent Differential

Tenants and certain owner-occupants (based on length of ownership) who have occupied the property to be acquired by the Department prior to the date of the initiation of negotiations may qualify to receive a rent differential payment. This payment is made when the Department determines that the cost to rent a comparable “decent, safe, and sanitary” replacement dwelling will be more than the present rent of the displacement dwelling. As an alternative, the tenant may qualify for a down payment benefit designed to assist in the purchase of a replacement property and the payment of certain costs incidental to the purchase, subject to certain limitations noted under the *Down Payment* section below. To receive any relocation benefits, the displaced person must buy or rent and occupy a “decent, safe and sanitary” replacement dwelling within 1 year from the date the Department takes legal possession of the property, or from the date the displacee vacates the displacement property, whichever is later.

Down Payment

The down payment option has been designed to aid owner-occupants of less than 90 days and tenants in legal occupancy prior to the Department's

initiation of negotiations. The one-year eligibility period in which to purchase and occupy a “decent, safe and sanitary” replacement dwelling will apply.

Last Resort Housing

Federal regulations (49 Code of Federal Regulations 24) contain the policy and procedure for implementing the Last Resort Housing Program on Federal-aid projects. Last Resort Housing benefits are, except for the amounts of payments and the methods in making them, the same as those benefits for standard residential relocation as explained above. Last Resort Housing has been designed primarily to cover situations where a displacee cannot be relocated because of lack of available comparable replacement housing, or when the anticipated replacement housing payments exceed the limits of the standard relocation procedure, because either the displacee lacks the financial ability or other valid circumstances.

After the initiation of negotiations, the Department will, within a reasonable length of time, personally contact the displacees to gather important information, including the following:

- Number of people to be displaced.
- Specific arrangements needed to accommodate any family member(s) with special needs.
- Financial ability to relocate into comparable replacement dwelling, which will adequately house all members of the family.
- Preferences in area of relocation.
- Location of employment or school.

NONRESIDENTIAL RELOCATION ASSISTANCE

The Nonresidential Relocation Assistance Program provides assistance to businesses, farms, and nonprofit organizations in locating suitable replacement property and reimbursement for certain costs involved in relocation. The Relocation Advisory Assistance Program will provide current lists of properties offered for sale or rent, suitable for a particular business’s specific relocation needs. The types of payments available to eligible businesses, farms, and nonprofit organizations are: searching and moving expenses, and possibly reestablishment expenses, or a fixed in lieu payment instead of any moving, searching, and reestablishment expenses. The payment types can be summarized as follows:

Moving Expenses

Moving expenses may include the following actual, reasonable costs:

- The moving of inventory, machinery, equipment, and similar business-related property, including: dismantling, disconnecting, crating, packing, loading, insuring, transporting, unloading, unpacking, and reconnecting of personal property. Items identified as real property may not be moved under the Relocation Assistance Program. If the displacee buys an item pertaining to the Realty back at salvage value, the cost to move that item is borne by the displacee.
- Loss of tangible personal property provides payment for actual, direct loss of personal property that the owner is permitted not to move.
- Expenses related to searching for a new business site, up to \$2,500, for reasonable expenses actually incurred.

Reestablishment Expenses

Reestablishment expenses related to the operation of the business at the new location, up to \$25,000 for reasonable expenses actually incurred.

Fixed In Lieu Payment

A fixed payment in lieu of moving, searching, and reestablishment payments may be available to businesses that meet certain eligibility requirements. This payment is an amount equal to half the average annual net earnings for the last two taxable years prior to the relocation and may not be less than \$1,000 nor more than \$40,000.

ADDITIONAL INFORMATION

Reimbursement for moving costs and replacement housing payments are not considered income for the purpose of the Internal Revenue Code of 1954 or for the purpose of determining the extent of eligibility of a displacee for assistance under the Social Security Act or any other law, except for any federal law providing local “Section 8” Housing Programs.

