

Salinas River Bridges Seismic Retrofit

On Highway 101 near King City, Monterey County

05-MON-101 PM R41.3/R41.8

EA 1C9600/05 1300 0019

Initial Study with Mitigated Negative Declaration



Prepared by the
State of California Department of Transportation

March 2017



ATTACHMENT E

On Highway 101 near King City, Monterey County, seismically retrofit the Salinas River Bridges and modify the northbound bridge to meet current standards

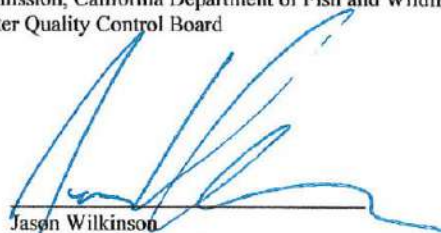
**INITIAL STUDY
with Mitigated Negative Declaration**

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

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies: California Transportation Commission, California Department of Fish and Wildlife,
Central Coast Regional Water Quality Control Board

3-23-17
Date of Approval



Jason Wilkinson
Senior Environmental Planner
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CEQA Lead Agency

Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) plans to seismically retrofit and resurface the Salinas River Bridges and bring the northbound bridge up to current standards. The bridges are located on Highway 101 just outside the limits of King City, Monterey County.

Determination

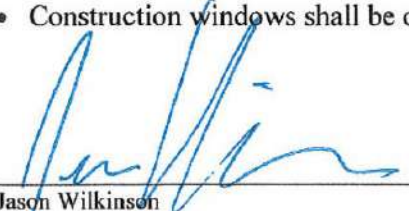
Caltrans prepared an Initial Study for this project and, after public review, has determined that the project would not have a significant effect on the environment for the following reasons:

The project would have no effect on cultural resources; pedestrian or bicycle facilities; land use; state, regional, or local plans or programs; utilities; emergency services; water quality; storm water runoff; geology, soils, seismicity, or topography; or paleontology.

The project would have no significant effect on visual quality or aesthetics; air quality; traffic or transportation; hydrology; or the floodplain. It would not create a significant effect from hazardous waste or materials.

The project would have no significantly adverse effect on park or recreational facilities; biological resources; or from noise because the following mitigation measures would reduce potential effects to less than significant:

- No night work that requires overhead lighting or that would create noise in excess of the nighttime exterior noise level standards for Monterey County shall be permitted.
- A bat exclusion plan shall be prepared and implemented according to specifications provided by a Caltrans biologist.
- Surveys for bats shall be conducted prior to vegetation removal if it must occur during the maternal roosting season.
- In order to protect swallows and bats, buffers shall be implemented as necessary and work could be required to cease if avoidance is not feasible.
- Construction windows shall be observed for swallows and bats.



Jason Wilkinson
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3-23-17
Date

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Chapter 1 Proposed Project

1.1 Introduction

State Highway 101 is the primary north-south transportation corridor along the central coast. The proposed project is located just outside the northwestern edge of King City, where Highway 101 makes a sweeping curve west as it crosses the Salinas River bed before turning north again on its way up the Salinas Valley. In the project vicinity, the open-channel river-bottom is approximately 75 to 150 feet wide. The river bottom and banks are generally well-vegetated, and throughout its length the Salinas River is most noticeable by its riparian forest. Because of the often dry riverbed, recreational activities such as off-road vehicle riding, horseback riding and hiking are commonly seen in the area.

The Salinas River bridge structures are generally parallel to one another at a distance of approximately 250 feet apart. The bridges are approximately 1,900 feet long, with their roadway decks roughly 28 feet above the riverbed. An established residential neighborhood and the San Lorenzo Park are along the northern side of the Salinas River, within the general vicinity of the project. Agricultural fields cover the land on the south side. East of the project is zoned as commercial development, and gas stations, restaurants and other freeway-oriented services are prevalent.

The southbound bridge was built in 1968 as a reinforced concrete box girder structure. It has two 12-foot lanes and standard-width shoulders: 5-foot inside and 10-foot outside. The northbound bridge is a welded steel girder structure built in 1956 and widened in 1968 during construction of the southbound bridge. It currently has two 12-foot lanes with approximately 3-foot inside and outside shoulders. Both bridges are supported by multiple reinforced concrete pier walls on reinforced concrete pile foundations—16 on the northbound bridge and 18 on the southbound bridge. The abutments are also of reinforced concrete. According to the 1968 as-built Log of Test Borings, the structures' foundations rest on a shallow layer of very loose sandy silt.

1.2 Purpose and Need

1.2.1 Purpose

Purpose of the project is to improve serviceability and stability of the bridge structures during moderate earthquakes and to address non-standard features of the northbound bridge.

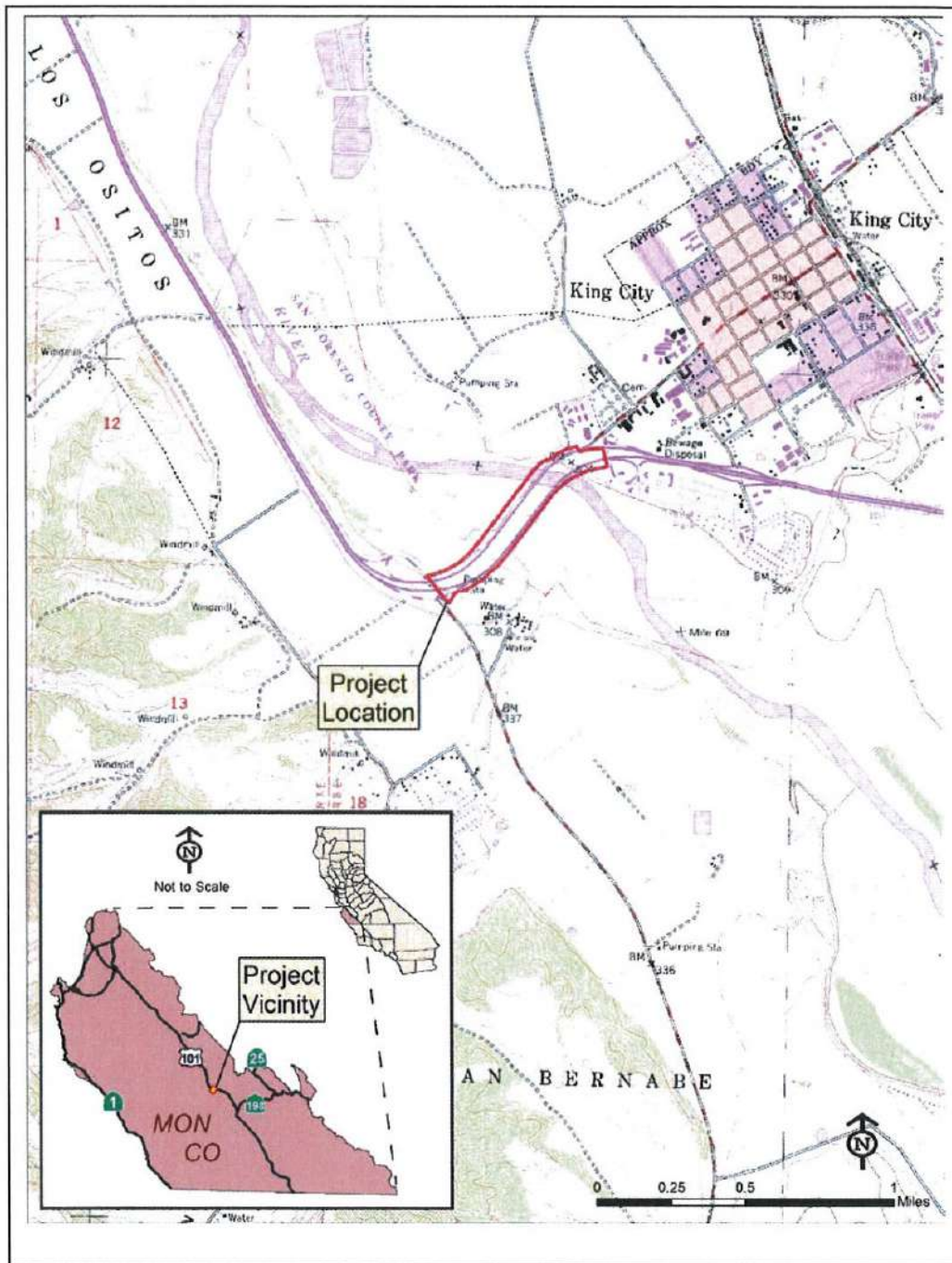


Figure 1 - 1 Project location map

1.2.2 Need

Bridge inspection reports have determined the need for a seismic retrofit of both the northbound and southbound Salinas River bridges. The soil supporting the structure

foundations might fail during an earthquake, causing the structures to sink or shift sideways. The seismic retrofitting will allow the structures to perform safely during and following moderate seismic events. In addition, the northbound bridge has non-standard inside and outside shoulders and non-standard rail.

1.3 Project Description

The project proposes to seismically retrofit and resurface the decks of both the northbound and southbound bridge structures in order to improve their stability during a moderate seismic event. In addition, the shoulders of the northbound bridge would be widened and the railing changed to bring those features up to current standards.

1.4 Project Alternatives

1.4.1 Build Alternative

The preliminary seismic strategy for both bridges is to place supplemental supports on both sides of each pier and connect these new supports to the existing pier walls. Each new support would consist of a single 5'6"-diameter cast-in-steel-shell pile filled with reinforced concrete. The existing pier walls would be extended about 8'8" on each end to these new supports on the southbound bridge and about 2' on the northbound bridge and would connect to the new piles, as shown in Figure 1-2. (This view is a cross-section looking straight down on the pier from above.) The new piles would be driven about 50 feet below the existing footings, well below the loose sand layer and into competent soil. The superstructure is also being retrofitted to assure the steel girders do not displace relative to the piers.

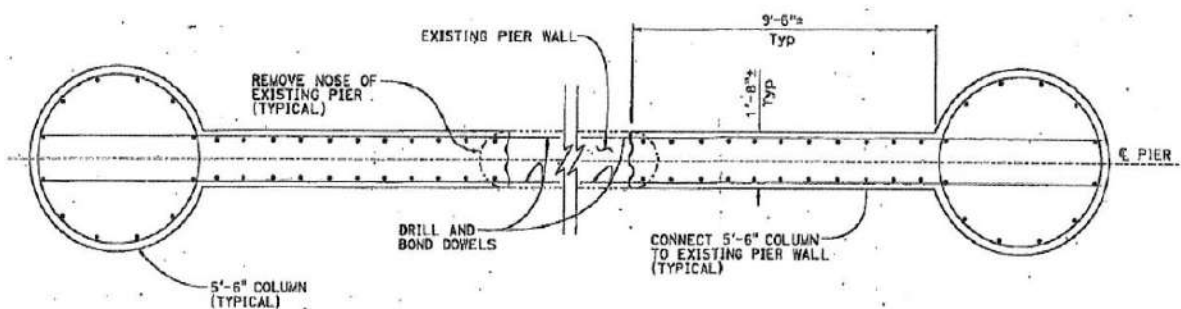


Figure 1 - 2 Proposed pier reinforcement (southbound bridge)

This alternative would also include widening the northbound bridge. The project proposes to widen the bridge on both sides to achieve standard 5-foot inside shoulders and 10-foot outside shoulders, as shown in Figure 1-3. (Deck widening is shown in solid black. Widening of steel girders and bracing is not depicted.) The abutments

would also be widened to accommodate the wider bridge width. In addition, the existing railing, which is an older, open concrete design, would be replaced with a standard, 2'8"-high solid concrete Type 736 barrier. Both bridge decks would also be resurfaced with polyester concrete.

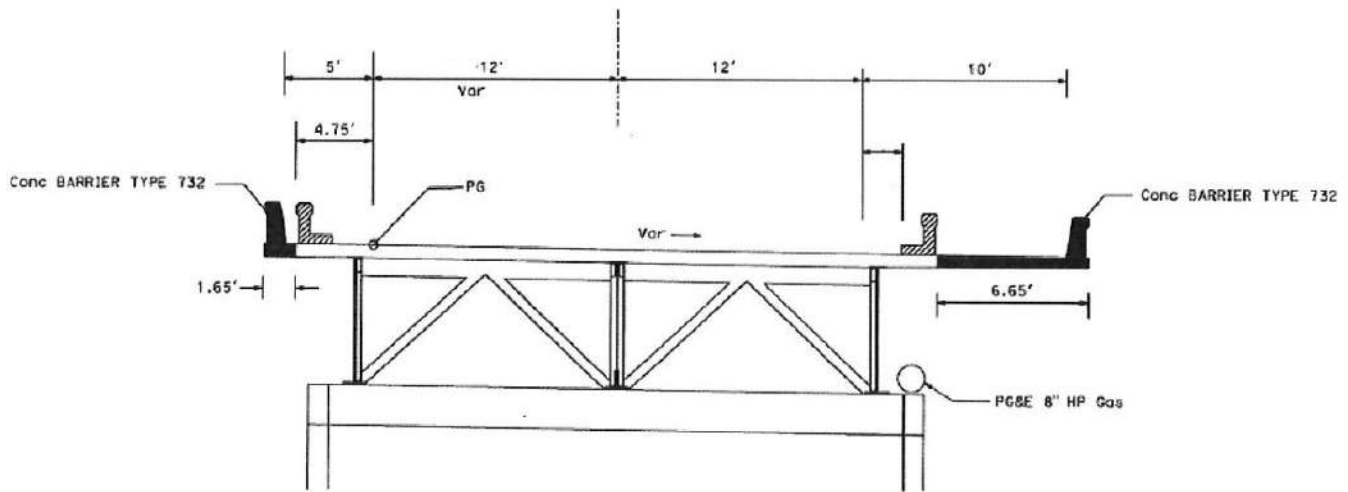


Figure 1 - 3 Bridge widening cross section (northbound bridge)

The completed project would be entirely within state right of way, though temporary construction easements from adjacent properties would be required along the outside of each bridge. It is anticipated that some of the existing utilities attached to the northbound bridge would be in conflict with the proposed work and therefore would be relocated during the construction. The existing high voltage power line crossing the bridges would be relocated within the existing utility easement, if necessary. The proposed project is expected to take 2 years to complete, with construction completed by January 2021. The estimated cost is \$32,100,000.

