Merced Pavement Anchor Project

On State Route 59 in Merced County
10-MER-59-PM R0.0-R12.1
Project Number 1018000284

Initial Study
with Proposed Mitigated Negative Declaration

Volume 1 of 2

Prepared by the
State of California Department of Transportation

December 2021

General Information About This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study, which examines the potential environmental impacts of alternatives being considered for the proposed project in Merced County in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the Caltrans District 10 Office at 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205, the Merced County Library at 2100 O Street, Merced, California 95340, and the Los Banos Branch of the Merced County Library at 1312 South 7th Street, Los Banos, California 93635.
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: C. Scott Guidi, District 10 Environmental Division, California Department of Transportation, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205. Submit comments via email to: Scott.Guidi@dot.ca.gov.
- Submit comments by the deadline: March 21, 2022.

What happens next:

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

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

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: C. Scott Guidi, District 10 Environmental Division, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839 (Voice), or use the California Relay Service 1-800-735-2929 (Teletype to Voice), 1-800-735-2922 (Voice to Teletype), 1-800-855-3000 (Spanish Teletype to Voice and Voice to Teletype), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

10-MER-59-PM R0.0-R12.1
Project Number 1018000284

Roadway improvements on State Route 59 from post miles R0.0 to R12.1 in Merced County

INITIAL STUDY
with Proposed Mitigated Negative Declaration

Submitted Pursuant to: (State) Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

James Henke

James P. Henke
Environmental Office Chief, District 10
California Department of Transportation
CEQA Lead Agency

12/9/2021

Date

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

C. Scott Guidi, 1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205; 209-479-1839

DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

District-County-Route-Post Mile: 10-MER-59-PM R0.0-R12.1

EA/Project Number: EA 10-0V690 and Project Number 1018000284

Project Description

The California Department of Transportation (Caltrans) proposes to perform roadway improvements along State Route 59 between post mile R0.0 and post mile R12.1 in Merced County. The existing pavement has deteriorated, resulting in poor ride quality and requiring elevated maintenance efforts. A cold plane and overlay strategy would be used to preserve the pavement. The scope of work for the project would include repairing and replacing the existing pavement and replacing identified damaged culverts and end treatments.

There are four bridges within the project area. Three of the bridges—Owens Creek Bridge, Miles Creek Bridge, and Deadman Creek Bridge—would require barrier and block extensions, replacement of existing metal beam guardrails to the Midwest Guardrail System, and replacement of nonstandard end treatments and terminal systems. The fourth bridge, Mariposa Creek Bridge, would be removed and replaced with a higher bridge to eliminate the continuous flooding that occurs at this location. Caltrans has identified six locations where utility poles would need to be relocated.

Determination

An Initial Study has been prepared by Caltrans, District 10.

On the basis of this study, it is determined that the proposed project will have no effect on aesthetics, air quality, agriculture, and forest resources, cultural resources, energy, geology and soils, hydrology and water quality, land use and planning, mineral resources, noise, paleontological resources, population and housing, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire.

The proposed project would have no significant effect on greenhouse gas emissions or hazards and hazardous materials.

On the basis of this study, it is determined that the proposed action with the incorporation of the identified mitigation measure would have a less than significant effect on biological resources for the following reason:

- Compensate for the Permanent Loss of Waters of the U.S. and Waters of the State. The proposed project would have a permanent loss of up to 0.041 acres of Waters of the U.S. and Waters of the State associated with the placement of rock slope protection along the banks of Mariposa Creek. To compensate for this loss, Caltrans would purchase credits at an approved mitigation bank or contribute to an agency-approved in-lieu fee program to ensure no net loss of wetland functions and values.

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James P. Henke
Environmental Office Chief, District 10
California Department of Transportation

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Date

Table of Contents

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) proposes to perform roadway improvements along State Route 59 between post miles R0.0 and R12.1 in Merced County. See Figure 1-1 for the project vicinity map and Figure 1-2 for the project location map. The existing pavement has deteriorated, resulting in poor ride quality and requiring elevated maintenance efforts. Additionally, the project would address the health of the four bridges within the project area along State Route 59 and the continued flooding issues at the Mariposa Creek Bridge.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to improve traffic conditions, drainage issues, nonstandard metal beam guardrails and end treatments, and bridges within the project area.

1.2.2 Need

The project is needed to address the rapid and costly deterioration of the roadway surface and culverts and correct the nonstandard metal beam guardrails and end treatments within the project area. The project is also needed to address the health of the four bridges identified within the project area and address the ongoing flooding that occurs at the Mariposa Creek Bridge.

1.3 Project Description

The California Department of Transportation (Caltrans) proposes to perform roadway improvements along State Route 59 between post miles R0.0 and R12.1 in Merced County. See Figure 1-1 for the project vicinity map and Figure 1-2 for the project location map. The existing pavement has deteriorated, resulting in poor ride quality and requiring elevated maintenance efforts. A cold plane and overlay strategy would be used to preserve the pavement. The scope of work for the project would include repairing and replacing the existing pavement and replacing identified damaged culverts and end treatments.

There are four bridges within the project area. Three of the bridges—Owens Creek Bridge, Miles Creek Bridge, and Deadman Creek Bridge—would require barrier and block extensions, replacement of existing metal beam guardrails to the Midwest Guardrail System, and replacement of nonstandard end treatments and terminal systems. The fourth bridge, Mariposa Creek Bridge, would be removed and replaced with a higher bridge to eliminate the continuous flooding that occurs at this location.

Caltrans has identified six locations where utility poles would need to be relocated to accommodate the new Mariposa Creek Bridge. Also, new or replaced culverts and dry wells are planned within the project limits. Caltrans has identified the following culvert/dry well replacement or installation locations along State Route 59 in Merced County:

- Post Mile 1.01 (Jefferson Road), replace the existing 18-inch corrugated metal pipe culvert under Jefferson Road with a 24-inch reinforced concrete pipe.
- Post Mile 1.03, a new 24-inch cross culvert would be built under Jefferson Road. Flared end sections and rock slope protection would also be included for this culvert.
- Post Mile 1.99 and Post Mile 2.05, build two new 24-inch cross culverts under State Route 59. Flared end sections and rock slope protection would also be included for this culvert.
- Post Mile 2.02 (Washington Road), build two new 24-inch cross culverts under Washington Road in both directions (eastbound and westbound).
- Post Mile 3.6, replace an existing dry well and build two new additional dry wells 50 feet north and 50 feet south from the existing dry well.
- Post Mile 4.56 (Lincoln Road), replace the existing 18-inch corrugated metal pipe culvert with a 24-inch reinforced concrete pipe culvert. Flared end sections and rock slope protection would also be included.
- Post Mile 6.03—Replace existing 30-inch, double-barrel corrugated metal pipes with 30-inch reinforced concrete pipe culverts. Flared end sections and rock slope protection would also be included.

Caltrans has identified four bridgework locations along State Route 59, which include the following:

- Deadman Creek Bridge Post Mile 7.92 (Bridge Number 39-0061): Structure work would include building concrete barrier transitions on each end of the existing Type 25 barriers to accommodate a new Midwest Guardrail System. Structure work would also include removing unsound concrete and installing a 1-inch thick polyester concrete overlay.
- Owens Creek Bridge Post Mile 11.37 (Bridge Number 39-0065): Structure work would include removing the existing 3-inch asphalt concrete overlay; repairing deck spall within the shoulder areas; treating the existing

concrete shoulder areas with methacrylate; placing a new, 1-inch asphalt concrete overlay within the shoulder areas; and building concrete barrier transitions on each end of the existing Type 25 barriers to accommodate a new Midwest Guardrail System. The bare concrete overlay within the edge of travel ways is to remain bare. The proposed off-bridge overlay would need to transition down to the existing concrete deck surface.

- Mariposa Creek Bridge Post Mile 11.89 (Bridge Number 39-0063): The existing four-span concrete slab bridge would be removed and replaced with a three-span, 110-foot-long, 43.5-foot-wide, 2-foot-deep conventional reinforced concrete or precast/prestressed concrete slab structure. To minimize the structure depth and roadway profile grade raise, the replacement is expected to consist of multiple driven pile extensions that would be necessary at each pier within the creek; the abutments are expected to be found on driven piles. The proposed replacement construction would be on the existing alignment without detouring traffic from the site. Stage construction with one-way traffic control would be necessary. Access to the creek would be required for bridge removal, dewatering, and new bridge construction operations.
- Two existing culverts within the existing Caltrans right-of-way (northwest and northeast sides of Mariposa Creek Bridge) that convey water into Mariposa Creek via flap gates from the existing storm drain ditches would be relocated and realigned for construction of the new elevated bridge. As part of the proposed design, several of the drainage ditches would have breaks filled in with dirt to allow maintenance vehicles to pass over the ditches. Culverts would be placed between the ditches to ensure water conveyance between the ditches is connected.
- Miles Creek Bridge Post Mile 11.37 (Bridge Number 39-0104): Structure work would include removing the existing 5-inch asphalt concrete; repairing deck spall; treating the existing bridge deck with methacrylate; placing a new, 1-inch maximum asphalt concrete overlay; and building concrete barrier transitions on each end of the existing Type 27 barriers to accommodate a new Midwest Guardrail System.