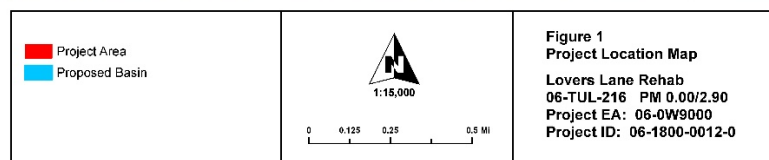
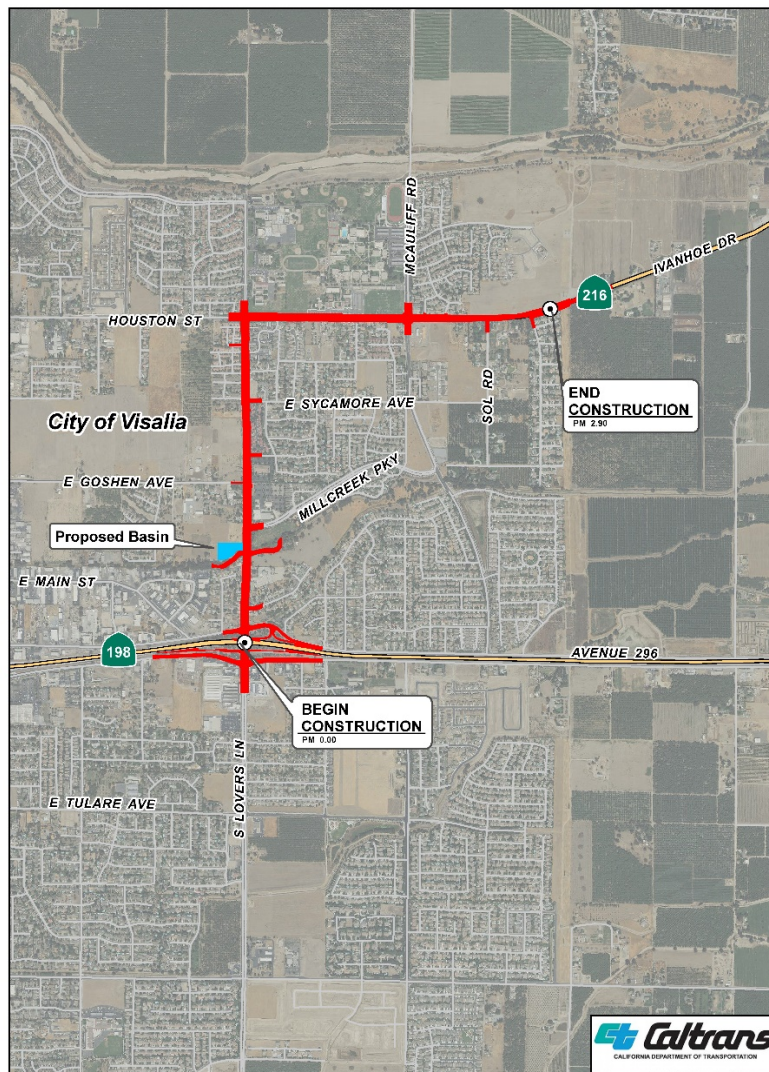
Any person, business, farm, or nonprofit organization that has been refused a relocation payment by the Department relocation advisor or believes that the payment(s) offered by the agency are inadequate may appeal for a special hearing of the complaint. No legal assistance is required. Information about the appeal procedure is available from the relocation advisor.

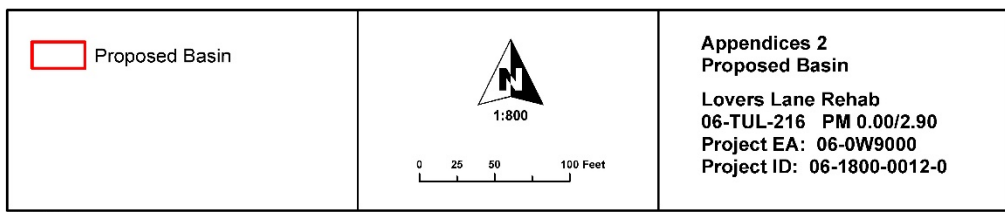
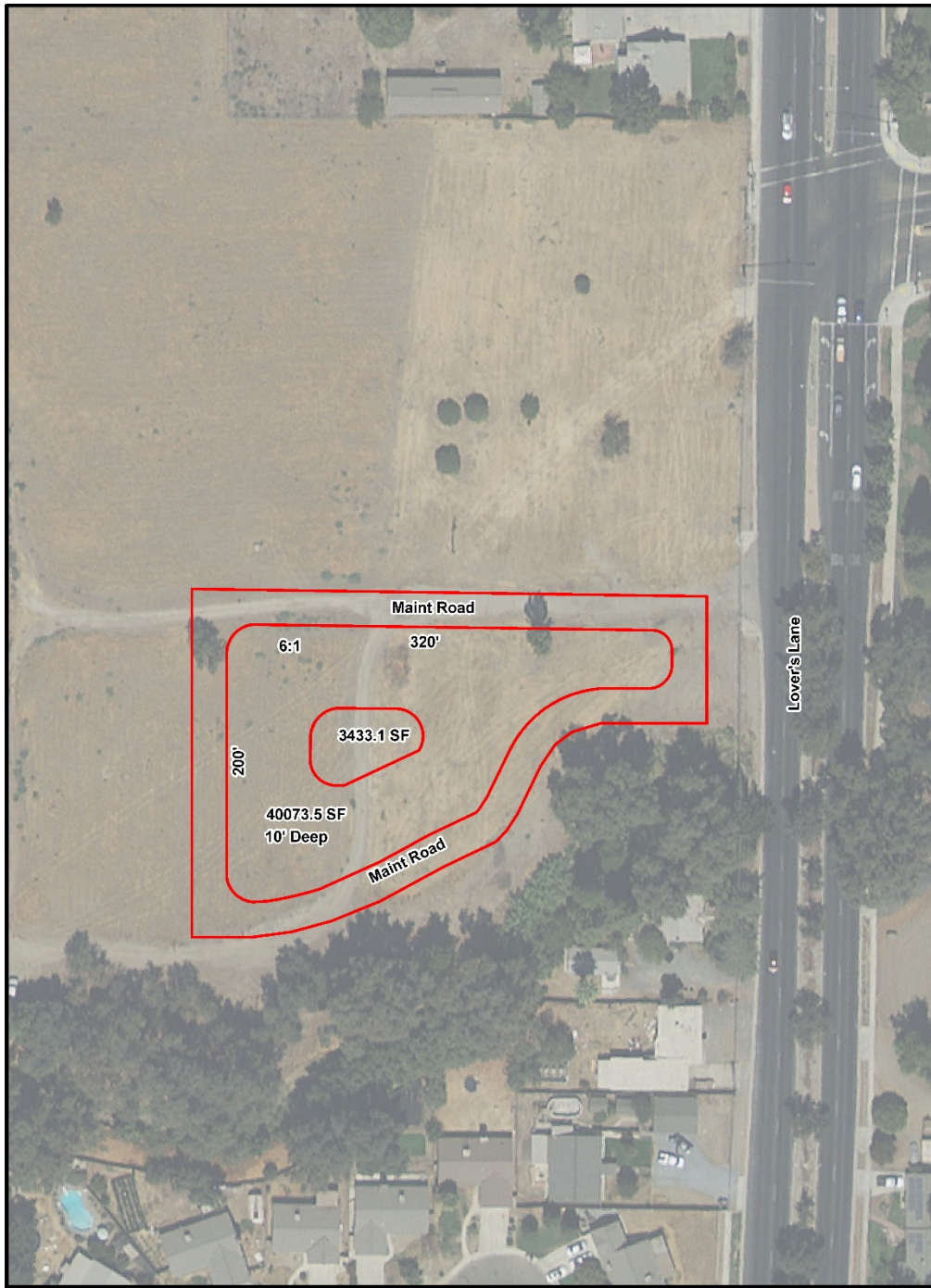
California law allows for the payment for lost goodwill that arises from the displacement for a public project. A list of ineligible expenses can be obtained from the Department’s Division of Right of Way and Land Surveys. California’s law and the federal regulations covering relocation assistance provide that no payment shall be duplicated by other payments being made by the displacing agency.