1.4.2 No-Build (No-Action) Alternative

If this alternative were chosen, there would be no action taken at this time. The bridge would continue to function as is, but risks failure if there were a seismic event. This would compromise the safety of the travelling public and would require closure of the facility, with traffic being diverted to city and county roads.

The next nearest crossing of the Salinas River is on Elm Avenue in Greenfield, which can be accessed via G15 (Metz-King City Road), originating at First Street in King City. This route represents a 13.5-mile detour, which would cause emergency services responses to be limited. A project to re-establish continuity would have to be initiated under expedited emergency conditions, resulting in a structure that, while adequately serving the public need, would not likely take into consideration other public values such as protecting environmental resources.

1.5 Preferred Alternative

Caltrans has identified the Build Alternative as the preferred because it meets the purpose and needs of the project.

1.6 Alternatives Considered but Eliminated from Further Discussion Prior to Draft Environmental Document

No other alternatives were considered.

1.7 Permits and Approvals Needed

Table 1-1 lists the agencies that would issue approvals or permits for the project that could affect the minimization or mitigation measures, the final determination, or project funding.

Table 1 - 1 Permitting and Approving Agencies

Agency	Permit/Approval	Status
California Department of Fish and Wildlife	Section 1600 Streambed Alteration Agreement for construction in the riverbed	Acquired during final design of the project.
U.S. Army Corps of Engineers	Section 404 nationwide permit for construction within the river channel	Acquired during final design of the project.
Central Coast Regional Water Quality Control Board	Section 401 Certification for construction within the river channel	Acquired during final design of the project.
U.S. Fish and Wildlife Service	Section 7 consultation and Biological Opinion for California red-legged frog; informal consultation and letter of concurrence for least Bell's vireo and San Joaquin kit fox	Completed.
National Marine Fisheries Service	Section 7 informal consultation and letter of concurrence for south-central California coast steelhead and critical habitat	Awaiting response from NMFS.
California Transportation Commission	Funding approval	Acquired prior to advertising project for contract bids.
Monterey County Water Resources Agency	Encroachment permit for work in the floodway	Acquired prior to construction.
Monterey County Parks	Encroachment permit for temporary easements from San Lorenzo Park	Acquired prior to construction.
Federal Emergency Management Agency	Conditional letter of map revision (CLOMR)	Acquired prior to construction.
Federal Emergency Management Agency	Final letter of map revision (LOMR)	Acquired after project completion.

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

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

- **Cultural resources**— A records search of the project area found that no prehistoric or historic-period cultural resources are within the current Area of Potential Effects. In addition, the Area of Potential Effects was surveyed on August 12, 2015 and inspected for archaeological resources; no prehistoric or historic-period cultural resources were identified. The project has no potential to impact cultural resources. Source: *Cultural Resources Review* memorandum
- **Traffic and Transportation/Pedestrian and Bicycle Facilities**— The project would not affect any mode of transportation. No permanent operational changes are proposed. See section 2.3 *Construction Impacts* for discussion of short-term traffic impacts.
- **Land Use**— The project would have no impact on existing or planned land use. The completed project would be contained within State right of way. Temporary easements would be required during construction.
- **State, Regional, and Local Plans and Programs**— Caltrans, as a state agency, is not subject to regional and local plans or programs, however the proposed project is consistent with the Monterey County Central Salinas Valley Area Plan. The project proposes modifications to existing bridges to address seismic safety; there would be no change in usage or capacity. The project is included in the State Seismic Retrofit Programs. (See section 2.3 *Construction Impacts* for discussion on compliance with the County of Monterey Code of Ordinances.)
- **Visual Quality and Aesthetics**— The project involves work on existing bridges. It would alter the appearance by widening the northbound bridge and changing out the open-arch railing to a solid railing using standard bridge design features. It would also add elements to the supporting structures (large cylindrical piles attached to the existing piers by concrete walls) that would be visible both from the highway and the surrounding area. Nonetheless, the completed project would not be an unexpected visual element in the highway corridor environment, and no adverse impacts to visual quality are anticipated. Source: *Visual Assessment of the Proposed Salinas River Bridge Seismic Retrofit Project*.
- **Utilities and Emergency Services**— The project does not include construction or capacity expansion of any water, wastewater, or storm water facilities. No utilities

would be required to service the completed project, nor will it generate any solid waste beyond construction material. At least one bridge lane will be open in both directions at all times during construction; emergency services should not be affected.

- **Water Quality and Storm Water Runoff**— No long-term impacts to water quality are anticipated with the project. Potential short-term impacts from construction activities are increases in sediments, turbidity and total dissolved solids; toxicity due to chemical substances originating from construction activities or vehicles; and inadequate storm water drainage. During construction, a Storm Water Pollution Prevention Plan (SWPPP) will be implemented to help identify the sources of sediment and other pollutants that could affect the quality of storm water discharges and to describe and ensure the implementation of best management practices to reduce or eliminate sediment and other pollutants in storm water as well as non-storm water discharges. Source: *Water Quality Assessment Report*.
- **Geology, Soils, Seismicity, and Topography**— The purpose of the project is to improve the bridge's ability to perform safely during a seismic event. There are three faults that have the potential to affect the project site. Additionally, the liquefaction potential of the soil to a depth of about 25 feet is considered high, though below that soils are denser and less susceptible to liquefaction. Further analysis of the liquefaction potential will be conducted and the results used to develop a suitable design. Source: *Structure Preliminary Geotechnical Report for Salinas River Bridge Seismic Restoration*.
- **Paleontology**— The probability of encountering paleontological resources within the high energy environments of a live stream channel and floodplain is very low. No impacts to paleontological resources are anticipated. Source: memorandum on paleontological resources
- **Hazardous Waste and Materials**— Materials to be removed during construction were found to contain regulated substances. Testing determined that there was acrially deposited lead in the soil at the project site. On the bridge, there is asbestos-containing material and lead-containing paint. The project would also involve removal of treated wood waste. However, these are routine construction issues and would be handled through standard practices. There is very little risk of impacts due to unanticipated hazardous waste or other contamination-related issues. Source: *Initial Site Assessment*.
- **Air Quality**— The project would not affect traffic patterns, therefore there would be no long-term impacts to air quality. See section 2.3 *Construction Impacts* for discussion of short-term impacts.

2.1 Physical Environment

2.1.1 Hydrology and Floodplain

Affected Environment

Applicable technical reports: Preliminary Hydraulic Report and Location Hydraulic Study.

The Salinas River is the largest river of the central coast of California, flowing 170 miles and draining about 4,160 square miles. Within the project limits, the Salinas River floodplain lies within a Federal Emergency Management Agency (FEMA) Zone AE regulatory floodway. “Floodways” are areas where fill or other development is likely to divert flow and contribute to increased water depths during a flood. It consists of the channel of the river plus any adjacent floodplain areas that must be kept free of encroachment so that the base flood (the 100-year flood event) can be carried away without substantial increases in flood heights (that is, without any net increase to the base flood elevations.) Generally, no new development is permitted within the regulatory floodway unless it can be demonstrated that the proposed development shall not result in *any* rise in the 100-year flood elevation. There are some situations, however, in which a project in the floodway may be allowed even though it would cause a rise in the flood elevation (such as with dams, bridges, or roads.) In these cases, the flood hazard map must be changed to reflect the new hazard.

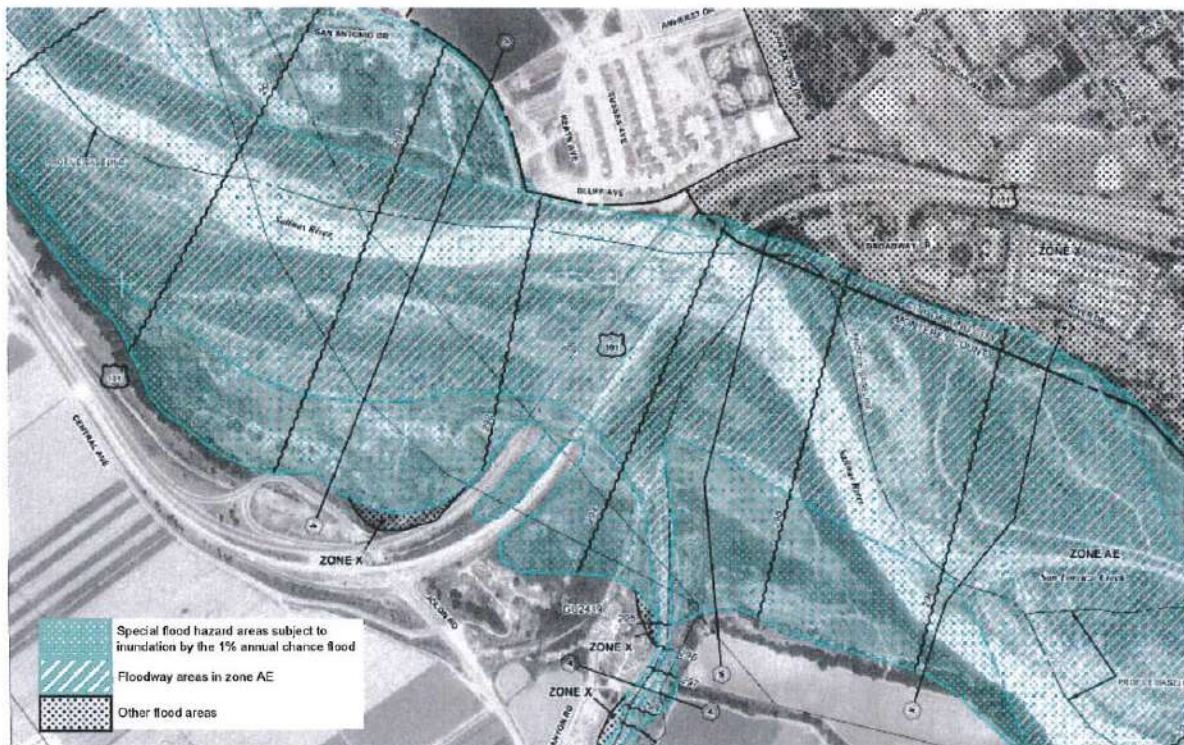


Figure 2 - 1 Project area flood hazard map

According to the flood mapping both upstream and downstream of the project site, flood waters exceed the channel capacity and flood adjacent lands during 100-year flood events. At the Salinas River Bridges, the 100-year runoff is completely contained within the bridge openings and there is no flooding onto the highway traveled way. All flooding is contained within the floodplain of the Salinas River and passes through the existing structures unobstructed.

Environmental Consequences

According to the hydraulic modeling, the proposed project would create a rise of 0.03 feet in the base flood elevation for about 7,350 feet upstream of the southbound bridge. This rise is caused by friction from the current against the larger piers slowing the flow of water and causing a backup. The Federal Emergency Management Agency's regulations for compliance within the floodway state that a rise in the base flood elevation cannot exceed 0.00 feet; the proposed project exceeds this regulation.

The rise would not cause any backwater conditions that would adversely affect the channel or the regulatory floodway's ability to pass the 100-year flood event, nor would it cause the river to extend beyond its banks. The river maintains existing base flood elevations beyond the initial rise upstream of the bridges, and quickly reverts to existing elevations downstream once it passes through the bridges. Therefore, it has been determined that the proposed project would have no adverse effects on the regulatory floodway or its ability to pass the 100-year flood event. Nonetheless, any net increase to the base flood elevations due to the seismic retrofit project's encroachment into the floodway would not be allowed without special provisions given by Monterey County in coordination with the Federal Emergency Management Agency.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans has determined that there would be no potentially significant effects to the floodplain as a result of the proposed project, therefore no measures are included. Because federal standards do not allow local agencies to issue variances for development within the floodway that would result in increased flood levels, Caltrans would have to apply to the Federal Emergency Management Agency for (1) a conditional letter of map revision (CLOMR) before construction begins and (2) a final letter of map revision (LOMR) after the project has been completed.

2.2 Human Environment

2.2.1 Parks and Recreational Facilities

Affected Environment

San Lorenzo Park is part of the Monterey County Park system. It is located at the King City limits on the east bank of the Salinas River with property extending into the riverbed. The park contains day-use facilities including picnic areas, sports complexes, and walking trails, as well as overnight camp sites. A steel truss pedestrian bridge crosses the river channel approximately 300 feet west of the northbound bridge

and connects to a system of dirt footpaths that meander through the riverbed and banks. The park also has meeting facilities and is home to the Monterey County Agricultural and Rural Life Museum. The picnic areas are open all year, but are closed at night.



Figure 2 - 2 San Lorenzo Park

Environmental Consequences

The completed project will have no impacts on San Lorenzo Park. Construction, however, could cause proximity impacts to recreational activities due to noise, dust, and the general undesirability of a large construction site nearby. Nighttime construction could disrupt camping activities due to light and noise pollution. Temporary construction easements will be needed from the private parcels adjacent to Caltrans right of way. (The easements run adjacent and parallel to the northbound bridge, and extend up to 100 feet outward from the edge of the bridge, *but would not extend into Park property*. Table 2-2 has been updated to show the correct property boundaries of the Park and adjacent private parcels.) The easements would be used for maneuvering construction equipment and stockpiling material; they would be highly disturbed and likely heavily trafficked by construction equipment. In one location, the

easement would come within about 30 feet of a walking path. (See section 2.4 *Construction Impacts* for additional information.)

Avoidance, Minimization, and/or Mitigation Measures

1. All construction activities that require overhead lighting or are in excess of the nighttime exterior noise level standards for Monterey County shall be limited to the hours of 7:00 a.m. to 10:00 p.m. Pile driving shall be limited to the hours of 7:00 a.m. to 7:00 p.m. to avoid disturbance to campers at the Park.
2. Construction fencing would delineate the construction area on the northbound side, limiting the range of construction equipment.
3. Construction easements would be temporary and would not encroach on Park trails.