Pacific Gas and Electric Company utility relocations would occur at the following locations to accommodate the new Mariposa Creek Bridge:

- Post Mile 10.22 (will be determined during the Plans, Specifications, and Estimates phase)
- Post Mile 10.29
- Post Mile 10.35
- Post Mile 10.42
- Post Mile 10.49
- Post Mile 10.54 (will be determined during the Plans, Specifications, and Estimates phase)

Figure 1-1 Project Vicinity Map

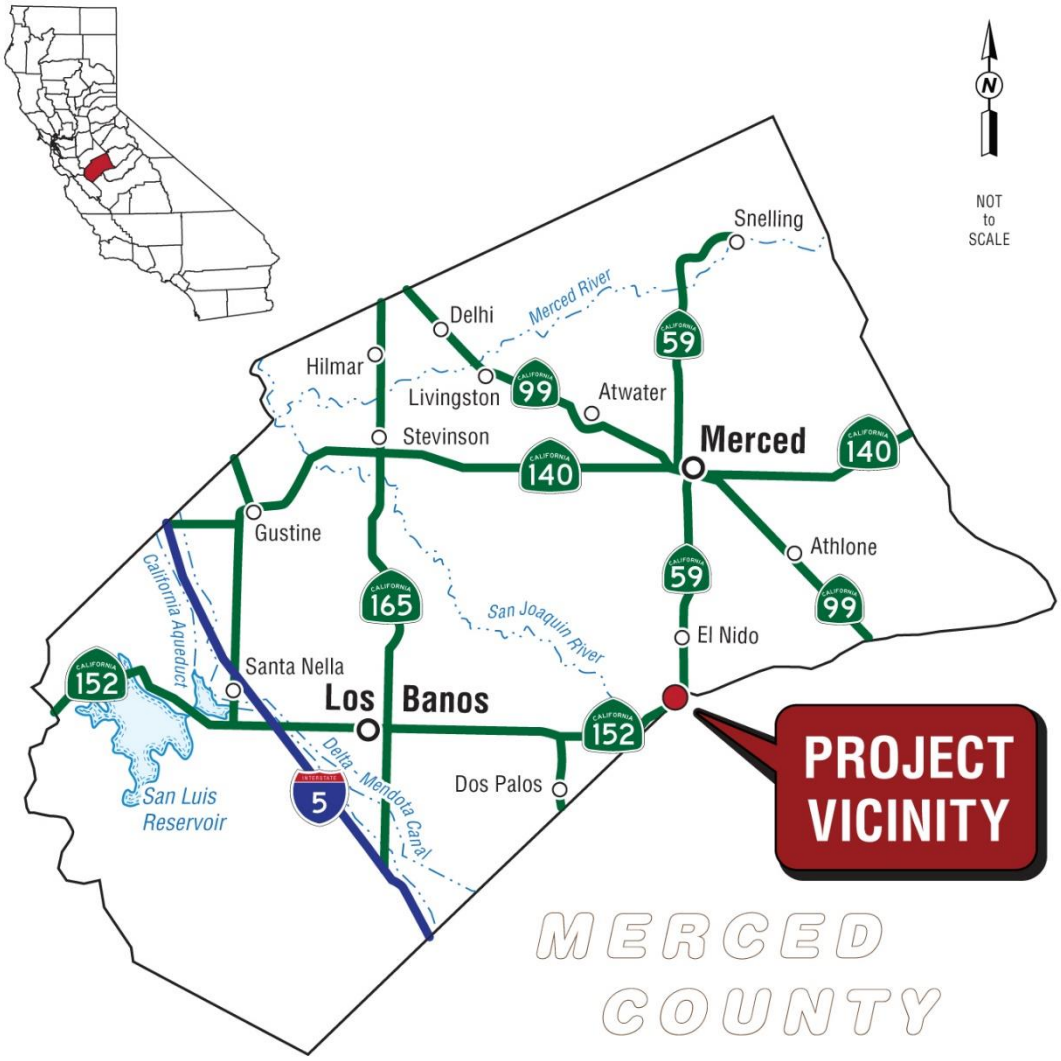
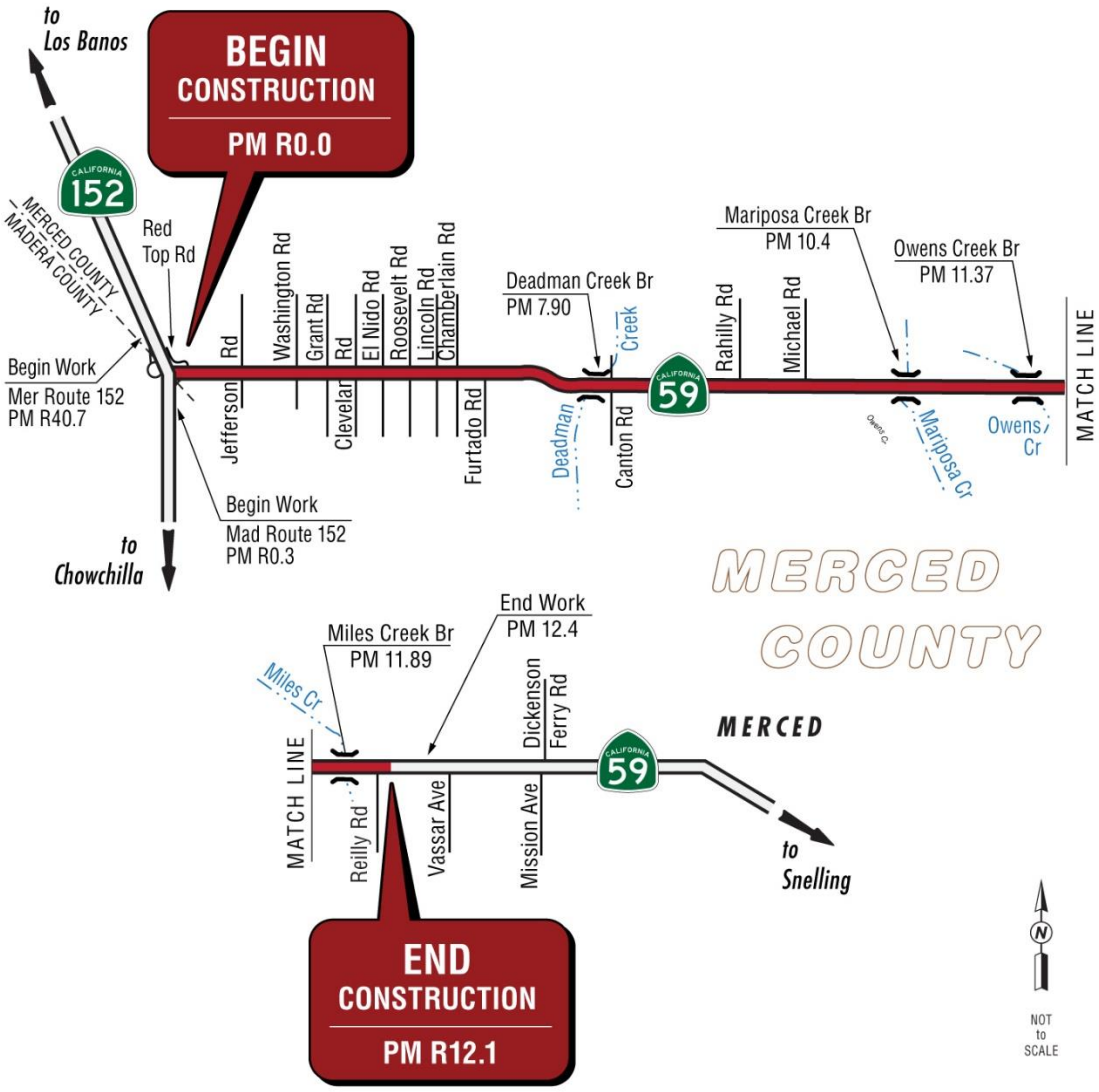


Figure 1-2 Project Location Map



1.4 Project Alternatives

1.4.1 Build Alternatives

The build alternative would make roadway improvements along State Route 59, between post miles R0.0 and R12.1 in Merced County. The existing pavement has deteriorated, resulting in poor ride quality and requiring elevated maintenance efforts. A cold plane and overlay strategy would be used to preserve the pavement. The scope of work for the project would include repairing and replacing the existing pavement and replacing identified damaged culverts and end treatments.

There are four bridges within the project area. Three of the bridges—Owens Creek Bridge, Miles Creek Bridge, and Deadman Creek Bridge—would

require barrier and block extensions, replacement of existing metal beam guardrails to the Midwest Guardrail System, and replacement of nonstandard end treatments and terminal systems. The fourth bridge, Mariposa Creek Bridge, would be replaced with a higher bridge to eliminate the continuous flooding that occurs at this location.

Caltrans has identified six locations where utility poles would need to be relocated to accommodate the new Mariposa Creek Bridge; permanent right-of-way acquisitions and temporary construction easements would be necessary to accommodate the Mariposa Creek Bridge replacement.

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 proposed project. These measures are listed later in this chapter under "Standard Measures and Best Management Practices Included in All Alternatives."