<https://dot.ca.gov/programs/right-of-way/relocation-assistance-program>.

Appendix G Stormwater Basin

The location and the size of the basin shown on the mapping are preliminary and are based on an initial hydrologic study that was developed to document all the environmental impacts of the project. It is probable that the size and location of the basins may change as the design of the project progresses. Alternatively, Caltrans may be able to discharge the stormwater to master-planned basins owned and operated by a public entity if one is available before construction.





Appendix H Comment Letters and Responses

The following text has been added since the draft environmental document:

A public notice was posted in the Visalia Times-Delta on March 5, 2021. A public notice in Spanish was posted in Noticiero Semanal on March 5, 2021. All newspaper publications stated the public comment period ran from March 5, 2021, to April 5, 2021, and offered the public an opportunity to request a virtual open house.

There were no requests for a virtual open house during public circulation. One comment was received from the State Clearinghouse and Planning Unit (see below). A Caltrans response follows this comment.

Comment From: State Clearinghouse and Planning Unit

The State Clearinghouse (SCH) would like to inform you that our office will transition from providing close of review period acknowledgement on your CEQA environmental document, at this time. During the phase of not receiving notice on the close of review period, comments submitted by State Agencies at the close of review period (and after) are available on CEQAnet.

Please visit: <https://ceqanet.opr.ca.gov/Search/Advanced>

Filter for the SCH# of your project OR your “Lead Agency”

If filtering by “Lead Agency”

Select the correct project

Only State Agency comments will be available in the “attachments” section: bold and highlighted

Thank you for using CEQA Submit.

Meng Heu

Office of Planning and Research (OPR)

State Clearing House

Response to comment 1: Thank you for circulating the Initial Study with Proposed Mitigated Negative Declaration/Environmental Assessment for the Lovers Lane Operational Improvements and Rehabilitation Project and acknowledging Caltrans’ compliance with California Environmental Quality Act requirements pursuant to State Clearinghouse guidelines. Caltrans has recorded the corresponding State Clearinghouse number for this project.

List of Technical Studies

Air Quality Report (November 2020)

Natural Environment Study (August 2020)

Initial Site Assessment (September 2020)

Preliminary Site Investigation (January 2021)

Visual Impact Assessment (September 2020)

Archaeological Survey Report (November 2020)

Historic Property Survey Report (November 2020)

Location Hydraulic Study (September 2020)

Paleontological Identification Report (November 2020)

Paleontological Evaluation Report (November 2020)

Water Compliance Memorandum (August 2019)

Traffic Noise Compliance Study Memorandum (August 2020)

To obtain a copy of one or more of these technical studies/reports or the Initial Study/Environmental Assessment, please send your request to the following email address: d6.public.info@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).