2.3 Biological Environment

2.3.1 Natural Communities

Applicable technical report: Natural Environment Study.

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in section 2.3.4 *Threatened and Endangered Species*. Wetlands and other waters are also discussed below in section 2.3.2 *Wetlands and Other Waters*.

Affected Environment

Aside from weedy and habitually disturbed areas, the area that would be disturbed by the proposed project is comprised of five habitat types with the potential to support special-status species and are listed in order of abundance within the project area: annual grassland, arroyo willow forest, riparian scrub, coyote brush scrub, and riverine.

Annual grassland is the most abundant, occurring primarily in the upland areas between the two bridges. It is dominated by introduced annual grasses, but includes many species of native plants such as wildflowers. Annual non-native grasslands can provide quality habitat for various sensitive species, but provide little cover for wildlife, though numerous species do forage, and several species breed, in this habitat.

Arroyo willow forest is located within the immediate floodplain on both sides of the active channel. This area is subjected to frequent flooding and contains fewer upland species than other habitats. It is dominated by tall arroyo willow trees, but includes others such as native southern California black walnut, Fremont cottonwood, and

sandbar willow. There are also several small, scattered stands of giant reed (frequently referred to as arundo) and tamarisk, which are non-native and invasive.

Riparian scrub is located in a continuous patch within the riverbed at the southern ends of the bridges. (The highway crosses the river in a southwesterly direction, so the southern ends of the bridges are in the northbound direction, away from the active channel. See Figures 1-1 and 2-1.) It is dominated by low sandbar willows, but also contains a variety of native species including shrubs, grasses, and others. It provides quality habitat and cover for a variety of species, primarily nesting songbirds.

Coyote brush scrub is located in a narrow strip adjacent to the northern sides of both lanes of Highway 101. It is dominated by coyote brush, but includes California sagebrush, black sage, and California buckwheat, likely established from historic highway plantings. Due to its proximity to the highway, it does not provide quality habitat at this location.

Environmental Consequences

Table 2-1 shows the area of each habitat type that is expected to be disturbed as a result of the project. Permanent impacts are calculated as the footprint of the pier extensions. Temporary impacts are primarily the result of excavation and vehicular traffic. Where necessary, these areas would be regraded after the construction work was completed and vegetated. They would eventually return to a natural state.

Table 2 - 1 Estimated Impacts to Natural Communities

Community/Habitat	Permanent Impact (sq ft)	Temporary Impact (ac)
Annual grassland	566	15.2
Arroyo willow forest	653	9.5
Riparian scrub	479	8.2
Coyote brush scrub	44	3.5
TOTAL	1742	36.4

Avoidance, Minimization, and/or Mitigation Measures

1. All disturbed areas shall be graded to landforms that preserve the natural flow patterns and functions of the riverbed and channel. A final grading plan would be prepared in coordination with the Caltrans biologist or designee. Contours would establish suitable landforms for reestablishing areas of natural communities.
2. Prior to any ground-disturbing activities, environmentally sensitive area (ESA) fencing shall be installed around the dripline of trees to be protected within the project limits. Environmentally sensitive areas shall be noted on design plans, delineated in the field prior to the start of construction activities, and installed

along the maximum disturbance limits to minimize disturbance to adjacent habitats.

3. Prior to the onset of work, Caltrans shall ensure that a plan is in place for prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to implement should a spill occur. All project-related hazardous materials spills within the project site shall be cleaned up immediately. Readily accessible spill prevention and cleanup materials shall be kept by the contractor on-site at all times during construction.
4. All trash that might attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
5. During construction, temporary erosion control measures as required by the California Construction General Permit, for a risk level 2 project, will be implemented. Temporary erosion control shall consist of temporary hydraulic mulch (bonded fiber matrix) along with temporary sediment control BMPs (fiber rolls, berms, et cetera) installed prior to every predicted rain event. All temporary construction site BMPs shall be inspected and maintained by the contractor throughout the construction period.
6. A landscape plan shall be prepared by a Caltrans Landscape Architect in coordination with a Caltrans biologist. Plants used for revegetation will consist of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable. This measure shall be implemented in all areas disturbed by activities associated with the project, unless Caltrans and USFWS determine that it is not feasible or practical.
7. Disturbed areas shall be treated with erosion control appropriate to the river environment and/or revegetated with a mix of native species suitable to the mosaic of existing natural communities. The plan must also include any specifications required by permitting agencies.

2.3.2 Wetlands and Other Waters

Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the Clean Water Act is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the Clean Water Act, a three-parameter approach is used

that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the Clean Water Act.

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

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

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of Corps' Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the Corps decision to approve is based on compliance with the Environmental Protection Agency's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the Environmental Protection Agency in conjunction with the Corps, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the Corps may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significantly adverse environmental consequences.

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

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board, the Regional Water Quality Control Boards (Regional Water Boards) and the California Department of Fish and Wildlife (California Fish and Wildlife). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural

flow of or substantially change the bed or bank of a river, stream, or lake to notify California Fish and Wildlife before beginning construction. If California Fish and Wildlife determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. California Fish and Wildlife jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the Corps may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the California Fish and Wildlife.

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

Affected Environment

Applicable technical reports: Natural Environment Study; Natural Environment Study Addendum.

The active river channel, referred to as “riverine” habitat, is considered “other waters of the U.S.” under the Clean Water Act and is defined as the area at or below the ordinary high water mark. It can flow all year during non-drought periods, but there was no standing or flowing water during site visits. Aside from four islands of arroyo willow forest, the channel within the project area is mostly unvegetated.

The Salinas River supports habitat for the south-central California coast steelhead and other non-special-status fish species such as Sacramento sucker and the non-native striped bass. Other native species that could reside in the river are western pond turtle, California red-legged frog, and Sierran tree frog, as well as non-native aquatic species such as crayfish and bullfrogs. (South-central California coast steelhead and California red-legged frog are discussed in section 2.3.4 *Threatened and Endangered Species*.)

Freshwater emergent wetland is located in a single narrow strip just downstream of the northbound bridge and at the southern edge of the active channel. It likely became established from receding river flows, resulting in pockets of pooled, seasonal water that receive very little stream current for extended periods, allowing species such as cattails to dominate. Wetlands are important for acting as a filtration system for water impurities and for their potential to support various animal species. This location, however, does not show signs of frequent inundation with water and is represented by such a small area that it likely does not support special status species.

The active river channel and the wetlands fall within the jurisdictions of the U.S. Army Corps and the Central Coast Regional Water Quality Control Board. The entire

riverbed is within the jurisdiction of California Fish and Wildlife. A jurisdictional determination from the Corps is anticipated during the design phase, and would be required before it issued a Section 404 permit.

Environmental Consequences

Riverine habitat would be temporarily impacted via earth work at the site of three piers (two on the southbound bridge and one on the northbound bridge). In addition, if water is present during construction of those three piers, a temporary stream diversion would be required to construct the project.

In 1989, President George H. W. Bush established the national policy of “no-net loss of wetlands”. This set the groundwork to replace each newly impacted wetland with a replacement wetland of the same size and with similar wetland functions and values. No net loss does not mean no loss. Wetlands may still be impacted, but they must be replaced. The proposed project would create a temporary loss of wetlands from general construction disturbance. Permanent impacts would also occur if the new pile and wall of one of the piers extended into the wetland area, however preliminary design does not show this to be likely. These areas would be more accurately estimated during final design and prior to permitting, when project plans would be more precise and the structure footprint could be accurately delineated. For the purposes of this document, however, Table 2-2 shows the estimated areas of permanent and temporary impacts as calculated at this time.

Table 2 - 2 Estimated Impacts to Wetlands and Other Waters

Resource	Permanent Impact	Temporary Impact
Freshwater emergent wetland	0	392 square feet
Riverine	131 square feet	1.6 acres

Avoidance, Minimization, and/or Mitigation Measures

1. Measures cited in section 2.3.1 *Natural Communities* shall be expanded to include provisions to reestablish freshwater emergent wetlands such that there is no net loss of wetlands, including appropriate contouring and replanting with native wetland species suitable to the locale.
2. Prior to any ground-disturbing activities, environmentally sensitive area (ESA) fencing shall be installed around jurisdictional waters and potential wetlands to be avoided.
3. During construction, erosion control measures shall be implemented. Fiber rolls and other temporary, large sediment barriers shall be installed as needed between the project site and jurisdictional other waters and riparian habitat. Erosion

controls shall be maintained by the contractor regularly throughout the construction period.

4. Construction activities that require presence within the riverine habitat, including any temporary stream diversion, shall be timed to occur between June 15 and October 31 in any given year, or as otherwise directed by the regulatory agencies, when the surface is likely to be dry or the water level is at seasonal minimum. Deviations from this work window will be made only with permission from the relevant regulatory agencies. In addition, access to the project limits that are within California Fish and Wildlife jurisdiction will be defined in the Streambed Alteration Agreement. The jurisdictional area shall be avoided during periods of rain or high stream flows.
5. Temporary impacts to wetlands would be re-established on site at a minimum 2:1 ratio; permanent impacts would be re-established on site at a 3:1 ratio. A mitigation and monitoring plan will be developed in accordance with the applicable permits to accomplish re-establishment. The Plan will include restoration and enhancement of existing riparian and wetland resources.

2.3.3 Animal Species

Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (U.S. Fish and Wildlife), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (National Marine Fisheries) and the California Department of Fish and Wildlife (California Fish and Wildlife) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.4 below. All other special-status animal species are discussed here, including California Fish and Wildlife fully protected species and species of special concern, and U.S. Fish and Wildlife or National Marine Fisheries candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

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

Affected Environment

Applicable technical reports: Natural Environment Study; Natural Environment Study Addendum.

Table 2-3 provides information on the animal species that could be adversely affected by the project that have special protection.

Table 2 - 3 Animal Species Potentially Affected

Species	Status	Presence
south-central California coast Steelhead	Federally threatened; California Species of Special Concern	No individuals seen; no water present; critical habitat present; spawning habitat in upstream tributaries (migratory corridor)
California red-legged frog	Federally threatened; California Species of Special Concern	No protocol surveys conducted; no individuals observed; no water present
Other amphibians and reptiles	California Species of Special Concern	No individuals seen; potential habitat present
Burrowing owl	California Species of Special Concern; protected under Migratory Bird Treaty Act.	No individuals seen.
Cliff and northern rough-wing swallows, white-throated swift	Protected under Migratory Bird Treaty Act.	Species present; nests present on bridges
Least Bell's vireo	Federally endangered; state endangered	No individuals or nests seen
Other bird species	Protection under Migratory Bird Treaty Act and California Fish and Game Code Section 3503	Nesting and foraging behavior seen.
San Joaquin kit fox	Federally endangered; state threatened	No evidence of individuals
American badger	California Species of Special Concern	No evidence of individuals; habitat present
Monterey dusky-footed wood rat	California Species of Special Concern	No individuals seen; rat nest present
Bats	California Species of Special Concern	Individuals seen, but not of a special-status species

Note: Because of their federal status, steelhead, California red-legged frog, Least Bell's vireo, and San Joaquin kit fox are covered under section 2.3.4 Threatened and Endangered Species.

Amphibians and reptiles

The following animals have been addressed as a group because their habitat requirements are similar or overlap and the potential for impacts from construction activities for each of them is the same: western spadefoot toad, coast horned lizard, San

Joaquin whipsnake, two-striped garter snake, and western pond turtle. The western spadefoot, two-striped garter snake, and western pond turtle are mostly aquatic, but also access banks or upland areas. The coast horned lizard and San Joaquin whipsnake inhabit open, arid areas with low or little vegetation. The western spadefoot, San Joaquin whipsnake, and two-striped garter snake also make use of small mammal burrows.

None of these species were detected during surveys, but the survey efforts were not considered intensive for this suite of species. There are no documented sightings of any of these species within the project limits except for western pond turtles, the most recent sighting having been more than 10 years ago. Potential habitat, however, exists for each of the species, so their presence at construction is possible.

Burrowing owl

The burrowing owl is a year-round resident of open, dry grassland and sometimes agricultural areas. Suitable burrowing owl habitat may also include trees and shrubs, though the underground burrows of other mammals are the essential habitat component, providing protection, shelter, and nests.

No burrowing owls were observed during any of the site visits. Burrowing owls frequently use burrows of the California ground squirrel, but the few burrows observed were outside of the construction area. The nearest sighting for burrowing owl is 2 miles to the north from 2002, and was non-nesting. It is unlikely that the grassland habitat would be used by burrowing owls because they are small patches surrounded by vegetation that would provide cover for predators. Furthermore, much of the grasslands would be subject to periodic flooding by the Salinas River. Nevertheless, it is possible that owls could use the area for wintering or even nesting.

Swallows and white-throated swift

The following species have been addressed as a group because they have similar habitat requirements, project-related impacts, and avoidance and minimization measures: bank swallow, northern rough-winged swallow, cliff swallow, and white-throated swift. Bank swallows and northern rough-winged swallows both nest in burrows in vertical banks of rivers and streams, though the latter will also nest in crevices in structures such as bridges. Cliff swallows make mud nests on rocks, buildings and other structures. White-throated swifts typically construct a simple cup nest and attach it to a vertical cliff wall or on a ledge.

White-throated swifts were observed entering the weep holes in the southbound bridge during site visits to the project area. Northern rough-winged swallows and cliff swallows were seen in the area, and nests of both species were observed on both bridges. It is likely that both bridges will contain active nests from both swallows, and the southbound bridge will likely also contain swift nests during the nesting season. No bank swallows were seen during any of the visits and they have not been documented nesting in the area since at least the early 1990's, but there is potential nesting habitat on the banks of the active channel of the Salinas River near the bridges.

Other bird species

Suitable nesting habitat for various bird species occurs along the Salinas River, although the habitat directly under the bridges and within the construction area is more disturbed than the habitat up- and downstream due to less mature vegetation that includes several non-native and invasive species and the frequent intrusive presence of human activity.

American badger

Suitable habitat for badgers is characterized by open habitats with dry, crumbly soils in which they dig burrows for cover. They are active year-round, nocturnally and diurnally, with variable periods of inactivity in winter. There was no sign of badger (tracks, dens, or scat) found during site visits and no recorded sightings since the 1980s, but there is suitable habitat for the species and therefore it could be present at the time of construction.