1.4.2 No-Build (No-Action) Alternative

If no action is taken and the project is not built, the existing roadway, culvert, guardrail deficiencies, bridge, and flooding issues would not be addressed.

1.5 Standard Measures and Best Management Practices Included in All Alternatives

- Caltrans Standard Specifications Section 10-5: Dust Control
- Caltrans Standard Specifications Section 13-1: Water Pollution
- Caltrans Standard Specifications Section 14-7.03: Discovery of Unanticipated Paleontological Resources
- Caltrans Standard Specifications Section 14-8.02: Noise Control
- Caltrans Standard Specifications Section 14-9.02: Air Pollution Control

1.6 Discussion of the NEPA Categorical Exclusion

This document contains information regarding compliance with the California Environmental Quality Act (CEQA) and other state laws and regulations. Separate environmental documentation, supporting a Categorical Exclusion determination, will be prepared in accordance with the National Environmental Policy Act. When needed for clarity, or as required by CEQA, this document may contain references to federal laws and/or regulations (CEQA, for example, requires consideration of adverse effects on species identified as a candidate, sensitive, or special-status species by the U.S. National Marine Fisheries Service and the U.S. Fish and Wildlife Service—that is, species protected by the Federal Endangered Species Act).

1.7 Permits and Approvals Needed

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

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	California Department of Fish and Game Code Section 1600 Lake or Streambed Alteration Agreement	Application for the Section 1600 Lake or Streambed Alteration Agreement would be obtained during the Plans, Specifications, and Estimates phase of the project.
Regional Water Quality Control Board	Regional Water Quality Control Board, 401 Certification	Application for the 401 Certification would be obtained during the Plans, Specifications, and Estimates phase of the project.
Central Valley Regional Water Quality Control Board	Clean Water Act Section 402: National Pollutant Discharge Elimination System Permit	Application for the 402 Permit would be obtained during the Plans, Specifications, and Estimates phase of the project.
U.S. Army Corps of Engineers	U.S. Army Corps of Engineers, 404 Nationwide Permit	Application for the 404 Permit would be obtained during the Plans, Specifications, and Estimates phase of the project.
U.S. Fish and Wildlife Service	Endangered Species Act Section 7: Letter of Concurrence	Consultation with the U.S. Fish and Wildlife Service would be done during the Plans, Specifications, and Estimates phase of the project.
National Marine Fisheries Service	Magnuson-Stevens Fishery Conservation and Management Act	Consultation between Caltrans and the National Marine Fisheries Service occurred on November 23, 2021. Caltrans requested concurrence that the proposed project is not likely to adversely affect the National Marine Fisheries Service's Endangered Species Act-listed species and/or designated critical habitat. The National Marine Fisheries Service concurred with Caltrans' determination with a letter dated December 1, 2021.

Chapter 2 CEQA Evaluation

2.1 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 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.

"No Impact" determinations in each section are based on the scope, description, and location of the proposed project as well as the appropriate technical report (bound separately in Volume 2), and no further discussion is included in this document.

2.1.1 Aesthetics

Considering the information in the Community Impact Assessment dated April 12, 2021, Caltrans List of Eligible and Officially Designated State Highways, and the List of Officially Designated County Scenic Highways, the following significance determinations have been made:

Except as provided in Public Resources Code Section 21099:

Question—Would the project:	CEQA Significance Determinations for Aesthetics
a) Have a substantial adverse effect on a scenic vista?	**No Impact**
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Aesthetics
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	**No Impact**
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	**No Impact**

2.1.2 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.

After coordination with the U.S. Department of Agriculture, Natural Resources Conservation Service and considering the information in the Agriculture and Forest Resources Conversion Assessment Memorandum dated September 16, 2021, the following significance determinations have been made.

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Agriculture and Forest Resources
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	**No Impact**
c) Conflict with existing zoning, 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**
d) Result in the loss of forest land or conversion of forest land to non-forest use?	**No Impact**
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use?	**No Impact**

2.1.3 Air Quality

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

Considering the information in the Air Quality Memorandum dated September 14, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Air Quality
a) Conflict with or obstruct implementation of the applicable air quality plan?	**No Impact**
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**
c) Expose sensitive receptors to substantial pollutant concentrations?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Air Quality
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	**No Impact**

2.1.4 Biological Resources

Considering the information in the Natural Environment Study dated November 2, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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, or National Oceanic Atmospheric Administration Fisheries?	**Less Than Significant Impact**
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 Impact**
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**
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**
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**No Impact**

Question—Would the project:	CEQA Significance Determinations for Biological Resources
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**

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, or National Oceanic Atmospheric Administration Fisheries.

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.

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.

Affected Environment

Per the Natural Environment Study, there are five intermittent streams within the project area and were characterized as non-wetland and wetland waters. In addition, several wetland habitats are present in the project area, including a vernal swale that partially crosses into the project area, freshwater emergent wetlands, and scrub-shrub wetlands, see Section 4.1.1 of the Natural Environment Study. The Natural Environment Study listed the affected aquatic resources that were identified in the proposed project area and determined the temporary and permanent impacts associated with the project and its construction activities.

There are three current design options associated with the removal and construction of the new Mariposa Creek Bridge. Design Option 1 includes the removal of three piers (totaling about 330 square feet) and the installation of two new piers (totaling about 38 square feet) within the Mariposa Creek channel. Design Options 2 and 3 are free span designs that would result in the removal of the three existing piers within the creek channel of Mariposa Creek.

Per the Natural Environment Study, dated November 2, 2021, the project supports five natural communities of special concern: intermittent stream (non-wetland water), scrub-shrub wetland (jurisdictional wetland), freshwater marsh wetland (jurisdictional wetland), vernal swale (jurisdictional wetland), and mixed riparian scrub (upland). Impacts on natural communities of special

concern are restricted to the Mariposa Creek Bridge site, where access to the creek channel would be required to install a stream diversion system, remove three existing bridge piers, and place rock slope protection along the creek banks next to the new bridge abutments.

The Natural Environment Study identified special-status wildlife species that occur in the project area. The special-status wildlife species are federally listed Brachiopods, California tiger salamanders, western pond turtles, giant garter snakes, San Joaquin kit foxes, Swainson's hawks, tricolored blackbirds, burrowing owls, and California Central Valley Steelheads.

The Natural Environment Study identified other protected and managed biological resources, such as migratory birds and invasive species.

Environmental Consequences

Waters of the U.S. and Waters of the State

The potential Waters of the U.S. and Waters of the State that would be impacted by the project would be the wetland and non-wetland waters associated with Mariposa Creek. Mariposa Creek is routinely managed by the local irrigation district and nearby agricultural landowners for flood protection. Based on historical aerial photographs, in-channel vegetation is routinely cut or removed or is washed out from high-velocity storm flows and regenerates in the next growing season. The creek and associated wetlands would continue to be disturbed and managed by future flood control maintenance activities. The quality of the wetland habitat and ongoing disturbance activities are important factors to consider in this impact analysis and recommended measures, including compensation ratios and requirements.

The Natural Environment Study identified direct impacts to Mariposa Creek for all three design options. Under all bridge design options, construction activities at Mariposa Creek would result in the placement of permanent and temporary fill material into Waters of the U.S. and Waters of the State. Potential jurisdictional wetlands (freshwater emergent wetland and scrub-shrub wetland) and non-wetland waters (intermittent stream consisting of open water, unvegetated, and upland vegetated portions below the creek bank) would be directly impacted during removal of the existing piers, installation of the new piers in the creek channel, installation of rock slope protection along the banks, and temporary stream diversion and dewatering activities.

Most of the impacts within the stream channel would be temporary from construction activities, except for new bridge pier construction for Design Option 1 and installation of rock slope protection. Removing the existing piers and installing the new piers or a free span structure would result in a net gain of Waters of the U.S. Therefore, the project is not expected to result in a permanent loss of intermittent stream habitat associated with this project element (see Table 4-1 in Chapter 4 of the Natural Environment Study).

There would be temporary and permanent impacts associated with the proposed project. The following table lists the temporary and permanent impacts to intermittent streams, freshwater emergent wetlands, and scrub-shrub wetlands for each design option (see Table 2.1, Temporary and Permanent Impacts).

Table 2.1 Temporary and Permanent Impacts

Habitat	Design Option 1 Impacts	Design Option 2 Impacts	Design Option 3 Impacts
Intermittent Stream	(Option 1) 0.111 acre of temporary impacts and 0.012 acre of permanent impacts	(Option 2) 0.111 acre of temporary impacts and 0.012 acre of permanent impacts	(Option 3) 0.111 acre of temporary impacts and 0.012 acre of permanent impacts
Fresh Water Emergent Wetland	(Option 1) 0.066 acre of temporary impacts and 0.011 acre of permanent impacts	(Option 2) 0.066 acre of temporary impacts and 0.011 acre of permanent impacts	(Option 3) 0.066 acre of temporary impacts and 0.011 acre of permanent impacts
Scrub-Shrub Wetland	(Option 1) 0.110 acre of temporary impacts and 0.025 acre of permanent impacts	(Option 2) 0.110 acre of temporary impacts and 0.025 acre of permanent impacts	(Option 3) 0.110 acre of temporary impacts and 0.025 acre of permanent impacts

The only project element that would result in permanent loss of Waters of the U.S. and Waters of the State would be associated with the rock slope protection installation along the banks and channel margin near the new bridge abutments for the Mariposa Creek Bridge. Much of these areas are currently unvegetated or disturbed areas with sparse scrub-shrub wetland vegetation. Some areas where rock slope protection would be placed are heavily eroded or contain broken concrete that has been previously placed to minimize erosion.

Avoidance, minimization, and/or mitigation measures would be used to lessen impacts to the Waters of the U.S. and the Waters of the State. With the implementation of Best Management Practices, and the following measures listed in the Natural Environment Study, the impacts would be less than significant. A detailed explanation for the following measures can be found in Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats

- Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat
- Measure 5: Compensate for the Permanent Loss of Waters of the U.S./Waters of the State

Special-Status Plant Species

Based on the negative results of appropriately timed botanical surveys and the absence of suitable microhabitat conditions that are required for special-status plants species that are known to occur in the region, the proposed project would not have the potential to affect special-status plant species.

Special-Status Wildlife Species

Federally Listed Brachiopods

Federally listed brachiopods (conservancy fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp) are known to occur in vernal pool grasslands next to the Biological Study Area. There are no ground-disturbing activities that would be performed within 250 feet of suitable habitat, and all pavement overlay work next to suitable habitat would occur within the existing roadway limits. Caltrans Standard Construction Site Best Management Practices to protect water quality and avoidance and minimization efforts presented in the Natural Environment Study would be implemented during construction to avoid direct and indirect effects on federally listed brachiopods. With the use of the following avoidance and minimization measures, Caltrans has determined the project **would have no effect on federally listed brachiopods**. For a detailed explanation of the avoidance and minimization measures, see Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat
- Measure 6: Avoid Potential Indirect Impacts on Habitat for Vernal Pool Branchiopods and Other Vernal Pool Species

California Tiger Salamander and Western Spadefoot Toad

California tiger salamanders and western spadefoot toads are known to occur in vernal pools next to the Biological Study Area. Potential upland habitat is present within grassland habitat in the action area that is contiguous with or near vernal pool grassland next to the Biological Study Area. One vernal swale that provides suitable aquatic habitat for these species crosses the

action area through a culvert. No ground disturbance is proposed in the vicinity of this feature.

The only ground disturbance in the vicinity of suitable upland habitat is associated with guardrail replacement at Deadman Creek, which would be limited to existing graded and disturbed right-of-way that does not support burrows that could be used by California tiger salamanders or friable soils that could be used by western spadefoot toads.

Caltrans Standard Construction Site Best Management Practices to protect water quality and avoidance and minimization efforts presented in the project's Natural Environment Study would be implemented during construction to avoid adverse effects on California tiger salamanders and western spadefoot toads. Caltrans has determined that the proposed project may affect but is not likely to adversely affect the federally listed California tiger salamander. For a detailed explanation of the avoidance and minimization measures, see Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat
- Measure 6: Avoid Potential Indirect Impacts on Habitat for Vernal Pool Branchiopods and Other Vernal Pool Species
- Measure 7: Retain an Agency-Approved Biologist To Conduct Preconstruction Surveys for California Tiger Salamander
- Measure 8: Check for Animals Under Construction Equipment and Vehicles Prior to Moving
- Measure 9: Limit the Use of Artificial Lighting
- Measure 10: Properly Dispose of Food-Related Trash and Remove From Project Site Daily
- Measure 11: Prohibit Pets and Firearms From Being Brought to the Project Site

Northern Western Pond Turtle

The project would require temporary in-channel work at Mariposa Creek, which provides potential habitat for Northern western pond turtles. Northern western pond turtles could be injured or killed if they are present within the active work area during bridge demolition, new construction, and installation

of the temporary stream diversion. Other effects of construction activities include noise and visual disturbance that could temporarily discourage western pond turtles from foraging and basking near the Biological Study Area and exposure to hazardous materials associated with construction if the materials were inadvertently released into an aquatic habitat.

Caltrans Standard Construction Site Best Management Practices to protect water quality and avoidance and minimization efforts presented in the Natural Environment Study would be implemented to avoid any adverse effects on northern western pond turtles. For a detailed explanation of the avoidance and minimization measures, see Appendix B.

Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel

Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources

Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats

Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat

Measure 8: Check for Animals Under Construction Equipment and Vehicles Prior to Moving

Measure 9: Limit the Use of Artificial Lighting

Measure 10: Properly Dispose of Food-Related Trash and Remove From Project Site Daily

Measure 11: Prohibit Pets and Firearms From Being Brought to the Project Site

Measure 12: Implement Protection Measures for Giant Garter Snakes

Measure 13: Conduct Preconstruction Surveys for Western Pond Turtles and Allow Turtles To Leave Work Area Unharmed

Giant Garter Snake

Owens Creek and Mariposa Creek in the Biological Study Area represent potential aquatic habitats for giant garter snakes. Based on the lack of known occurrences in the project vicinity (within 20 miles) and the presence of dispersal barriers, the potential for giant garter snakes to be encountered during construction is considered very low. If giant garter snakes are present or disperse through the work area, they could be injured or killed during the movement of equipment within or next to the Mariposa Creek channel during

bridge replacement activities. Avoidance and minimization efforts presented in this Natural Environment Study would be implemented to avoid adverse effects on giant garter snakes.

Although existing habitat in Mariposa Creek would be modified, no permanent or long-term habitat loss for giant garter snakes is expected from the project. The project may affect but is not likely to adversely affect the federally listed giant garter snake. Caltrans Standard Construction Site Best Management Practices to protect water quality and avoidance and minimization efforts presented in the Natural Environment Study would be implemented to avoid any adverse effects on giant garter snakes. For a detailed explanation of the avoidance and minimizations measures, see Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat
- Measure 8: Check for Animals Under Construction Equipment and Vehicles Prior to Moving
- Measure 9: Limit the Use of Artificial Lighting.
- Measure 10: Properly Dispose of Food-Related Trash and Remove From Project Site Daily
- Measure 11: Prohibit Pets and Firearms From Being Brought to the Project Site
- Measure 12: Implement Protection Measures for Giant Garter Snakes

San Joaquin Kit Fox

The project would not permanently modify suitable habitats for San Joaquin kit foxes. Most project activities would occur within the existing roadway, which does not provide suitable denning habitat for San Joaquin kit foxes; no potential dens were seen during the spring and summer 2021 field surveys. However, ground disturbance within disturbed agricultural areas associated with drainage improvements and guardrail replacement and ground disturbance associated with the replacement of the Mariposa Creek Bridge would occur within potential dispersal habitat for San Joaquin kit foxes.

San Joaquin kit foxes could disperse through the construction area at night if they occupy nearby habitats. If present in surrounding areas, San Joaquin kit foxes could be attracted to active construction areas if onsite equipment or

materials provide refuge sites or if food-related trash is left onsite overnight. Attracting San Joaquin kit foxes to construction areas along active roadways could expose them to a greater risk of vehicle collisions.

Although there is a low likelihood of encountering San Joaquin kit foxes during construction due to the lack of known occupancy in the project vicinity, implementation of avoidance and minimization measures, including preconstruction surveys, daily clearance surveys, periodic monitoring, restricted use of artificial lighting, and maintaining a clean worksite, would ensure that adverse impacts are avoided. Caltrans has determined the proposed project may affect but is not likely to adversely affect the federally listed San Joaquin kit fox.

The implementation of the following minimization measures would minimize impacts on San Joaquin kit foxes during construction. For a detailed explanation of the minimization measures, see Appendix B.

Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel

Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources

Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats

Measure 5: Store Construction Materials and Equipment in Designated Staging Areas

Measure 8: Check for Animals Under Construction Equipment and Vehicles Prior to Moving

Measure 9: Limit the Use of Artificial Lighting

Measure 10: Properly Dispose of Food-Related Trash and Remove From Project Site Daily

Measure 11: Prohibit Pets and Firearms From Being Brought to the Project Site

Measure 16: Conduct Preconstruction San Joaquin Kit Fox Clearance Surveys and Establish Exclusion Zones, as Necessary

Swainson's Hawk

Project activities are not expected to remove or otherwise disturb any potential Swainson's hawk nest trees or suitable foraging habitat because these habitats are not present within the permanent and temporary impact area. Three small eucalyptus trees would be removed south of the Mariposa

Creek Bridge during construction of the elevated bridge approaches; however, these trees are not of sufficient stature to support nesting Swainson's hawk.

Large eucalyptus trees that could provide nesting habitat are about 600 feet to the southeast of the bridge site and would not be directly affected by proposed activities. However, construction-generated noise and activity have the potential to indirectly affect Swainson's hawks if they are actively nesting near project activities associated with pavement overlay, culvert installation, guardrail replacements, and bridge construction.

Increased levels of noise and human activity in the vicinity of an active nest could result in nest abandonment or forced fledging and subsequent loss of fertile eggs, nestlings, or juveniles. Caltrans has determined the project would not result in significant loss of foraging habitat for Swainson's hawk since most of the project's habitat disturbance is temporary and restricted to a narrow strip of roadside habitat.