Monterey dusky-footed woodrat

Dusky-footed woodrats are common in oak woodlands and riparian habitats with moderate canopy cover and variable understory. A single large nest was observed on an island of arroyo willows within the river channel between the two bridges. The rest of the construction area was surveyed extensively and no other signs were seen of this species. There is some question as to whether a woodrat found at this location would likely be Monterey dusky-footed woodrat or another species, since their ranges overlap.

Bats

Bats are nocturnal animals. They can colonize a variety of both natural and man-made locations, with the underside of bridges being particularly useful. The Salinas River bridges are close to water, provide protection from predators, are subject to little human activity, and contain the small crevices and warm, dark environment needed for roosting. Bats species identified during site visits were: big, brown bat; hoary bat; LeConte's free-tail; Townsend's big-eared bat (a California species of special concern); and Yuma myotis. Both the northbound and southbound bridges showed signs of use as both a day roost and night roost by big brown bats, but it is possible the other species are using the bridges as well. Some of the larger trees adjacent to the project site could also provide roosting habitat for bats.

Environmental Consequences

Amphibians and reptiles

If present, project construction could result in the injury or mortality of noted species during clearing and grubbing operations, vehicular travel, or through diversion or dewatering of the Salinas River (if necessary). Capturing and relocating these species could subject them to stresses that could result in adverse effects. Injury or mortality could occur via accidental crushing by worker foot-traffic or construction equipment. Erosion and sedimentation could also occur, which could directly or indirectly affect

water quality and/or alter downstream habitat by filling pools. Since presence is unlikely, the potential for these impacts is low, but not null.

Burrowing Owl

Vegetation clearing and associated grading could directly impact burrowing owls by crushing occupied burrows. Active construction on each of the bridge piers, including the placement of falsework and forms, could directly impact birds due to the close proximity of crews and equipment to active nests. Indirect impacts could also result from noise and disturbance associated with construction, which could alter perching, foraging, or nesting behaviors.

Swallows and white-throated swift

Active construction on the bridge piers and northbound bridge deck could directly impact active bird nests and eggs or young residing in nests. Indirect impacts could also result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors. In addition, there would be temporary loss of vegetation supporting potential nesting habitat, and a temporary loss of nesting locations on the bridges.

Other bird species

Vegetation removal could directly impact active bird nests and eggs or young residing in nests. As with the swallows, indirect impacts are also possible from noise and disturbance associated with construction.

American badger

If present during construction, vegetation clearing and associated grading could directly impact badgers by crushing occupied burrows. Construction at each of the bridge piers, including the placement of falsework and forms, could directly impact badgers due to the close proximity of crews and equipment to active dens. Indirect impacts could also result from noise and disturbance associated with construction, which could alter behaviors.

Monterey dusky-footed woodrat

Vegetation removal within arroyo willow habitat, particularly in the location where the nest was observed, could kill or injury individuals in the area. Indirect impacts could occur through other vegetation clearing.

Bats

Individual bats present during construction could be directly impacted if they are disturbed and leave their day roosts. This could cause direct mortality by exposing them to diurnal predators, or by causing unnecessary energy expenditure that could lead to starvation or susceptibility to disease or predation. Entire colonies could also abandon the roost due to disturbance, increasing the number of individuals affected. Roosting habitat on the bridges would be temporarily impacted by the project, but it is assumed that bats are not utilizing the smaller-sized trees and shrubs within the construction area. If bats are using the bridge structures as maternity roosts, young

that are not yet weaned are susceptible to mortality if their mothers are disturbed such that they do not return to their roosts. Bats using the larger trees adjacent to the construction area could be temporarily impacted by noise and the presence of construction crews during the project.

Avoidance, Minimization, and/or Mitigation Measures

The California Department of Fish and Wildlife Section 1600 Streambed Alteration Agreement could require additional measures not included in this section.

Amphibians and reptiles

1. Prior to construction, a biologist determined qualified by Caltrans shall survey the project area and capture and relocate any aquatic species of special concern to the nearest suitable habitat outside of the construction zone. Observations of these species shall be documented and submitted to California Fish and Wildlife upon project completion.
2. The project plans shall delineate environmentally sensitive areas (ESAs) to minimize impacts to sensitive areas and species by limiting access to the minimum required for construction. No vehicle access within the ESAs would be permitted.

Burrowing Owl

3. Prior to construction, a qualified biologist with experience in the ecology of the burrowing owl shall conduct a training session for all construction personnel that will include a description of the burrowing owl and specific measures that are being implemented to avoid adverse effects during construction.
4. A pre-construction survey shall be conducted by a qualified biologist no less than 14 days prior to initiating ground disturbance activities using the recommended methods described in the *Staff Report on Burrowing Owl Mitigation* from California Fish and Wildlife (formerly known as the California Department of Fish and Game.) Implementation of avoidance and minimization measures shall be triggered by positive owl presence on the site where project activities will occur. If found on site, protective buffers will be established around occupied burrows and will follow guidelines in the Staff Report. Time lapses between project activities shall require that additional surveys be conducted to ensure there is no incidental take of the owl, including but not limited to a final survey conducted within 24 hours prior to ground disturbance.
5. A qualified biologist shall implement buffers (e.g., with flagging, fencing, etc.) around occupied burrowing owl burrows. If feasible, no disturbance shall occur within 160 feet of occupied burrows during the non-breeding/wintering season of September 1 through January 31 or within 250 feet during the breeding season of February 1 through August 31.

6. If avoidance of occupied burrowing owl burrows is not feasible, disturbance within burrowing owl buffers shall be avoided until a qualified biologist prepares and implements a Burrowing Owl Exclusion Plan as outlined in CDFG (2012). This plan shall describe implementation of on-site passive relocation/exclusion of burrowing owls, construction of artificial burrows (if necessary), and monitoring. Passive relocation/exclusion of burrowing owls shall be conducted by a qualified biologist with all necessary approvals/permits from California Fish and Wildlife.

Swallows and white-throated swift

7. If construction activities are proposed to occur on or within 100 feet of either bridge during the nesting season (February 15 to August 31), a contractor shall install exclusionary devices prior to the nesting season that are designed to prevent swallows, swifts, or any other bird from nesting either on or in the bridge structures. The exclusionary devices shall be approved by a Caltrans biologist at least 2 weeks prior to installing. The exclusionary devices shall be inspected by a Caltrans biologist or his or her designee at a frequency specified by a Caltrans biologist. The exclusion device shall be installed in a manner that does not entrap wildlife.
8. If any active nests containing eggs or young are detected in the project site, all work within 250 feet of such nests shall cease until a Caltrans biologist is contacted and has determined whether or not additional measures must be implemented, or whether to modify the protective buffer around the nest until the nest is no longer active.

Other bird species

9. Tree and other vegetation removal shall be scheduled to occur from September 2 to February 14, outside of the typical nesting bird season, to avoid potential impacts to nesting birds. If construction activities are proposed to occur within 100 feet of potential habitat during the nesting season (February 15 to August 31), a nesting bird survey shall be conducted by a biologist determined qualified by Caltrans no more than two weeks (14 days) prior to construction. If an active nest is found, Caltrans shall coordinate with California Fish and Wildlife to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have fledged.

American badger

10. If a badger is found to be present on the project site, no work is to occur within 100 feet of the badger and/or its den until the den has been found to be vacant for three consecutive nights. If the den is a pupping den, then the 100-foot buffer must remain in place until the pups have weaned and the den is abandoned. Measures implemented for San Joaquin kit fox (see section 2.3.4 *Threatened and Endangered Species*) will also avoid and protect badgers.

Monterey dusky-footed wood rat

11. Prior to implementation of proposed project activities, a pre-construction visual survey will be conducted within suitable woodrat habitat in the project site to determine the presence or absence of woodrat nests.
12. If woodrat nests are located during this survey, an environmentally sensitive area with a 25-foot buffer will be established around each one.
13. To the extent feasible, project activities requiring grading or vegetation removal within the 25-foot protective buffer should only occur during the non-breeding season (October 1-December 31) to avoid noise impacts to any breeding woodrats that may occupy the nest from January through September.
14. If project activities cannot avoid impacting or removing the nest, then it should be dismantled by hand prior to grading or vegetation removal activities. The dismantling shall occur during the non-breeding season (October 1-December 31) and shall be conducted so that the nest material is removed starting on the side where most impacts will occur and ending on the side where the most habitat will be undisturbed, which will allow for any woodrats in the nest to escape into adjacent undisturbed habitat.
15. If young are encountered during nest dismantling, the dismantling activity should be stopped and the material replaced back on the nest and the nest should be left alone and rechecked in 2-3 weeks to see if the young are out of the nest or capable of being out on their own (as determined by a qualified biologist); once the young can fend for themselves, the nest dismantling can continue.

Bats

16. A bat exclusion plan shall be implemented between the dates of September 1 and February 15 to avoid impacts to maternal colonies. A contractor shall install exclusionary devices designed to allow any day-roosting bats present to exit the structure but to prevent bats from returning and roosting either on or in the bridge structures. The exclusionary devices shall be approved by a Caltrans biologist at least 2 weeks (14 days) prior to installation. The exclusionary devices shall be inspected by a Caltrans biologist or someone approved by a Caltrans biologist at a frequency specified by a Caltrans biologist. The exclusionary device shall be installed in a manner that does not entrap wildlife. The exclusionary device shall be in place for the minimum amount of time necessary to complete the project.
17. If any active bats with dependent young are detected on one of the bridges, all work within 150 feet of the maternal roost shall cease until a Caltrans biologist is contacted and has determined whether or not additional measures must be implemented, or to modify the protective buffer around the roost until the young are weaned and no longer dependent upon adult bats.
18. Vegetation removal shall be scheduled to occur from September 2 to February 14, to avoid impacts to maternally-roosting bat species that utilize vegetation. If

construction activities are proposed to occur within 100 feet of potential habitat during the maternal roosting season (approximating the nesting bird season of February 15 to August 31), a visual survey for bats shall be conducted in tandem with nesting bird surveys by a biologist determined qualified by Caltrans no more than two weeks (14 days) prior to construction. If roosting bats are found, Caltrans shall coordinate with California Fish and Wildlife to determine an appropriate buffer based on the habits and needs of the species. The buffer area shall be avoided until a qualified biologist has determined that juveniles have been weaned and are no longer dependent upon parental care.

2.3.4 Threatened and Endangered Species

Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with National Marine Fisheries to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (California Fish and Wildlife) is the agency responsible for implementing the California Endangered Species Act. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by California Fish and Wildlife. For species listed under both the Federal Endangered Species Act and California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, California Fish and Wildlife may also authorize impacts to California Endangered Species

Act species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Affected Environment

Applicable technical reports: Natural Environment Study; Natural Environment Study Addendum.

California red-legged frog

California red-legged frogs breed in permanent or temporary freshwater bodies that will hold water through July, though they require permanent water for hydration. They will move between aquatic sites to breed, forage, or to escape drying conditions. These overland movements can extend more than two miles, often in straight lines and without regard to habitat type.

No protocol surveys were conducted for California red-legged frog and the species was not observed during reconnaissance surveys. No water was present in the project area during any of the site visits in 2015 and 2016. There is no federally designated critical habitat for California red-legged frog within the project area. The species is not expected to occur within the area of disturbance, but the site is within the historic range and there have been occurrences within the watershed. For these reasons, and due to drought conditions during site visits, their presence cannot be completely ruled out, and presence has been inferred.

Steelhead

Steelhead trout are the anadromous (ocean-going) form of rainbow trout. Adults spawn and juveniles rear in freshwater. The juveniles then either remain in freshwater or migrate to the ocean to mature, subsequently returning to freshwater as adults to reproduce. Around the beginning of the 20th century, the Salinas River and tributaries supported a large population of steelhead trout. Today, only small populations of steelhead remain in a handful of the Upper Salinas tributaries. Dams constructed in the upper Salinas River and two of its tributaries during the mid-1900s are thought to be a major reason for the decline.

The Salinas River within the project limits provides migration habitat for adult and juvenile south-central California coast steelhead during the winter, but does not provide suitable spawning or rearing habitat due to high summer temperatures and a lack of optimal spawning gravel. The Salinas River is designated critical habitat for steelhead, though the mainstem is currently rated as "poor", primarily due to agricultural activities and associated water development throughout the Salinas Valley. No water was present in the river during 2015 and 2016 site visits and thus no steelhead were present. However, because of the critical habitat designation and the occurrence of upstream historical sightings, it has been inferred that the project area could contain adult and juvenile steelhead during both upstream and downstream migrations.

Least Bell's vireo

Least Bell's vireos require riparian areas to breed and typically inhabit structurally diverse woodlands along watercourses. They occur in a number of riparian habitat types, building their nests in a variety of plants that provide concealment in dense foliage. Federal critical habitat has been designated for the species, but not within the project area.

No least Bell's vireos were detected during site visits in 2015 and 2016, although protocol-level surveys were not conducted. No confirmed nests have occurred in the Salinas Valley since 1983. However, U.S. Fish and Wildlife has recommended a conservative approach in assuming presence in the absence of protocol surveys.

San Joaquin kit fox

The San Joaquin kit fox typically inhabits arid areas of low vegetation, usually consisting of grasslands or scrub communities. Kit foxes may construct their own dens or modify and inhabit dens originally constructed by other animals. Habitat loss and degradation due to agricultural conversion are major factors in the kit fox's decline. U.S. Fish and Wildlife has not designated critical habitat for the San Joaquin kit fox, but it has prepared a recovery plan.

No evidence of kit fox was observed within or adjacent to the project limits. Few small mammal burrows were noted during site visits to the project area and none were large enough to meet U.S. Fish and Wildlife's size criteria for potential use by kit fox. No evidence of denning was observed within the project site.

Environmental Consequences

California red-legged frog

If frogs were present on the project site, construction could result in the injury or mortality of individuals present in aquatic areas or those residing in small mammal burrows within upland habitat. It is possible that frogs would need to be captured and re-located if found within an area needing to be dewatered.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may affect, and is likely to adversely affect, California red-legged frog.