With the implementation of the following avoidance and minimization measures, any potential direct or indirect impacts on Swainson's hawk would be avoided. A detailed explanation of the avoidance and minimization measures can be found in Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 14: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors, Including Special-Status Species, and Establish Protective Buffers

Tricolored Blackbird

The project would not directly affect (permanent or temporary removal of) suitable nesting habitat for tricolored blackbirds. Emergent wetland vegetation within the impact area at Mariposa Creek is patchy and is not likely to support a colony of the tricolored blackbird. Noise and construction disturbances generated from project activities could disturb nesting tricolored blackbirds if an active colony is near the construction area. These activities could result in the incidental loss of fertile eggs or nestlings or otherwise lead to nest abandonment.

With the implementation of the following avoidance and minimization measures, any potential direct and indirect impacts on tricolored blackbirds

would be avoided. A detailed explanation of the avoidance and minimization measures can be found in Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 14: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors, Including Special-Status Species, and Establish Protective Buffers

Burrowing Owls

Project activities are not expected to remove or otherwise disturb any potential nest sites because nesting habitat is not present within the permanent and temporary impact area. However, construction-generated noise has the potential to indirectly affect burrowing owls if they occupy areas near construction activities. Construction disturbance (i.e., noise, increased human presence) during the breeding season may result in nest abandonment and subsequent loss of eggs or young.

With the implementation of the following avoidance and minimization measures, any potential direct and indirect impacts on burrowing owls would be avoided. A detailed explanation of the avoidance and minimization measures can be found in Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 15: Conduct Preconstruction Surveys for Burrowing Owls and Establish Exclusion Zones, if Necessary

California Central Valley Steelhead

No impacts on California Central Valley Steelhead or its habitat would occur in Deadman Creek, Miles Creek, or Owens Creek because proposed asphalt preservation, drainage improvements, and bridge maintenance and guardrail improvements would not require any in-water work or work within the channel between the tops of the streambanks. Furthermore, Standard Construction Site Best Management Practices would be implemented during construction to protect water quality in these waterways and downstream receiving waters

by controlling erosion and sedimentation, preventing and controlling accidental spills or unintentional discharges, and controlling stormwater runoff.

Project impacts on California Central Valley Steelhead habitat would be limited to Mariposa Creek because in-water work and work within the channel between the tops of the streambanks would be required to demolish the existing bridge, build the new bridge, and install a temporary stream diversion structure.

However, no direct impacts (e.g., noise and physical disturbance, direct physical injury, fish rescue and relocation, and direct exposure to contaminants) on California Central Valley Steelhead would occur because all in-water work and work below the ordinary high water mark active channel would be restricted to the approved in-water construction window of June 1 to October 15, when adult and juvenile steelhead would not be present in the construction area. However, bridge demolition and new bridge construction could result in temporary, indirect effects on California Central Valley Steelhead.

The implementation of the following avoidance and minimization measures would ensure that construction activities avoid and minimize impacts on California Central Valley Steelhead during construction. A detailed explanation of the avoidance and minimization measures can be found in Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain a Qualified Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat
- Measure 17: Avoid Potential Direct Impacts on California Central Valley Steelhead

Other Protected and Managed Biological Resources

Migratory Birds

The project has the potential to affect vegetation-nesting migratory birds either through direct injury or mortality during ground-disturbing activities or by disrupting normal behaviors, including nesting. Swallows or other structure-nesting birds that are present on the underside of the Mariposa Creek Bridge during construction could be directly affected during the demolition of the existing bridge structure.

The implementation of the following avoidance and minimization measures would reduce the potential impacts on migratory birds, including structure-nesting swallows and other birds. For a detailed explanation of the avoidance and minimization measures, see Appendix B.

- Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel
- Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources
- Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats
- Measure 14: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors, Including Special-Status Species, and Establish Protective Buffers
- Measure 18: Remove Bridge Structure During the Non-Breeding Season for Structure-Nesting Migratory Birds or Implement Exclusion Measures to Deter Nesting

Invasive Plants

Invasive plant species displace native species, change ecosystem processes, alter plant community structure, and lower wildlife habitat quality. Road, highway, and related construction projects are some of the principal dispersal pathways for invasive plants.

The project would create additional disturbed areas for a temporary period. Areas, where temporary disturbance occurs, would be more susceptible to colonization or spread by invasive plants. The riparian habitat at Mariposa Creek is currently inhabited by invasive plant species. Temporary construction disturbance within this area could promote the additional growth of these species.

With the implementation of the following avoidance and minimization measures, the effects on nearby communities of special concern due to the introduction and spread of invasive plants would be avoided. For a detailed explanation of this measure, see Appendix B.

Measure 19: Avoid and Minimize the Spread of Invasive Plant Species During Project Construction

Avoidance, Minimization, and/or Mitigation Measures

With the implementation of avoidance, minimization, and/or mitigation measures discussed for each biological resource in the previous section, the project would have a less than significant impact on those resources. For a detailed discussion of the measures, see Appendix B or the Natural Environment Study for the project.

2.1.5 Cultural Resources

Considering the information in the Historical Property Survey Report dated October 5, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Cultural Resources
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	**No Impact**
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	**No Impact**
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	**No Impact**

2.1.6 Energy

Considering the information in the 2030 Merced County General Plan dated November 30, 2021, and the 2017 Caltrans Best Management Practices Manual, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Energy
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during project construction or operation?	**No Impact**
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	**No Impact**

2.1.7 Geology and Soils

Considering the information in the Paleontological Memorandum dated November 1, 2021, and review of the California Department of Conservation's California Earthquake Hazards Zone Application, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Geology and Soils
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**
ii) Strong seismic ground shaking?	**No Impact**
iii) Seismic-related ground failure, including liquefaction?	**No Impact**
iv) Landslides?	**No Impact**
b) Result in substantial soil erosion or the loss of topsoil?	**No Impact**
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	**No Impact**
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	**No Impact**
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**
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**No Impact**

2.1.8 Greenhouse Gas Emissions

Considering the information in the Climate Change/Greenhouse Gas Analysis Memorandum dated November 4, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Greenhouse Gas Emissions
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	**Less Than Significant Impact**
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	**Less Than Significant Impact**

Affected Environment

The project is in a rural area with a mostly resource-based agricultural economy. State Route 59 is a 12-mile, north-south transportation route from the City of Merced to State Route 140 in Merced County. Traffic counts are low and rarely congested. The project would not add capacity or increase travel demand because the project would preserve and rehabilitate the existing roadway, culverts, bridges and would not lead to an increase in operational emissions.

Environmental Consequences

Greenhouse gas emissions are expected from temporary construction activities during the 200-day work period. Using the Caltrans Construction Emissions Tool, Caltrans has estimated that 694 tons of total construction-related carbon dioxide emissions would be produced throughout the project construction period. The project would generate air pollutants during construction. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors.

However, the largest percentage of pollutants would be windblown dust generated during excavation, grading, hauling, and various other construction activities. The impacts of these activities would vary each day as construction progresses. Dust and odors during construction could cause occasional annoyance and complaints from the residents along the State right-of-way.

Avoidance, Minimization, and/or Mitigation Measures

No avoidance, minimization, and/or mitigation measures are required. In compliance with Caltrans policy and Executive Order B-30-15, the project would use Best Management Practices and Standard Specifications to reduce greenhouse gas emissions from the project and to meet statewide and agency goals. Implementation of Caltrans Standard Measures and Best Management Practices would ensure construction-related impacts are less than significant.

The project would not conflict with any applicable greenhouse gas reduction plan, policy, or regulation.

2.1.9 Hazards and Hazardous Materials

Considering the information in the Hazardous Waste Initial Site Assessment dated November 1, 2021, and the Preliminary Site Investigation Report dated August 5, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hazards and Hazardous Materials
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**
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	**No Impact**
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school?	**No Impact**
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**No Impact**
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, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	**No Impact**
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	**No Impact**
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	**No Impact**

Affected Environment

The project proposes to repair the existing roadway pavement, culverts, and dry wells. Additionally, the project would upgrade or repair four bridges within

the project area. It has been determined that the Mariposa Creek Bridge would be replaced to eliminate the ongoing flooding that occurs in the area.

Per the Hazardous Waste Initial Site Assessment dated November 1, 2021, the methodologies used to review the project were Caltrans records, State Water Resources Control Board's GeoTracker Database, California Department of Toxic Substances Control's Cortese List, and California Department of Toxic Substances Control's EnviroStor Database. Caltrans determined the project has the potential to encounter hazardous waste from construction and excavation activities.

Through the collection of soil samples, where excavation is likely to occur, Caltrans determined the project has the potential to encounter soil containing aerially deposited lead, treated wood waste, and paint striping that may be deemed hazardous.

Environmental Consequences

Soil samples were taken at the four bridge sites where excavation is likely to occur; regulated and unregulated soils that contain aerially deposited lead were found. With the upgrade of the metal beam guardrails at the bridge locations, the proper disposal of treated wood waste would be required when encountered.

Finally, the project would require the removal and proper disposal of roadway paint striping. The Hazardous Waste Initial Site Assessment did not identify any impacts from any open hazardous remediation sites, asbestos-containing materials, or naturally occurring asbestos. Properly disposing of lead-based paint would not be required because the four bridges were determined not to contain any.