Steelhead

The addition of concrete reinforcements at the three piers within the riverine habitat (the active channel, below the ordinary high water mark) would result in permanent impacts and might require stream diversion and dewatering. This could also temporarily alter aquatic habitat quality and, during the time the channel is dewatered, make the river channel unavailable to steelhead and other aquatic organisms, but would be implemented during a timeframe in which steelhead are not likely to be present in the project area. Vegetation removal to allow access to piers could somewhat affect shading and microhabitat temperature characteristics along the edges of the river, and

could alter the stability of the banks. These effects, however, also would be temporary. Vegetation proposed for removal consists of younger plants that would be replaced by native riparian plantings in a relatively short timeframe. In addition, the noise and vibrations caused by pile driving for the retrofitted piers are likely to cause temporary impacts to any steelhead in the vicinity.

Diversion, dewatering, and construction in aquatic areas used by migrating steelhead could result in direct impacts to the species through injury or mortality as steelhead stranded in residual wet areas are captured, handled, and relocated. The activities could also impact the structure of the streambed substrate, causing erosion and sedimentation, which could directly or indirectly affect water quality for steelhead. These impacts would likely be temporary and rectified once the pre-construction stream flow conditions are restored. In total, the project would result in approximately 3.4 acres of temporary impacts to steelhead critical habitat along about 1500 linear feet of the channel.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may affect, and is *not* likely to adversely affect, the south-central California coast steelhead. The proposed project may affect, and is *not* likely to adversely affect, steelhead critical habitat.

Least Bell's vireo

If present, vegetation removal could directly impact active bird nests and eggs or young residing in nests. Indirect impacts could result from noise and disturbance associated with construction, which could alter perching, foraging, and/or nesting behaviors.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may affect, and is *not* likely to adversely affect, least Bell's vireo.

San Joaquin kit fox

No San Joaquin kit fox are expected to be affected by the project, however due to historic occurrences of kit fox in the area, avoidance and minimization measures will be incorporated into the project.

The Federal Endangered Species Act Section 7 effects determination is that the proposed project may affect, and is *not* likely to adversely affect, the San Joaquin kit fox.

Avoidance, Minimization, and/or Mitigation Measures

California red-legged frog

1. A biologist with experience in identification of all life stages of the California red-legged frog shall survey the project area no more than 48 hours before the onset of work activities. If any life stage of the California red-legged frog is detected, U.S. Fish and Wildlife shall be notified prior to the start of construction. If Caltrans and U.S. Fish and Wildlife determine that adverse effects to the California red-legged frog cannot be avoided, the proposed project will not

commence until Caltrans completes the appropriate level of consultation with U.S. Fish and Wildlife.

2. Work activities within the active channel (riverine habitat) shall take place between April 15 and October 31, when water levels are typically at their lowest, and California red-legged frogs are likely to be more detectable and breeding frogs can be avoided. Should activities need to be conducted outside of this period, Caltrans may conduct or authorize such activities after obtaining U.S. Fish and Wildlife's written approval.
3. Before work begins, a biologist with experience in the ecology of the California red-legged frog, as well as identification of all life stages, shall conduct a training session for all construction personnel, which will include a description of the California red-legged frog and specific measures that are being implemented to avoid adverse effects to the species during the proposed project.
4. If any life stage of the California red-legged frog is detected in the project area during construction, work will cease immediately and the resident engineer, authorized biologist, or biological monitor will notify the Ventura Fish and Wildlife Office via telephone or electronic mail. If Caltrans and U.S. Fish and Wildlife determine that adverse effects to the California red-legged frogs cannot be avoided, construction activities will remain suspended until Caltrans and U.S. Fish and Wildlife complete the appropriate level of consultation.
5. All refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet away from aquatic or riparian habitat and not in a location from where a spill would drain directly toward aquatic habitat. The monitor shall ensure contamination of aquatic or riparian habitat by implementing the spill response plan described in section 2.3.1 *Natural Communities*.
6. Habitat contours shall be returned to their original configuration at the end of the project activities. This measure shall be implemented in all areas disturbed by activities associated with the project, unless Caltrans and U.S. Fish and Wildlife determine that it is not feasible or modification of original contours would benefit the California red-legged frog.
7. The number of access routes, size of staging areas, and the total area of activity shall be limited to the minimum necessary to achieve the project goals. ESAs shall be delineated to confine access routes and construction areas to the minimum area necessary to complete construction, and minimize the impact to California red-legged frog habitat; this goal includes locating access routes and construction areas outside of aquatic habitat and riparian areas to the extent practicable.
8. To control sedimentation during and after project implementation, Caltrans shall implement best management practices. If best management practices are

ineffective, Caltrans shall attempt to remedy the situation immediately, in consultation with U.S. Fish and Wildlife.

9. If a work site is to be temporarily dewatered by pumping, the intake shall be screened with wire mesh not larger than 0.2 inch to prevent any California red-legged frogs not initially detected from entering the pump system. If California red-legged frogs are detected during dewatering, and adverse effects to California red-legged frogs cannot be avoided, construction activities will remain suspended until Caltrans and U.S. Fish and Wildlife complete the appropriate level of consultation.
10. Upon completion of construction activities, any diversions or barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Alteration of the creek bed will be minimized to the maximum extent possible; any imported material will be removed from the stream bed upon completion of the project.
11. Unless approved by U.S. Fish and Wildlife, water shall not be impounded in a manner that may attract California red-legged frogs.
12. A qualified biologist shall permanently remove any individuals of exotic species, such as bullfrogs, crayfish, and centrarchid fishes from the project area, to the extent possible. The U.S. Fish and Wildlife-approved biologist shall be responsible for ensuring his or her activities are in compliance with the California Fish and Game Code.
13. To ensure that diseases are not conveyed between work sites, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.

Steelhead

14. Prior to initiation of stream diversion/dewatering, Caltrans shall conduct an informal worker environmental training program including a description of steelhead, its legal/protected status, proximity to the project site, avoidance/minimization measures to be implemented during the project, and the implications of violating the Federal Endangered Species Act and permit conditions.
15. During construction, work in the active channel (riverine habitat) shall take place between June 15 and October 31 in any given year, when surface flow is likely to be absent or at a seasonal minimum, and when steelhead are not likely to be migrating through the project area. Deviations from this work window will only be made with permission from Caltrans and the relevant regulatory/resource agencies. Caltrans will work with the relevant regulatory agencies within the parameters specified in permits to ensure that the diversions are sized and placed appropriately to ensure that impacts are minimized to steelhead.

16. During work in the active channel, a Caltrans-approved biologist shall be retained who has experience in steelhead biology and ecology, aquatic habitats, biological monitoring (including diversion/dewatering), and capturing, handling, and relocating fish species. During work in the active channel, the biological monitor(s) shall continuously monitor placement and removal of any required stream diversions or dewatering. The biologist(s) shall capture steelhead and other native fish stranded as a result of diversion or dewatering and relocate the fish to suitable channel habitat near the work area, using methods approved by the appropriate regulatory agencies. These methods may include providing aerated water in buckets for transport and ensuring adequate water temperatures during transport. The biologist shall note the number of steelhead observed in the affected area, the number of steelhead relocated, and the date and time of the collection and relocation.
17. During in-stream work, if pumps are incorporated to assist in temporarily dewatering the site, intakes shall be completely screened with no larger than 3/32-inch (2.38 mm) wire mesh to prevent steelhead and other sensitive aquatic species from entering the pump system. Pumps shall release the additional water to a settling basin allowing the suspended sediment to settle out prior to re-entering the stream(s) outside of the isolated area. The form and function of all pumps used during the dewatering activities shall be checked daily, at a minimum, by a qualified biological monitor to ensure a dry work environment and to minimize adverse effects to aquatic species and habitats.
18. The biological monitor shall monitor erosion and sediment controls to identify and correct any conditions that could adversely affect steelhead or steelhead habitat. The biological monitor shall be granted the authority to halt work activity as necessary and to recommend measures to avoid/minimize adverse effects to steelhead and steelhead habitat.
19. Caltrans shall provide National Marine Fisheries a written summary of work performed (including biological survey and monitoring results), best management practices implemented (i.e., use of biological monitor, flagging of project areas, erosion and sedimentation controls) and supporting photographs. Furthermore, the documentation describing listed species surveys and re-location efforts (if appropriate) shall include name(s) of the Caltrans-approved biologist(s), location and description of area surveyed, time and date of survey, all survey methods used, a list and tally of all sensitive animal species observed during the survey, a description of the instructions/recommendations given to the applicant during the project, and a detailed discussion of capture and relocation efforts (if appropriate).

Least Bell's vireo

20. Measures listed under "Other bird species" in section 2.3.3 *Animal Species* would also apply to least Bell's vireo.

21. Protocol-level surveys by a U.S. Fish and Wildlife-approved biologist shall be conducted the survey season prior to construction following the survey guidelines (USFWS 2001).
22. If least Bell's vireo are observed within 500 feet of the project site prior to or during the course of construction, a qualified biologist shall implement a buffer and work shall cease within the buffer until the least Bell's vireo is located greater than 500 feet from project-related disturbance. If an active least Bell's vireo nest is observed within 500 feet of the project site, all project activities shall immediately cease and U.S. Fish and Wildlife and California Fish and Wildlife shall be contacted within 48 hours. Caltrans shall then coordinate with U.S. Fish and Wildlife and California Fish and Wildlife to ensure that project activities comply with all regulatory requirements. Any additional measures shall be implemented as necessary.
23. New sightings of least Bell's vireos shall be reported to the California Natural Diversity Database.

San Joaquin kit fox

24. If kit fox are detected in the project limits, then U.S. Fish and Wildlife and California Fish and Wildlife must be consulted pursuant to Section 7 of the Federal Endangered Species Act and the California Endangered Species Act, respectively. All project activities shall cease until consultation is complete and the necessary take authorization is obtained.
25. Caltrans and the contractor shall implement the following standard minimization and avoidance measures per the *Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance* (USFWS 2011b) and the letter of concurrence from U.S. Fish and Wildlife.
 - Project employees will be directed to exercise caution when commuting within listed species habitats. Twenty mile-per-hour daytime and 10 mile-per-hour nighttime speed limits will be observed in all project areas, except on county roads and state and federal highways. Off-road vehicles will be prohibited outside of the project area unless authorized by U.S. Fish and Wildlife. Project employees will be provided with written guidance governing vehicle use, speed limits on unpaved roads, fire prevention, and other hazards.
 - Prior to any ground disturbance, the contractor, all employees of the contractor, subcontractors, and subcontractors' employees will attend an employee education program conducted by a Caltrans or U.S. Fish and Wildlife-approved biologist. The program will consist of a brief presentation by persons knowledgeable in San Joaquin kit fox biology, legislative protection, and measures to avoid impacts to the species during project implementation.

- A litter control program will be initiated at each project site. No pets or firearms (except for law enforcement officers and security personnel) will be allowed on-site.
- Excavations deeper than 2 feet will be covered with plywood or similar material at the end of each work day, or escape ramps put in place to prevent any entrapment. Each excavation will be inspected thoroughly before being filled.
- All construction pipes, culverts, or similar structures with a diameter of 4 inches or greater stored on the construction site overnight will be thoroughly inspected for San Joaquin kit foxes prior to being buried, capped, or otherwise used or moved. If a San Joaquin kit fox is discovered inside a pipe, the pipe should not be moved until U.S. Fish and Wildlife has been consulted.
- Use of rodenticides and herbicides in project areas will be restricted. Uses of such compounds will observe all restrictions as mandated on the label as well as those by the U.S. Environmental Protection Agency and any other state or federal authority. If rodent control must be conducted, zinc phosphide will be used to minimize risk to kit fox.
- The resident engineer or his or her designee will be responsible for implementing these conservation measures. The Caltrans biologist or Environmental Construction Liaison will be the contact for biological concerns.
- Upon Project completion, all areas subject to temporary ground disturbance including storage and staging areas, temporary roads, pipeline corridors, etc. will be re-contoured if necessary and revegetated to promote restoration to pre-project conditions. Restoration and vegetation work will use California endemic plant materials from on-site or local sources. Loss of soil from run-off or erosion will be prevented using fiber rolls or similar material and by implementing the best management practices from the Caltrans National Pollutant Discharge Elimination System statewide storm water permit.
- Prior to any ground disturbance, a preconstruction survey will be conducted for San Joaquin kit fox and potential dens. The preconstruction survey will be conducted no less than 14 days and no more than 30 days prior to the beginning of ground disturbance or construction activities. The status of all potential dens will be determined and mapped. Potential dens will be monitored with tracking medium for three days to determine the current use. If no kit fox activity is observed during this period then the den will be excavated by hand or carefully with equipment provided by the contractor, under the direction of the biologist, to preclude subsequent use.
- If kit fox activity is observed at a den, Caltrans will contact U.S. Fish and Wildlife for further coordination. Written results of the preconstruction survey will be submitted to U.S. Fish and Wildlife within 5 days after survey completion and prior to the start of ground disturbance.

- If at any time a natal or pupping den or individual kit fox is discovered within the project area or within 200 feet of the project boundary, U.S. Fish and Wildlife will be notified immediately and all work with the potential to harm kit foxes will cease. New sightings of kit fox shall be reported to the California Natural Diversity Database.

2.3.5 Invasive Species

Regulatory Setting

Invasive species are defined as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health.” The State’s invasive species list, maintained by the California Invasive Species Council, is used to define the invasive species that must be considered as part of the environmental analysis for a proposed project.

Affected Environment

Applicable technical report: Natural Environment Study.

A total of 23 invasive plant species were observed within the project study area. Perennial pepperweed and sweet fennel were observed with moderate or greater density and were determined to be invasive. Giant reed is invasive within the Salinas River and has been an on-going problem, although there were only sporadic occurrences within the vicinity of the project.

Environmental Consequences

Once established, invasive plants will spread naturally, generally through seed dispersal or rhizome extension. (A rhizome is a root or underground plant stem that is capable of growing into a mature plant.) They can also spread when individual plants are carried to a new location, such as during grading activities. Invasive plants often out-compete native plants, which can defeat efforts to reestablish native plant communities.

The proposed project would disturb a large area of ground, some of which contains invasive plant species. This activity has the potential to spread invasive species within the project limits.

Avoidance, Minimization, and/or Mitigation Measures

1. During construction, Caltrans will ensure that the spread or introduction of invasive exotic plant species will be avoided to the maximum extent possible.
2. Construction equipment shall be certified as “weed-free” by Caltrans before entering the construction site. If necessary, wash stations onsite shall be established for construction equipment under the guidance of Caltrans in order to avoid/minimize the spread of invasive plants and/or seed within the construction area.

3. Invasive exotic plants in the project site removed during construction shall be properly disposed at a certified landfill to prevent the spread of invasive species. Inclusion of any species that occurs on the Cal-IPC Invasive Plant Inventory in the Caltrans erosion control seed mix or landscaping plans for the project shall be avoided.
4. The development of any required Mitigation and Monitoring Plan shall include actions to properly remove giant reed that occurs within the area of disturbance in a way that avoids the spread of the species downstream.

2.4 Construction Impacts

This section contains information related to construction activities that have not been previously addressed.

Affected Environment

The project location is adjacent to a suburban area that includes a residential community, a regional park, several motels, and various other transportation-oriented businesses. The nearest homes are within 50 feet of the construction zone. A sound wall separates the homes from the construction area. The nearest boundary of the upland portion of San Lorenzo Park is about 900 feet from the construction zone, though this appears to be a maintenance area. The picnic area and campground would be about 1500 and 2700 feet from construction activities, respectively. The recreation area of the park, which includes hiking trails, extends into the riverbed up to about 30 feet from the state right of way. (See section 2.2.1 *Parks and Recreational Facilities* for more information.) A Quality Inn, the motel nearest to the project site, is approximately 380 feet from where construction would begin, though vehicle and equipment activity could be staged closer.

Environmental Consequences

Air Quality

Monterey County is a nonattainment-transitional area (three or fewer exceedances in the last year) for the state ambient air quality standards for ozone. During construction, the proposed project would generate air pollutants that are precursors to ozone. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors, but the greatest source of pollutants would be windblown dust from disturbed soil. Because the wind typically blows from the northwest, fugitive dust and other emissions would generally be blown towards the agricultural fields on the other side of the river and away from those who might be adversely affected.

Lighting

Night work during construction requires strong lighting that could be disruptive to nearby residents, motel guests, and campers, depending on their distance from the

source and the intervening topography and vegetation. Night lighting is also disruptive to the hunting habits of nocturnal animals.

Noise and Vibrations

The most severe impact from construction likely would be noise, and to a lesser degree vibrations. Construction would require the use of large machinery that emits high noise levels and strong vibrations, both intermittently and consistently. In addition to earth-moving and demolition equipment at the bridges, backup alarms and vehicle engines would be occurring both in the construction zone and on local roads. The anticipated range of noise levels from construction equipment on site is approximately 76 decibels (for a concrete saw or pump) to 101 decibels (for a pile driver, used to drive each of the new reinforcing piles) at 50 feet from the source. A large dump truck emits about 88 decibels at 50 feet. Table 2-4 illustrates how these decibel levels compare to common noise sources.

Based on the formula that noise produced by construction equipment would be reduced at a rate of 6 decibels per doubling of the distance, Table 2-5 shows the noise levels that could be experienced at the nearest locations (not considering any reduction from the sound wall.) Some of these locations are already affected by traffic noise from Highway 101. Levels of highway traffic noise typically range from 70 to 80 decibels at a distance of 50 feet from the highway.

Table 2 - 4 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
Jet fly-over at 1000 feet	— 110 —	Rock band
Gas lawn mower at 3 feet	— 100 —	
	— 90 —	
Diesel truck at 50 feet at 50 mph	— 80 —	Food blender at 3 feet Garbage disposal at 3 feet
Noisy urban area, daytime	— 70 —	Vacuum cleaner at 10 feet Normal speech at 3 feet
Gas lawn mower, 100 feet Commercial area	— 60 —	
Heavy traffic at 300 feet	— 50 —	Large business office Dishwasher next room
Quiet urban daytime	— 40 —	Theater, large conference room (background)
Quiet urban nighttime	— 30 —	Library
Quiet suburban nighttime	— 20 —	Bedroom at night, concert hall (background)
Quiet rural nighttime	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013.

Table 2 - 5 Predicted Noise Levels

Locations	Distance from construction equipment (ft)	Maximum construction noise at location (dBA)	Distance from highway (ft)	Ambient highway noise (dBA)
Residences	50-100	80-90	135	60-70
Park picnic area	1500	70	1600	40-50
Park campground	2800	67	2900	35-45
Quality Inn	380	83	220	59-69

Construction noise levels would be somewhat mitigated by the elevation differential between the locations and the construction equipment for work occurring in the riverbed. An existing sound wall running along San Lorenzo Park Road behind the residences would further reduce noise levels to those homes by about 5 to 8 decibels.

Predicted noise levels during construction could be inconsistent with the Monterey County Code of Ordinances. Section 10.60.030 of the Ordinance states that “it is prohibited within the unincorporated area of the County of Monterey to operate, assist in operating, allow, or cause to be operated any machine, mechanism, device, or contrivance which produces a noise level exceeding eighty-five (85) dBA measured fifty (50) feet therefrom.” In addition, Section 10.60.040 of the Ordinance addresses the regulation of nighttime noise as follows:

A. It is prohibited within the unincorporated area of the County of Monterey to make, assist in making, allow, continue, create, or cause to be made any loud and unreasonable sound any day of the week from 10:00 p.m. to 7:00 a.m. the following morning.

B. Within the time period 10:00 p.m. to 7:00 a.m. the following morning, and for the purposes of this Section, a loud and unreasonable sound shall include any sound that exceeds the exterior noise level standards set forth in Table 2-6 below.

Table 2 - 6 Monterey County Exterior Noise Level Standards (Nighttime Only)

	Standard
Nighttime hourly equivalent sound level (L_{eq} dBA)	45
Maximum level, dBA	65

As a state agency, Caltrans is not subject to county regulations in the absence of a local approval. However because the ambiance of a park is often integral to its function, parks are given special consideration. Therefore, on this project, Caltrans will use the Monterey County noise level standards to regulate nighttime noise.

Traffic

During construction, the northbound bridge would be reduced to one lane while the bridge is being widened and the San Antonio Drive/Broadway Street northbound on-ramp would be closed while the lane closure was being set up. The ramp closure would require that northbound travelers access either the Canal Street or First Street on-ramps over city surface roads, however this is not expected to be a substantial adverse impact.

Avoidance, Minimization, and/or Mitigation Measures

1. The Caltrans Public Information Office shall provide construction schedules and pertinent information to local news media (radio, television, newspapers) after receiving notice from the Resident Engineer that construction is about to begin.
2. Caltrans Standard Specifications pertaining to dust control and dust palliative requirements should effectively reduce and control emission impacts during construction. (Construction activities must comply with local and state water reduction mandates and practices.)
3. Measure #1 in section 2.2.1 *Parks and Recreational Facilities* that would reduce noise and glare impacts on San Lorenzo Park by limiting construction hours would also serve to reduce construction impacts to other area receptors.
4. Residents within 300 feet of areas where pile driving, pavement breaking, and vibratory rolling will take place shall be notified at least 2 weeks in advance of the proposed activity.
5. A photo survey of structures within 200 feet of pile driving would be conducted in advance of the potentially damaging construction work (i.e., when expected vibrations are greater than 0.4 inches per second within 60 feet of a pile driving location.¹)
6. Rubber tires should be used instead of tracked vehicles near vibration-sensitive areas.

2.5 Cumulative Impacts

Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land

¹ This assessment is based on the upper range of a pile driving impact 1.518 inches per second at 25 feet, and uses the formula $PPV_{equip}=PPV_{ref} \cdot (1.518 \text{ in/sec for a pile driver}) \times (25/D)^{1.5}$. Here D is the distance from equipment to receiver. If subsequent testing shows a different vibration level at 25 feet, the 60-foot radius can be adjusted accordingly.

use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines.

Affected Environment

Highway 101 runs through the southern Salinas Valley and is the primary north-south transportation corridor west of Interstate 5. Throughout the region it is a four-lane divided highway with an unpaved median and post-and-wire fencing generally defining the right-of-way line. The geography of the Salinas Valley is defined by the broad valley floor and bounded by the Coastal Range to the west and the Gabilan Mountains to the east. Land use throughout the region is predominately agriculture, with large tracts of low-growing row crops and occasional vineyards seen along both sides of Highway 101. The cities of King City, Greenfield, Soledad, and Gonzales, separated by agricultural land and open space, have developed along the east side of the highway within the valley.

The Salinas River watershed originates 4,000 feet above sea level in the La Panza Range near Santa Margarita in San Luis Obispo County and drains approximately 4,160 square miles. It flows northward for 170 miles, emptying into the Monterey Bay National Marine Sanctuary. It has been listed as a “Category 1, Impaired Watershed” and one of the most critical rivers in California by the State Water Resources Control Board due to its degraded condition and the impacts of nonpoint-source pollution on water quality. San Lorenzo Creek, which enters the Salinas River about three quarters of a mile upstream of the project location, is a major tributary.

The riverbed varies considerably in width along the length of the river. In the project vicinity, it is about 1,760 feet wide, though the channel itself is between only 65 and 110 feet wide at this location, with a few small upland areas. Historically, the Salinas River was dry during the summer months and prone to flooding during extreme winter and spring storm events. Releases from upstream reservoirs have extended the period during which the river channel contains surface water flows into the summer months. This provides flows beyond the natural runoff season.

As discussed in section 2.3 *Biological Environment*, the river and the surrounding undeveloped land support a variety of native plant communities and animal species, many of which are under special protection through state and federal regulations. Conversely, the area also hosts various invasive plant species that exploit the disturbed soil of the riverbed and highway corridor in order to colonize these areas.

Other projects within the vicinity of the proposed project for which cumulative impacts were considered are:

- *King City Route 101 Rehabilitation* — Caltrans, 05-MON-101, EA 1F750, project ID #0514000050

This project will replace the structural section of Highway 101 in both directions from Wild Horse Road to Jolon Road, widen the inside shoulders where necessary to achieve a standard 5-foot width, and upgrade other minor highway components. A Categorical Exemption under CEQA was approved on April 2, 2014. Similarly to the proposed bridge project, the rehabilitation project includes precautionary measures to avoid potential impacts to San Joaquin kit fox and San Joaquin whipsnake, though these species are not expected to be present. It also includes measures to reduce impacts from construction noise. The proposed bridge project falls within the limits of the rehabilitation project and is on a parallel schedule. Therefore, if approved, the proposed project would be constructed in conjunction with the rehabilitation project and the two would be advertised as one and constructed under the same contract. The rehabilitation project is expected to take one month to construct and is scheduled to begin May 2019.

- *Clean Up Roadside Environment (CURE)* — Caltrans, 05-MON-101, EA 0T990, project ID #0500020243

This project will remove fixed objects along Highway 101, beginning at Canal Street in King City and extending for 15 miles northward to the El Camino Real overhead north of Greenfield. The proposed project is within these project limits. An Environmental Impact Report under CEQA was approved June 26, 2014. The project includes removal of about 315 mature Tasmanian blue gum (eucalyptus) trees and one Monterey cypress tree in a 5-mile stretch beginning about 3.5 miles north of the proposed bridge project. Replanting has been included in the project to offset impacts to visual quality from tree removal. This project is currently being constructed in phases. Road construction is expected to be completed in the fall of 2017.

- *Maintenance Worker Safety Improvements* — Caltrans, 05-MON-101, EA 1C090, project ID #0512000073

This project will improve the safety of Caltrans Maintenance workers by modifying highway facilities that are in close proximity to traffic, such as signs and electrical boxes, and providing Maintenance vehicle pullouts. The project begins at Canal Street in King City and continues north at spot locations for 33 miles, to Alta Street just north of Gonzales. The proposed project is within these project limits. A Cate-

gorical Exemption under CEQA was approved November 19, 2013. The project includes aesthetic treatments to reduce adverse impacts on visual quality, such as colored concrete in newly paved areas. This project was completed in early 2017.

• *Salinas River Stream Maintenance Program* — Monterey County Water Resources Agency

This project proposes to coordinate voluntary channel maintenance activities with landowners and appropriate government agencies. The proposed Stream Maintenance Program allows the participants to conduct stream maintenance activities (i.e., non-native invasive and native vegetation treatment and sediment management, among other activities) along the Salinas River main stem and portions of San Lorenzo Creek on a voluntary basis to maximize flood flow capacity and minimize bank erosion, helping to protect against flooding during and after major storm events.

Key channel maintenance activities that could occur are 1) controlling non-native, invasive vegetation (e.g. *Arundo donax*) using mainly herbicide application (glyphosate) and/or mechanical removal; 2) mechanically removing native vegetation on the channel bottom and sandbars within the areas below the top of the riverbanks but away from the channel; 3) removing excess accumulated sediment from the river channel by mechanized equipment, limited to those areas below the riverbank that are dry; 4) repairing and stabilizing riverbanks when a weakened, unstable, or failing bank causes or threatens damage to an adjacent property, increases the flood hazard, impairs roads/transportation/access, generates erosion, or impacts riparian habitat or natural resource values. The proposed bridge project would occur within a small segment of the area covered by this program.

Environmental Consequences

The Maintenance Worker Safety Improvement project will have no adverse impacts and therefore would not contribute to anticipated impacts from the proposed bridge project.

The CURE project involves substantial tree removal; this was determined to be a significant impact to visual quality. (The trees were originally planted at the edge of the agricultural fields to provide a wind break.) Other than providing a raptor perch for hunting, the eucalyptus trees have little biological value. The proposed bridge project would remove trees as well. While these trees add to the visual quality of the river scene, they primarily serve in a biological capacity as part of the riparian scrub habitat. The relatively small trees that would be removed with the proposed project do not provide the same function as the eucalyptus trees. The removed eucalyptus trees are also several miles from the proposed project, with many other trees in the intermediate spaces that could be used for nesting, hunting, and refuge. Therefore, tree loss that would be incurred on the proposed project would not substantially contribute to tree loss from the CURE project.