Avoidance, Minimization, and/or Mitigation Measures

With the use of Best Management Practices and Caltrans Standard Specifications Section 14-11.14 Treated Wood Waste, the project would have a less than significant impact. Standard Special Provisions would be developed during the Plans, Specifications, and Estimates phase of the project to safely handle and dispose of any hazardous materials containing lead, and thus would have a less than significant impact on the environment.

2.1.10 Hydrology and Water Quality

Considering the information in the Water Compliance Memorandum dated July 6, 2021, and Location Hydraulic Study, dated September 1, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Hydrology and Water Quality
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water or groundwater quality?	**No Impact**
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**
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation onsite or offsite;	**No Impact**
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite;	**No Impact**
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	**No Impact**
(iv) impede or redirect flood flows?	**No Impact**
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	**No Impact**
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	**No Impact**

2.1.11 Land Use and Planning

Considering the information in the Community Impact Assessment dated April 12, 2021, and review of the 2030 Merced County General Plan dated November 30, 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Land Use and Planning
a) Physically divide an established community?	**No Impact**
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**

2.1.12 Mineral Resources

Considering the information in the 2030 Merced County General Plan dated November 30, 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Mineral Resources
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	**No Impact**
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**

2.1.13 Noise

Considering the information in the Noise Compliance Study Memorandum dated October 27, 2021, the following significance determinations have been made:

Question—Would the project result in:	CEQA Significance Determinations for Noise
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**
b) Generation of excessive groundborne vibration or groundborne noise levels?	**No Impact**

Question—Would the project result in:	CEQA Significance Determinations for Noise
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, would the project expose people residing or working in the project area to excessive noise levels?	**No Impact**

2.1.14 Population and Housing

Considering the information in the Community Impact Assessment Memorandum dated April 12, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Population and Housing
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**
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**No Impact**

2.1.15 Public Services

Considering the information in the Community Impact Assessment Memorandum dated April 12, 2021, the following significance determinations have been made:

Question:	CEQA Significance Determinations for Public Services
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: Fire protection?	**No Impact**
Police protection?	**No Impact**
Schools?	**No Impact**
Parks?	**No Impact**
Other public facilities?	**No Impact**

2.1.16 Recreation

Considering the information in the Community Impact Assessment Memorandum dated April 12, 2021, and the Section 4(f) Assessment dated July 28, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Recreation
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**No Impact**
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**

2.1.17 Transportation

Considering the information in the Community Impact Assessment Memorandum dated April 12, 2021, and the 2030 Merced County General

Plan dated November 30, 2012, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Transportation
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	**No Impact**
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	**No Impact**
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**
d) Result in inadequate emergency access?	**No Impact**

2.1.18 Tribal Cultural Resources

Considering the information in the Historical Property Survey Report dated October 5, 2021, the following significance determinations have been made:

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

Question:	CEQA Significance Determinations for Tribal Cultural Resources
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**

Question:	CEQA Significance Determinations for Tribal Cultural Resources
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	**No Impact**

2.1.19 Utilities and Service Systems

Considering the information in the Community Impact Assessment Memorandum dated April 12, 2021, the following significance determinations have been made:

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
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?	**No Impact**
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	**No Impact**
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**
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**

Question—Would the project:	CEQA Significance Determinations for Utilities and Service Systems
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	**No Impact**

2.1.20 Wildfire

Considering the information in the Wildfire Severity Zone Memorandum dated April 12, 2021, the following significance determinations have been made:

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

Question—Would the project:	CEQA Significance Determinations for Wildfire
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	**No Impact**
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**
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**
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**

2.1.21 Mandatory Findings of Significance

Question:	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**
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**
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	**No Impact**

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Affected Environment

The California Department of Transportation (Caltrans) proposes to perform roadway improvements along State Route 59 between post mile R0.0 and post mile R12.1 in Merced County. The existing pavement has deteriorated, resulting in poor ride quality and requiring elevated maintenance efforts. A cold plane and overlay strategy would be used to preserve the pavement. The scope of work for the project would include repairing and replacing the existing pavement and replacing identified damaged culverts and end

treatments. There are four bridges within the project area. Three of the bridges—Owens Creek Bridge, Miles Creek Bridge, and Deadman Creek Bridge—would require barrier and block extensions, replacement of existing metal beam guardrails to the Midwest Guardrail System, and replacement of nonstandard end treatments and terminal systems.

The fourth bridge, Mariposa Creek Bridge, would be removed and replaced with a higher bridge to eliminate the continuous flooding that occurs at this location. Caltrans has identified six locations where utility poles would need to be relocated to accommodate the new Mariposa Creek Bridge. Also, new or replaced culverts and dry wells are planned within the project limits.

Environmental Consequences

The project would impact Special-Status Species of Concern, Waters of the U.S., Waters of the State, Wetlands, and Other Protected and Managed Biological Resources; however, with the implementation of avoidance, minimization, and/or mitigation measures discussed in Section 2.1.4, the effects would be less than significant.

Through the collection of soil samples, where excavation is likely to occur, Caltrans determined the project has the potential to encounter soil containing aerially deposited lead, treated wood waste, and paint striping that may be deemed hazardous. With the implementation of Standard Special Provisions discussed in Section 2.1.9, the effects would be less than significant.

Avoidance, Minimization, and/or Mitigation Measures

With the implementation of avoidance, minimization, and/or mitigation measures discussed in this document, the project would have a less than significant impact on the environment. All other impacts would be minimized through the implementation of Caltrans Best Management Practices, Standard Specifications, and Standard Special Provisions. Therefore, the project would not have a significant cumulatively considerable impact on human beings or the environment.

Appendix A Title VI Policy Statement

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

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Making Conservation a California Way of Life.

August 2020

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

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

Original signed by
Toks Omishakin
Director

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

Appendix B Avoidance, Minimization, and/or Mitigation Measures Summary

To be sure 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, which follows) would be implemented. During project design, avoidance, minimization, and/or mitigation measures would be incorporated into the project's final plans, specifications, and cost estimates, as appropriate. All permits would be obtained before the implementation of the project. During construction, environmental and construction/engineering staff would ensure that the commitments contained in this Environmental Commitments Record are fulfilled.

Following construction and appropriate phases of project delivery, long-term mitigation maintenance and monitoring will take place, as applicable. As the following Environmental Commitments Record is a draft, some fields have not been completed and will be filled out as each of the measures is implemented.

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

Measure 1: Conduct Worker Environmental Awareness Training for Construction Personnel

Before the start of work, agency-approved biologist(s) would conduct a worker environmental awareness training program for all construction personnel, including contractors, subcontractors, and contractor's representatives, covering sensitive habitats (including wetlands and non-wetland waters); the status of all listed species; how to identify these species and their habitats (including vernal pools, California tiger salamanders, giant garter snakes, and San Joaquin kit foxes); how to avoid impacts on the species; what to do if these species are encountered during construction activities; and the laws that protect them. In addition, the training would review the required permits and associated permit conditions that the contractor should be aware of during construction. New construction personnel who are added to the project after the training is first conducted would also be required to take the training. Documentation of the training, including sign-in sheets, would be kept on file.

Measure 2: Install Fencing and/or Flagging To Protect Sensitive Biological Resources

Before the start of construction, high-visibility temporary fencing or flagging would be installed along the perimeter of the work area next to environmentally sensitive areas (e.g., vernal pool grassland areas and perimeter of streams and associated wetlands). Caltrans would ensure that the final construction plans show the locations where the fencing/flagging would be installed and define the installation procedures. The agency-approved biologist(s) would ensure that the fencing/flagging is maintained for the duration of construction and would be repaired or replaced if necessary. Fencing would be of an appropriate material that would not risk entangling the California tiger salamander, giant garter snake, or other wildlife. All temporary fencing/flagging would be removed upon the completion of construction.

Measure 3: Retain an Agency-Approved Biologist To Conduct Periodic Monitoring During Construction in Sensitive Habitats

To ensure all construction personnel are trained, that avoidance and minimization measures are properly implemented, required exclusion barrier fencing is installed and maintained, and sensitive habitats are avoided, an agency-approved biologist would conduct periodic monitoring during all construction activities that occur next to sensitive habitats (i.e., adjacent top waterways and vernal pool grasslands). The agency-approved biologist would determine the appropriate timing and frequency of this monitoring in coordination with Caltrans (and with the California Department of Fish and Wildlife and U.S. Fish and Wildlife Service, if necessary). Monitoring would be conducted concurrently with applicable species-specific preconstruction surveys.

Measure 4: Protect Water Quality and Prevent Erosion and Sedimentation in Aquatic Habitat

Construction Site Best Management Practices that are consistent with the most recent Caltrans manuals (including the Construction Site Best Management Practices Manual and the Stormwater Pollution Prevention Plan and Water Pollution Control Program Manuals) would be developed for the project and would be implemented throughout construction to avoid adverse effects on water quality. Best Management Practices associated with an erosion control plan would be prepared for avoiding the discharge of pollutants from vehicles/equipment into aquatic and other sensitive habitats.