The King City Route 101 Rehabilitation project is not expected to have any adverse impacts on protected species, though it does include precautionary measures similar

to those cited for the proposed bridge project. Due to the low likelihood of presence of species that have the potential to be on both projects and the inclusion of precautionary measures, there would be no cumulative impact.

The two projects could, however, both affect the human environment during construction in the form of noise, dust, and reduced traffic flow. Adverse noise impacts cannot be avoided during the day because of the type of work required, but these are temporary and not considered significant. Significant impacts from the proposed bridge project would be avoided by eliminating disruptive night work. The rehabilitation project will be constructed using Caltrans Standard Specifications, which stipulate that noise from construction shall not exceed 86 dBA L_{max} (an average) at 50 feet from job site activities from 9:00 p.m. to 6:00 a.m., in addition to other noise minimizing features. These restrictions, coupled with the short duration of the roadway rehabilitation work, would reduce the potential for cumulative impacts from noise to less than significant.

Caltrans Standard Specifications would also be incorporated into both projects to control dust from ground disturbance. The rehabilitation project does not have the potential for substantial ground disturbance; the Standard Specification should satisfactorily control dust during construction. Therefore, the rehabilitation project is not likely to contribute to cumulative air quality impacts.

The rehabilitation project will require prolonged temporary ramp closures of about 2 weeks while ramps are reconstructed. The project would also reduce the highway to one lane in each direction within the section under construction. Because highway traffic volumes are relatively low at this location and congestion non-existent, reducing highway lanes would not be a substantial impact to traffic flow. The proposed bridge project would also require a lane closure, but as the lane closure is already planned this would not be a cumulative impact.

The Stream Maintenance Program would include activities similar to the proposed bridge project, such as grading of the riverbed and vegetation removal. Consequently, it has the potential for significantly adverse impacts on a number of environmental resources to which the proposed bridge project could also contribute. These include special status plants; California red-legged frog and California tiger salamander and their habitats; various bird species including least Bell's vireo; special status bat species and their habitat; San Joaquin kit fox and its habitat; native riparian habitat; jurisdictional waters of the U.S. and wetlands regulated under Section 404 of the Clean Water Act; and upstream steelhead migration habitat. It also has the potential to increase sedimentation and turbidity of the Salinas River.

Through the years, U.S. Fish and Wildlife and National Marine Fisheries have actively overseen and approved the channel maintenance activities and associated effects on species listed under the Federal Endangered Species Act, including the least Bell's vireo, the California red-legged frog, and south-central California coast steelhead. These agencies have identified conditions for the Monterey County Water

Resources Agency to follow for species protection. U.S. Fish and Wildlife and National Marine Fisheries have consistently found that the channel maintenance activities were not likely to jeopardize the continued existence of listed species, or destroy or adversely modify designated critical habitat.

Avoidance, Minimization, and/or Mitigation Measures

In order to reduce impacts to traffic, the San Antonio Drive/Broadway Street north-bound on-ramp and the Canal Street on-ramp would not be closed at the same time.

The Stream Maintenance Program is a long-term project covering 92 miles of the Salinas River in addition to portions of its tributaries. The Environmental Impact Report for the Stream Maintenance Program includes substantial mitigation measures that would reduce to less than significant the impacts from that project to resources on which both projects have adverse impacts. The proposed bridge project would disturb fewer than 40 acres, of which only about 0.04 acre would be permanent. Furthermore, the Stream Maintenance Program, or other future flood maintenance program, would likely further disturb the area under the Highway 101 bridges. Considering the small, isolated area affected by the proposed bridge project as well as its incorporation into a larger, region-wide project, the proposed bridge project is not expected to be a substantial contribution to cumulative impacts within the river environment. No additional measures would be required beyond those already included for impacts to specific resources.

2.6 Climate Change

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

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change by the United Nations and World Meteorological Organization in 1988, has led to increased efforts devoted to greenhouse gas emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of greenhouse gas generated by human activity including carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF₆), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of greenhouse gas emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light duty trucks, other trucks, buses, and motorcycles make up the largest source (second to electricity generation) of greenhouse gas emitting sources. The dominant greenhouse gas emitted is CO₂, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change. "Greenhouse Gas Mitigation" is a term for reducing greenhouse gas emissions in order to reduce or "mitigate" the impacts of climate change. "Adaptation," refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)².

There are four primary strategies for reducing greenhouse gas emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively.³

Regulatory Setting

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: requires the California Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

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

Assembly Bill 32, the Global Warming Solutions Act of 2006, Núñez and Pavley: this assembly bill sets the same overall greenhouse gas emissions reduction goals as outlined in EO S-3-05, while further mandating that the California Air Resources Board create a scoping plan, (which includes market mechanisms) and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (signed on October 18, 2006): this order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (signed on January 18, 2007): this order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

² http://climatechange.transportation.org/ghg_mitigation/

³ http://www.fhwa.dot.gov/environment/climate_change/mitigation/

Senate Bill 97 (SB 97) Chapter 185, 2007: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: this bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

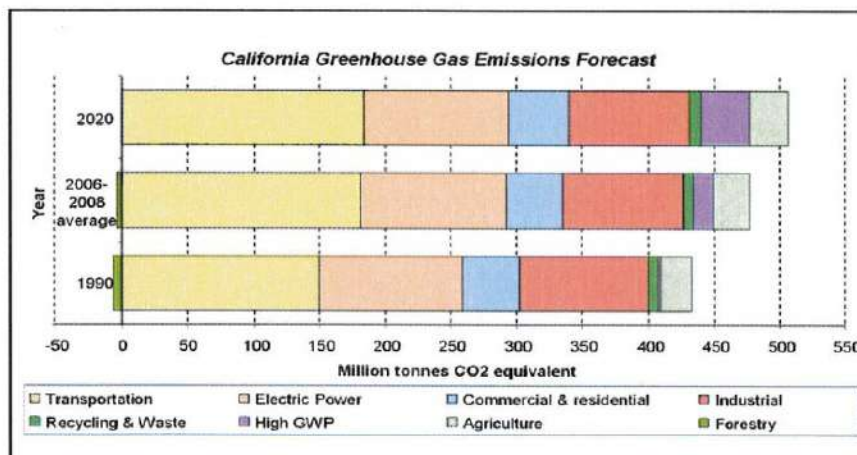
Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: this bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Project Analysis

An individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of greenhouse gas.⁴ In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines sections 15064(h)(1) and 15130). To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 contains the main strategies California will use to reduce greenhouse gas emissions. As part of its supporting documentation for the Draft Scoping Plan, the California Air Resources Board released the greenhouse gas inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the greenhouse gas inventory for 2006, 2007, and 2008.

⁴ This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze greenhouse gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).



Source: <http://www.arb.ca.gov/cc/inventory/data/forecast.htm>

Figure 2 - 3 California Greenhouse Gas Forecast

Caltrans and its parent agency, the Transportation Agency, have taken an active role in addressing greenhouse gas emission reduction and climate change. Recognizing that 98 percent of California's greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.⁵

The proposed project would not increase the capacity of the highway, as it would maintain the same number of lanes and capacity as the existing roadway. Because the project would not increase capacity nor vehicle hours travelled, no increases in operational greenhouse gas emissions are anticipated. During construction, temporary signals will be used to regulate traffic. While construction emissions of greenhouse gases are unavoidable, the project would provide an overall long term public benefit through improved safety and operation of the highway.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction greenhouse gas emissions include emissions produced as a result of material processing, emissions produced by onsite construction equipment, and emissions arising from traffic delays due to construction. During construction, the operation of construction equipment could cause a temporary increase in the local concentrations of greenhouse gas emissions, but traffic volumes on this route are not heavy and therefore this increase is not expected to be substantial. These emissions will be produced at different

⁵ Caltrans Climate Action Program is located at the following web address:
http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

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

California Environmental Quality Act Conclusion

While construction would result in a slight increase in greenhouse gas emissions during construction, Caltrans expects that there would be no operational increase in GHG emissions associated with this proposed project. However, it is Caltrans' determination that in the absence of further regulatory or scientific information related to greenhouse gas emissions and California Environmental Quality Act significance, it is too speculative to make a determination on the project's direct impact and its contribution on the cumulative scale to climate change. Nonetheless, Caltrans is taking further measures to help reduce energy consumption and greenhouse gas emissions. These measures are outlined in the following section.

Greenhouse Gas Reduction Strategies

Caltrans continues to be involved on the Governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help to achieve the targets set forth in AB 32. Many of the strategies Caltrans is using to help meet the targets in AB 32 come from the Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in greenhouse gas emissions, while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO₂ reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as depicted in Figure 2-3, the Mobility Pyramid.

Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. Caltrans works closely with local jurisdictions on planning activities but does not have local land use planning authority. Caltrans assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; Caltrans is doing this by supporting on-going research efforts at universities, by supporting legislative efforts to increase fuel economy, and by its participation on the Climate Action Team. It is important to note, however, that the control of the fuel economy standards is held by U.S. Environmental Protection Agency and the California Air Resources Board.



Figure 2 - 4 Mobility Pyramid

Caltrans is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391 (Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas emissions. The CTP defines

performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system. The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible greenhouse gas emission reductions while meeting the State's transportation needs.

Table 2-7 summarizes agency and statewide efforts that Caltrans is implementing in order to reduce greenhouse gas emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Table 2 - 7 Climate Change/Carbon Dioxide (CO₂) Reduction Strategies

Strategy	Program	Partnership		Method/Process	Estimated CO ₂ Savings (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated

Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC	Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services	Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team	Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs	Goods Movement Action Plan	Not Estimated	Not Estimated
Total				2.72	18.18

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) ⁶ provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

The following measures will also be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from the project:

- According to Caltrans' Standard Specifications, the contractor must comply with all of the local Air Pollution Control District's rules, ordinances, and regulations regarding to air quality restrictions.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

⁶ http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011⁷, outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks.

Climate change adaption must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise. In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop. The California Climate Adaptation Strategy (Dec 2009)⁸, which summarizes the best known science on climate change impacts to California, assesses California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and Caltrans of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

⁷ <http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation>

⁸ <http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF>

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report⁹ to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by the Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the states infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. Caltrans continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, Caltrans is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, Caltrans has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, Caltrans will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

⁹ *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

Chapter 3 Comments and Coordination

Early and continuing coordination with the general public and appropriate public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis, potential impacts and mitigation measures, and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including project development team meetings and interagency coordination meetings. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues early in the process.

- In October 2015, Caltrans staff contacted the Monterey County Parks Department regarding the potential for impacts on San Lorenzo Park from construction. County staff confirmed that San Lorenzo Park is a park of significance, which affords it additional protection against impacts from state highway projects. Consequently, Caltrans will continue to work with the County to address issues related to the project.
- In November 2015, Caltrans staff contacted the National Marine Fisheries seeking technical assistance regarding steelhead.
- In December 2015, Caltrans staff contacted U.S. Fish and Wildlife to notify them of the project and discuss each of the federally-listed species potentially affected.
- In February 2016, Caltrans staff contacted the U.S. Coast Guard, who confirmed that the project is not within their jurisdiction and no further coordination would be necessary.
- In April 2016, Caltrans staff contacted the State Lands Commission for a determination as to whether the project limits were within Commission jurisdiction. The determination is still pending.
- In May 2016, Caltrans staff contacted the Monterey County Water Resources Agency to discuss requirements related to work within the floodway. The county Water Resources Agency acts as liaison to the Federal Emergency Management Agency for development within the floodway or floodplain.
- In June 2016, Caltrans staff met with staff from King City to discuss traffic impacts during construction.
- On July 21, 2016, Caltrans staff held a public informational meeting at the King City Council Chambers. There were no attendees from the public.

The public review period for the Initial Study and proposed Mitigated Negative Declaration was from July 11 to August 11, 2016. The Initial Study with the proposed Mitigated Negative Declaration was mailed to the State Clearinghouse for distribution to state agencies. Letters with information about the document and public meeting were mailed to the occupants and owners of properties within the vicinity of the project. Caltrans did not receive any substantive comments on the document during this

period, however the Transportation Agency of Monterey County (TAMC) stated, “Our agency supports your efforts in widening the bridge shoulders and providing seismic safety along this key transportation corridor thru the Monterey region.”

Chapter 4 **List of Preparers**

This document was primarily prepared by the following Caltrans Central Region staff:

Carr, Robert, Landscape Associate. B.S., Landscape Architecture; 26 years of experience in visual impact analysis and landscape architecture. Contribution: Visual Impact Analysis.

Chafi, Abdulrahim, Civil/Environmental Engineer, registered. Ph.D. Environmental Engineering; 17 years of environmental technical studies experience. Contribution: memorandum on air quality and noise.

Davis, Tom, Transportation Engineer. B.S. Civil Engineering; 15 years of experience in hydraulics analysis. Contribution: Location Hydraulic Study.

Domingos, Andrew, Associate Environmental Planner (Natural Sciences). B.S. Environmental Science (Resource Management); 10 years of experience in biological studies. Contribution: Natural Environment Study Addendum and agency consultations.

Hadu, Damon, Associate Environmental Planner (Cultural Resources). M.A. Cultural Resources Management; 20 years of experience in prehistoric and historic archaeology. Contribution: memorandum on cultural resources.

Huddleston, Paula, Associate Environmental Planner. B.A. Anthropology; 24 years of experience in environmental analysis. Contribution: environmental studies coordination and research.

Kloth, Joel, Engineering Geologist, registered. B.S. Geology; 26 years of experience in geology and environmental engineering. Contribution: Initial Site Assessment (for hazardous waste).

Leyva, Isaac, Engineering Geologist. B.S. Geology; 26 years of experience in petroleum geology, environmental, and geotechnical engineering. Contribution: Water Quality Assessment, and memorandum on paleontology.