Caltrans personnel and the contractor would perform routine inspections of the construction areas to verify that the Best Management Practices are being properly implemented and maintained and are operating effectively as designed. A water quality inspector would inspect sites before and after a rain event to ensure that Stormwater Best Management Practices are adequate.

Vehicle and equipment fueling and maintenance operations would occur at least 50 feet away from water features. All equipment would be maintained such that there would be no leaks of automotive fluids such as gasoline, oils, or solvents.

The stockpiling of materials and storing of equipment (including portable equipment), vehicles, and supplies would be restricted to designated construction staging areas located outside sensitive biological resource areas.

Measure 5: Compensate for the Permanent Loss of Waters of the U.S./Waters of the State

To compensate for the permanent loss of up to 0.041 acre of Waters of the U.S. and Waters of the State associated with the placement of rock slope protection along the banks of Mariposa Creek, Caltrans would purchase credits at an approved mitigation bank or contribute to an agency-approved in-lieu fee program to ensure no net loss of wetland functions and values. The wetland compensation ratio would be a minimum of 1 to 1 (1 acre of wetland habitat credit for every 1 acre of impact) to ensure no net loss of wetland habitat functions and values.

Measure 6: Avoid Potential Indirect Impacts on Habitat for Vernal Pool Branchiopods and Other Vernal Pool Species

The following avoidance and minimization efforts would be implemented before and during construction to protect habitat for the conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and other vernal pool species outside the area of proposed ground disturbance.

- Construction activities within 250 feet of suitable vernal pool branchiopod habitat (located between post miles 6.45 to 7.07, 7.8 to 8.2, and 9.13 to 9.55) would be avoided from the first day of the first significant rain event (1 inch or greater) until June 1, or until suitable wetlands remain dry for 72 hours and no significant rain event is forecast on the day construction is proposed.
- Consistent with Measure 3 (Install Fencing and/or Flagging To Protect Sensitive Biological Resources), a qualified biologist would guide the installation of exclusion fencing before the start of construction activities (including non-ground-disturbing activities such as pavement overlay). The exclusion fencing would be installed along the edge of the construction limits between the edge of the disturbed road shoulder and grassland vegetation.

  The exclusion fencing would consist of an orange construction barrier or erosion control fencing or a combination of fencing (i.e., orange sediment-control fencing); it would be installed by Caltrans or its construction

contractor. The exclusion fencing would be buried at least 6 inches deep or secured with weighted material (e.g., sandbags, rock, concrete blocks) to prevent inadvertent discharge of hazardous materials into nearby vernal pool areas and limit the movement of sensitive species from entering the roadway during construction activities.

- No herbicide would be used within 100 feet of aquatic habitat.

Measure 7: Retain an Agency-Approved Biologist To Conduct Preconstruction Surveys for California Tiger Salamander

No more than 14 days before the start of construction between post miles 6.5 and 7.05, 7.8 and 8.2, and 9.13 and 9.55, within proximity to suitable aquatic habitat, U.S. Fish and Wildlife Service-approved biologist(s) would conduct a visual encounter preconstruction survey of these areas for the California tiger salamander. The survey would pay particular attention to detecting any burrows, crevices, and other cover sites that could be used as refugia by the species. If any burrows are discovered, they would be flagged or otherwise marked and avoided.

Measure 8: Check for Animals under Construction Equipment and Vehicles Prior to Moving

Before being moved, vehicles and equipment in the vicinity of suitable habitat (post miles 6.5 to 7.05, 7.8 to 8.2, and 9.13 to 9.55) would be checked for any California tiger salamanders or other sensitive wildlife sheltering underneath them. In the event that an animal is seen, the vehicles/equipment would not be moved until the individual has vacated the area voluntarily.

Measure 9: Limit the Use of Artificial Lighting

The use of temporary artificial lighting in the vicinity of suitable habitat (post miles 6.5 to 7.05, 7.8 to 8.2, and 9.13 to 9.55) would be limited, except when necessary for construction or driver and pedestrian safety. Any artificial lighting used during construction would be confined to areas within the construction footprint and directed away from the surrounding sensitive habitat. Caltrans would limit nontarget casting of light by installing shielding around the light source to further confine the illumination to minimize its effects on species.

Measure 10: Properly Dispose of Food-Related Trash and Remove From Project Site Daily

All food-related trash items such as wrappers, cans, bottles, and food scraps generated by project-related activities and personnel would be disposed of in closed containers and removed daily from the project site to reduce the potential for attracting predator species.

Measure 11: Prohibit Pets and Firearms From Being Brought to the Project Site

To eliminate the potential for disturbance or injury to, or death of, any species resulting from the presence of pets and firearms, neither (with the exception of firearms carried by authorized law enforcement officials) would be allowed on the project site.

Measure 12: Implement Protection Measures for Giant Garter Snake

The following measures would be implemented before and during construction to protect giant garter snakes:

- All construction activities in the giant garter snake habitat would occur between May 1 and October 1.
- A qualified biologist would conduct a preconstruction giant garter snake survey in suitable aquatic and upland habitats no more than 24 hours before construction. The construction area would be resurveyed whenever there is a lapse in construction activity of two weeks or more. If a giant garter snake is detected during the preconstruction surveys, the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife would be notified before the start of construction to determine if additional protection measures are necessary to avoid and minimize adverse effects to the species.
- Construction equipment and materials stored onsite shall be visually inspected at the start of each workday for the presence of wildlife sheltering within or under them. Uninjured snakes detected during construction activities shall be allowed to move away from the work area voluntarily. The capture and relocation of trapped or injured giant garter snakes shall be attempted only by a biologist with the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife, and proper species identification must be made before any capture or handling.
- No monofilament plastic mesh or line or jute netting would be used for erosion control. Approved erosion control materials include burlap-wrapped fiber rolls, coconut coir matting, sediment fencing, and tackifier hydroseeding compounds.
- Exclusion fencing would be placed along the upstream and downstream limits of the work area at Mariposa Creek, extending from the existing waterline to the top of the bank to prevent the movement of wildlife (including giant garter snakes) into the active work area.
- To prevent inadvertent entrapment of wildlife during construction in or near giant garter snake habitat, all excavated, steep-walled holes or trenches more than 6 inches deep would be provided with one or more escape ramps built out of earth fill or wooden planks and would be inspected by a qualified biologist before being filled.

Measure 13: Conduct Preconstruction Surveys for Western Pond Turtles and Allow Turtles To Leave Work Area Unharmed

To avoid potential injury to or mortality of western pond turtles, Caltrans would retain a qualified biologist to conduct a preconstruction survey for western pond turtles immediately before construction activities (including vegetation removal and construction of the temporary stream diversion) at Mariposa Creek. The biologist would survey the aquatic habitat, streambanks, and nearby riparian habitat within the construction area immediately before disturbance.

If a western pond turtle is found within the immediate work area during the preconstruction survey or project activities, work would stop in the area until the turtle can move out of the work area on its own. Information about the location of turtle(s) seen during the preconstruction survey would be included in the worker environmental awareness training (Measure 1) and provided directly to the construction crew working in that area to ensure that areas, where turtles were seen, are inspected each day before the start of work to ensure that no turtles are present.

If a western pond turtle nest is discovered during the preconstruction survey or project construction, Caltrans would coordinate with the California Department of Fish and Wildlife to determine whether implementation of additional avoidance measures (e.g., no-disturbance buffer or monitoring) is prudent.

Measure 14: Conduct Preconstruction Surveys for Nesting Migratory Birds and Raptors, Including Special-Status Species, and Establish Protective Buffers

Caltrans would retain a qualified wildlife biologist to conduct nesting bird surveys if construction occurs between February 1 and September 30. These nesting bird surveys would include a minimum of two separate surveys to look for active nests of migratory birds, including raptors. Surveys would include a search of all trees and shrubs and ruderal areas that provide suitable nesting habitat for birds within 100 feet of construction disturbance. In addition, a 0.5-mile area from the Biological Study Area would be surveyed for nesting raptors to identify raptors that might be affected by construction disturbances, particularly special-status species (i.e., Swainson's hawk).

The biologists conducting the surveys should have experience with all special-status birds that could potentially nest within the survey area. In areas where access is not permitted, the surveyors would use binoculars and spotting scopes to inspect any potential nest trees, particularly large trees and snags. Surveys should occur during the height of the breeding season (April 1 to June 1), with one survey occurring within one week before the start of construction.

As deemed necessary by Caltrans, additional surveys may be conducted during the appropriate period to document nesting Swainson's hawks. These surveys would generally follow methodologies for Swainson's hawk (Swainson's Hawk Technical Advisory Committee 2000), as appropriate, according to the construction schedule. The need for these types of surveys would be determined by a Caltrans biologist in coordination with the California Department of Fish and Wildlife before the start of construction to inform the potential for these species to be present in or near work locations.

If no special-status raptor species or active nests are detected during these surveys, no additional measures would be required. If an active nest is found in the survey area, a no-disturbance buffer would be established to avoid disturbance or destruction of the nest site until the end of the breeding season (September 30) or until a qualified wildlife biologist determines that the young have fledged and moved out of the construction area (this date varies by species).

The extent of the buffer would be determined by a Caltrans designated biologist in coordination with any applicable agencies (as determined by species) and would depend on the level of noise or construction disturbance taking place, line of sight between the nest and the disturbance, ambient levels of noise and other non-project disturbances, and other topographical or artificial barriers. Suitable buffer distances may vary between species; however, a minimum of 50 feet for songbirds and 300 feet for raptors is typical, extending up to 0.25 miles for special-status species.

Measure 15: Conduct Preconstruction Surveys for Burrowing Owl and Establish Exclusion Zones, if Necessary

A qualified biologist would conduct two separate pre-construction surveys for burrowing owls. The surveys would be conducted no less than 14 days before and within 48 hours of initiating ground-disturbing activities within suitable habitats. The preconstruction survey area would encompass the designated work area (including permanent and temporary impact areas) and a 500-foot buffer around the designated work area where access is permitted. Areas inaccessible by foot would be surveyed using binoculars. To the maximum extent feasible (i.e., where the construction footprint can be modified), construction activities within 500 feet of active burrowing owl burrows would be avoided during the nesting season (February 1 to August 31).

If an active burrow is identified near a proposed work area and work cannot be conducted outside of the nesting season (February 1 to August 31), a qualified biologist would establish a no-activity zone that extends a minimum of 250 feet around the burrow. If burrowing owls are present at the site during the non-breeding season (September 1 through January 31), a qualified biologist would establish a no-activity zone that extends a minimum of 150 feet around the burrow.

If the designated no-activity zone for breeding or nonbreeding burrowing owls cannot be established, a wildlife biologist experienced in burrowing owl behavior would evaluate site-specific conditions and, in coordination with the California Department of Fish and Wildlife, recommend a smaller buffer (if possible) that still minimizes the potential to disturb the owls (and is deemed to still allow reproductive success during the breeding season). The site-specific buffer would consider the type and extent of the proposed activity occurring near the occupied burrow, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity to background activities.

Measure 16: Conduct Preconstruction San Joaquin Kit Fox Clearance Surveys and Establish Exclusion Zones, as Necessary

A U.S. Fish and Wildlife Service- or California Department of Fish and Wildlife-approved biologist would conduct a preconstruction survey no more than 30 days and no less than 14 days before the beginning of ground disturbance or any activity likely to affect San Joaquin kit foxes. This measure would be implemented in all project areas that are next to suitable grassland (post miles 6.5 to 7.05, 7.8 to 8.2, and 9.13 to 9.55) and agricultural lands. The biologist would survey the proposed construction area and a 200-foot buffer area (where landowner access has been granted) around the construction area to identify suitable dens.

The biologist would conduct den searches by systematically walking transects spaced 30 feet to 100 feet apart through the survey area. Transect distance should be determined based on the height of vegetation such that 100 percent visual coverage of the project area is achieved. Where landowner access is not granted, suitable habitat next to the right-of-way would be scanned using binoculars to identify potential dens.

If dens are found during the survey, the biologist would map the location of each den and record the size and shape of the den entrance; the presence of tracks, scats, and prey remains; and if the den was recently excavated. The biologist would also record information on prey availability (e.g., ground squirrel colonies). The status of the den, as defined by the U.S. Fish and Wildlife Service, should also be determined and recorded. Dens would be classified in one of the following four den status categories:

- **Potential den:** Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is sufficient to conclude that it is being used or has been used by a San Joaquin kit fox. Potential dens comprise: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for San Joaquin kit fox use.

- **Known den:** Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radio telemetry or spotlighting data; San Joaquin kit fox signs such as tracks, scats, and/or prey remains; or other reasonable proof that a given den is being or has been used by a San Joaquin kit fox.
- **Natal or pupping den:** Any den used by a San Joaquin kit fox to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more San Joaquin kit fox tracks, scats, and prey remains in the vicinity of the den and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which San Joaquin kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition, either term applies.
- **Atypical den:** Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

After preconstruction den searches and before the start of construction activities, a qualified U.S. Fish and Wildlife Service/California Department of Fish and Wildlife-approved biologist would establish and maintain the following exclusion zones measured in a radius outward from the entrance or cluster of entrances of each den:

- **Potential and atypical dens:** A total of four to five flagged stakes would be placed 50 feet from the den entrance to identify the den location.
- **Known den:** Orange construction barrier fencing would be installed between the construction work area and the known den site at a minimum distance of 100 feet from the den. The fencing would be maintained until all construction-related disturbances have ended. At that time, all fencing would be removed to avoid attracting subsequent attention to the den.
- **Natal/pupping den:** The U.S. Fish and Wildlife Service would be contacted immediately if a natal or pupping den is discovered at or within 200 feet from the boundary of the construction area.

Measure 17: Avoid Potential Direct Impacts on California Central Valley Steelhead

Conduct all in-water construction activities between June 1 and October 15 to avoid direct impacts on California Central Valley Steelhead. If more time is needed to complete in-water work after October 15, a work period variance request would be submitted to the resource agencies for approval. The work period variance request should be submitted to the resource agencies at least two weeks before October 15.

Measure 18: Remove Bridge Structure During the Nonbreeding Season for Structure-Nesting Migratory Birds or Implement Exclusion Measures To Deter Nesting

To avoid impacts on nesting swallows and other structure-nesting migratory birds that are protected under the Migratory Bird Treaty Act and the California Fish and Game Code, Caltrans would conduct bridge demolition activities at Mariposa Creek after the conclusion of the bird nesting period (nesting season generally occurs from February 15 through August 31). A qualified biologist would monitor any active nests near the end of the nesting season to determine when nesting has concluded. Removal or modification of the bridge structure after the nesting period has concluded is strongly preferred; however, if this is not possible, Caltrans would implement the following avoidance measures.

Before the start of construction, Caltrans would hire a qualified wildlife biologist to inspect the bridge structure that would be modified during the non-breeding season (September 1 through February 14). If nests are found and are determined to be inactive (abandoned), they may be removed.

- After inactive nests are removed, and before construction occurs from February 15 to August 31, the undersides of the bridge to be modified would be covered with a suitable exclusion material that would prevent birds from nesting (i.e., 0.5-to-0.75-inch mesh netting, plastic tarp, or other suitable material safe for wildlife). The exclusion material and methods would comply with Caltrans Standard Plans and Specifications under Section 14-6.10 (Caltrans 2018).
- A qualified wildlife management specialist experienced with the installation of bird exclusion materials would be hired by Caltrans or their contractor to ensure that exclusion devices are properly installed and would avoid inadvertent entrapment of migratory birds. All exclusion devices would be installed before February 15 and would be monitored by a qualified biologist throughout the breeding season (typically several times a week). The exclusion material would be anchored so that swallows cannot attach their nests to the structures through gaps in the net.
- As an alternative to installing exclusion materials on a structure, Caltrans may hire a qualified biologist or qualified wildlife management specialist to remove nests as the birds build them and before any eggs are laid. Visits to the site would need to occur daily throughout the breeding season (February 15 through August 31) as swallows can complete a nest in a 24-hour period.
- If exclusion material is not installed on structures before February 15 or manual removal of nests is not conducted daily and migratory birds colonize a structure, removal or modification to that portion of the structure may not occur until after August 31 or until a qualified biologist has

determined that the young have fledged and all nest use has been completed.

- If appropriate steps are taken to prevent swallows from building new nests as described above, work can proceed at any time of the year.

Measure 19: Avoid and Minimize the Spread of Invasive Plant Species During Project Construction

Caltrans would be responsible for avoiding and minimizing the introduction of new invasive plants and the spread of invasive plants previously documented in the Biological Study Area. The following Best Management Practices would be written into the construction specifications and implemented during project construction:

- Retain all excavated soil material onsite or dispose of excess soil in a permitted offsite location to prevent the spread of invasive plants to un-infested areas next to the project footprint.
- Use a weed-free source for project materials (e.g., straw wattles for erosion control that are weed-free or contain less than 1 percent weed seed).
- Prevent invasive plant contamination of project materials during transport and when stockpiling (e.g., by covering soil stockpiles with a heavy-duty, contractor-grade tarpaulin).
- Use sterile grass seed and native plant stock during revegetation.
- Restore temporarily disturbed areas to pre-project conditions or better. Revegetate or mulch disturbed soils within 30 days of completing ground-disturbing activities to reduce the likelihood of invasive plant establishment.

List of Technical Studies Bound Separately (Volume 2)

Agriculture and Forest Resources Conversion Assessment Memorandum

Air Quality Memorandum

Climate Change/Greenhouse Gas Analysis Memorandum

Community Impact Assessment Memorandum

Noise Compliance Study Memorandum

Water Compliance Memorandum

Natural Environment Study

Location Hydraulic Study

Historical Property Survey Report

Hazardous Waste Initial Site Assessment

Preliminary Site Investigation Report

Paleontological Memorandum

Section 4(f) Memorandum

Wildfire Severity Zone Memorandum

To obtain a copy of one or more of these technical studies/reports or the Initial Study, please send your request to:

C. Scott Guidi
District 10 Environmental Division
California Department of Transportation
1976 East Doctor Martin Luther King Junior Boulevard, Stockton, California 95205

Or send your request via email to: Scott.Guidi@dot.ca.gov
Or call: 209-479-1839

Please provide the following information in your request:
Project title
General location information
District number-county code-route-post mile
Project ID number