Tibstra, Robb, Associate Environmental Planner (Natural Sciences). M.S. Biology, B.S. Biology (Ecology); 20 years of experience in biological studies. Contribution: Natural Environment Study and agency consultations.

Other project team members:

Bonner, Larry, Senior Environmental Planner. B.S. Natural Resource Management; 17 years of experience in environmental analysis.

Henkle, Aaron, P.E., Project Manager. B.S. Civil Engineering, registered; 20 years of experience in highway design.

Mohan, Sanku, P.E., Senior Transportation Engineer. B.S. Civil Engineering; 26 years of experience in civil engineering.

Sekhon, Harjinder, P.E., Transportation Engineer. B.S. Civil Engineering; 16 years of experience in civil engineering.

Wilkinson, Jason, Senior Environmental Planner. B.S. Natural Resource Management; 9 years of experience in environmental analysis.

Appendix A California Environmental Quality Act Checklist

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

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

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? | ☐ | ☐ | ☐ | ☒ |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | ☐ | ☐ | ☐ | ☒ |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))? | ☐ | ☐ | ☐ | ☒ |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | ☐ | ☐ | ☐ | ☒ |
| 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? | ☐ | ☐ | ☐ | ☒ |

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

- | | | | | |
|--|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| a) Conflict with or obstruct implementation of the applicable air quality plan? | ☐ | ☐ | ☐ | ☒ |
| b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation? | ☐ | ☐ | ☐ | ☒ |
| c) 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 (including releasing emissions which exceed quantitative thresholds for ozone precursors)? | ☐ | ☒ | ☐ | ☐ |
| d) Expose sensitive receptors to substantial pollutant concentrations? | ☐ | ☐ | ☒ | ☐ |
| e) Create objectionable odors affecting a substantial number of people? | ☐ | ☐ | ☒ | ☐ |

IV. BIOLOGICAL RESOURCES: Would the project:

- | | | | | |
|--|--------------------------|-------------------------------------|--------------------------|--------------------------|
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service? | ☐ | ☒ | ☐ | ☐ |

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
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?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
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?	☐	☐	☐	☒

V. CULTURAL RESOURCES: Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

VI. GEOLOGY AND SOILS: Would the project:

a) Expose people or structures to 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?	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Appendix A • California Environmental Quality Act Checklist

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
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?	☐	☐	☐	☒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

VII. GREENHOUSE GAS EMISSIONS: Would the project:

- a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?
- b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

- a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 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?
- c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

☐	☐	☐	☒
☐	☐	☐	☒
☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	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?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒

Appendix A • California Environmental Quality Act Checklist

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

XI. MINERAL RESOURCES: Would the project:

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

XII. NOISE: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☒	☐	☐
) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

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

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XV. 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?	☐	☐	☐	☒
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?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

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

Appendix B Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

OFFICE OF THE DIRECTOR

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*Flex your power
Be energy efficient*

March 16, 2012

NON-DISCRIMINATION POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact Mario Solis, Manager, Title VI and Americans with Disabilities Act Program, California Department of Transportation, 1823 14th Street, MS-79, Sacramento, CA 95811. Phone: (916) 324-1353, TTY 711, fax (916) 324-1869, or via email: mario_solis@dot.ca.gov.

A handwritten signature in blue ink, reading "Malcolm Dougherty".

MALCOLM DOUGHERTY
Acting Director

Appendix C Minimization and/or Mitigation Summary

The following is a summary of the measures discussed previously that would be included in the project to minimize impacts to resources. The detailed measures can be found in Chapter 2 in the *Avoidance, Minimization and Mitigation* sections referenced for each topic.

Avoidance and/or Minimization Measures for Less Than Significant Impacts

Parks and Recreational Facilities

- Construction fencing would limit impacts on Park facilities.

Reference: section 2.2.1 *Parks and Recreational Facilities*

Natural Communities

- Graded areas shall be returned to natural landforms and disturbed areas revegetated and/or treated with erosion control.
- Environmentally sensitive area fencing shall be placed around the dripline of trees to be protected within the project limits.
- Plants used for revegetation will consist of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials shall be used to the extent practicable. Invasive, exotic plants shall be controlled to the maximum extent practicable.
- Construction site shall be maintained such that all trash is removed and accidental spills prevented.

Reference: sections 2.3.1 *Natural Communities* and 2.3.4 *Threatened and Endangered Species*.

Wetlands and Other Waters

- Graded areas shall be returned to natural landforms and disturbed areas revegetated and/or treated with erosion control.
- Prior to any ground-disturbing activities, environmentally sensitive area fencing shall be installed around jurisdictional waters and potential wetlands to be avoided.
- Refueling, maintenance and staging of equipment and vehicles shall occur at least 60 feet away from aquatic or riparian habitat and not in a location from where a spill would drain directly toward aquatic habitat.
- During construction, erosion control measures shall be implemented.

Reference: section 2.3.2 *Wetlands and Other Waters*.

Animal Species

- Preconstruction surveys shall be conducted for protected amphibians and reptiles, burrowing owl, and Monterey dusky-footed wood rat.
- Construction monitoring shall be conducted for burrowing owl if present. Buffers shall be placed around burrows.
- Environmentally sensitive areas (ESA) shall be designated to limit the area of disturbance.
- Training sessions on burrowing owl shall be conducted for all construction personnel.
- Exclusion zones shall be implemented as necessary and work could be required to cease if avoidance is not feasible to protect the following: burrowing owl, white-throated swift and other nesting birds, American badger, and Monterey dusky-footed wood rat.
- Construction windows shall be observed for white-throated swift and other nesting birds, and Monterey dusky-footed wood rat. (See Table C-1 at the end of this appendix.)
- If necessary, Monterey dusky-footed wood rat nests must be dismantled by hand and according to specifications provided by a Caltrans biologist.

Reference: section 2.3.3 *Animal Species*.

Threatened and Endangered Species

- Preconstruction surveys shall be conducted for: California red-legged frog, steelhead, Least Bell's vireo, and San Joaquin kit fox.
- Construction windows shall be observed for California red-legged frog and steelhead. (See Table C-1 at the end of this appendix.)
- Construction monitoring shall be conducted for steelhead.
- Training sessions on California red-legged frog, least Bell's vireo, and San Joaquin kit fox shall be conducted for all construction personnel.
- If there is discovery of California red-legged frog during construction, work shall cease and the Ventura office of U.S. Fish and Wildlife shall be contacted.
- Measures included to protect natural communities, including wetlands and other waters, will also protect aquatic species.
- Best management practices shall be implemented to control sedimentation. Upon completion of construction activities, removal of diversions or barriers to flow shall minimize disturbance to the substrate.
- If a work site is to be temporarily dewatered by pumping, the intake shall prevent California red-legged frogs, steelhead, and other sensitive aquatic species from entering the pump system. Unless approved by U.S. Fish and Wildlife, water shall not be impounded in a manner that may attract California red-legged frogs.

- Where possible, exotic species such as bullfrogs, crayfish, and centrarchid fishes shall be removed from the project area.
- Fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
- A summary of work shall be provided to the National Marine Fisheries.
- Exclusion zones shall be implemented as necessary and work could be required to cease if avoidance is not feasible for least Bell's vireo.
- If kit fox are detected during construction, all work shall cease and the U.S. Fish and Wildlife and California Department of Fish and Wildlife contacted. Measures in the *Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance* and the letter of concurrence from the U.S. Fish and Wildlife shall be followed.
- Use of rodenticides and herbicides in project areas will be restricted.

Reference: sections 2.3.1 *Natural Communities*, 2.3.2 *Wetlands and Other Waters* and 2.3.4 *Threatened and Endangered Species*.

Invasive Species

- The spread or introduction of invasive exotic plant species will be avoided. Construction equipment shall be certified as weed free. Invasive exotic plants in the project site removed during construction shall be properly disposed at a certified landfill.

Reference: section 2.3.5 *Invasive Species*.

Noise and Vibration

- Public notice of construction schedules and other pertinent information shall be provided to the media. In particular, residents within 300 feet of heavy vibratory construction activities shall be notified at least 2 weeks in advance of the proposed activity. A photo survey of structures within 200 feet of pile driving would be conducted.

Reference: section 2.4 *Construction Impacts*.

Mitigation Measures for Potentially Significant Impacts

Parks and Recreational Facilities/Noise

- No night work that requires overhead lighting or that would create noise in excess of the nighttime exterior noise level standards for Monterey County (45 Leq dBA or 65 maximum dBA) shall be permitted.

Reference: sections 2.2.1 *Parks and Recreational Facilities* and 2.4 *Construction Impacts*

Air Quality

- Caltrans Standard Specifications pertaining to dust control and dust palliative requirements should effectively reduce and control emission impacts during construction.

Animal Species

- A bat exclusion plan shall be prepared and implemented according to specifications provided by a Caltrans biologist.
- Surveys for bats shall be conducted prior to vegetation removal if it must occur during the maternal roosting season. (See Table C-1 at the end of this appendix.)
- Exclusion zones shall be implemented as necessary and work could be required to cease if avoidance is not feasible to protect swallows and bats.
- Construction windows shall be observed for swallows and bats. (See Table C-1 at the end of this appendix.)

Reference: section 2.3.3 *Animal Species*.

Table C - 1 Avoidance Dates for Construction Activities

Protected Habitat/Species	Restricted Activity	Protected Activity/location	Avoidance Dates (inclusive)
Burrowing owl	Work within established buffers	Occupied burrows during <i>non-breeding</i> season	September 1 through January 31
Burrowing owl	Work within established buffers	Occupied burrows during <i>breeding</i> season	February 1 through August 31
California red-legged frog	Work within river channel	Active channel	November 1 through April 14
Least Bell's vireo; bats; birds (general)	Remove vegetation	Nesting season	February 15 through August 31
Monterey dusky-footed woodrat	Grading or removing vegetation within 25-foot buffer	Breeding season/nests	October 1 through December 31
Steelhead	Work within river channel	Active channel	November 1 through June 14
Swallows; white-throated swifts; bats	Install exclusionary devices	Nesting season	September 1 through February 14
Riverine	Work within channel, including stream diversion	River channel	November 1 through May 31
Riverbed/floodplain	Any construction	Ca Fish & Wildlife jurisdiction	Periods of rain or high flow

Table C - 2 Triggers that Affect Construction Activities

Protected Habitat/Species	Trigger	Action	Timing to Resume Activity
American badger	individual(s)/den found	cease work within 100' of badger and/or den	Den found vacant for three consecutive nights
American badger	pupping den found	cease work within 100' of den	Pups have weaned; den abandoned
Bats	active bats with dependent young detected on bridge	cease work within 150' of the maternal roost; contact biologist	Biologist approval
Birds (general)	construction activities within 100' of potential habitat during nesting season	pre-construction survey	Within 2 weeks of survey
Birds (general)	active nest found	buffer established (radius to be determined in field)	Juveniles fledged; biologist approval
Burrowing owl	occupied burrows found	cease work within burrow buffers: non-breeding season radius = 160', breeding season radius = 250'	None – buffers shall remain off limits
Burrowing owl	permanent avoidance of burrow buffers not feasible	temporary avoidance of burrow buffers	Burrowing Owl Exclusion Plan in place
California red-legged frog	detected in the project area	cease work; U.S. Fish & Wildlife and California Fish & Wildlife contacted within 48 hours	Consultation completed
California red-legged frog	work in channel must occur during wet season	temporarily postpone work	U.S. Fish & Wildlife approval obtained
Least Bell's vireo	individual observed within 100' of project site	buffer established (radius to be determined in field)	When individual is greater than 100' away
Least Bell's vireo	active nest found within 100' of project site	Cease work immediately	Consultation completed
Monterey dusky-footed woodrat	nests located	cease work within 25' buffer	Outside breeding season
Monterey dusky-footed woodrat	nest cannot be avoided	dismantle nest by hand	Nest is dismantled and unoccupied
Monterey dusky-footed woodrat	young are encountered during nest dismantling	dismantling activity stopped; material replaced	2-3 weeks if nest is empty
San Joaquin kit fox	individual(s) detected	cease work; U.S. Fish & Wildlife and California Fish & Wildlife contacted	Biologist approval
Steelhead	avoidance dates for work in channel cannot be avoided	temporarily postpone work	Biologist approval
Swallows; white-throated swift	active nests containing eggs or young detected	cease work within 250' of nest	Biologist approval
Riverine	Work must occur in channel between June 15 and Oct 31	contact regulatory agencies	Permission granted

List of Technical Studies

The following documents were prepared expressly for this project and used to support information contained in the Initial Study:

Environmental (Air & Noise) Studies for Salinas River Two Bridge Structures Project memorandum, April 14, 2016

Water Quality Assessment Report, April 2016

Natural Environment Study, May 2016

Natural Environment Study Addendum, March 2017

Preliminary Hydraulic Report for the Seismic Retrofit Project on the Salinas River Bridges, February 5, 2016

Location Hydraulic Study, February 5, 2016

Cultural Resources Review memorandum, August 13, 2015

Initial Site Assessment (for hazardous waste), December 22, 2015

Visual Assessment of the proposed Salinas River Bridge Seismic Retrofit Project, February 2016

Initial paleontology memorandum, April 11, 2016

Structure Preliminary Geotechnical Report for Salinas River Bridge Seismic Restoration, June 15, 2015

Other materials used in the preparation of the Initial Study:

Monterey County Central Salinas Valley Area Plan

Monterey County Code of Ordinances

Federal Emergency Management Agency (FEMA) mapping

Salinas River Stream Maintenance Program Revised Final Environmental Impact Report, June 2014

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM

05/MON/101 R41.3/R41.8 05-1C9600/0513000019
 Dist.-Co.-Rte. (or Local Agency) P.M./P.M. E.A/Project No. Federal-Aid Project No. (Local Project)/Project No.

PROJECT DESCRIPTION: (Briefly describe project including need, purpose, location, limits, right-of-way requirements, and activities involved in this box. Use Continuation Sheet, if necessary.)

The California Department of Transportation (Caltrans) plans to seismically retrofit the Salinas River Bridges and bring the northbound bridge up to current standards. The bridges are located on Highway 101 just outside the limits of King City, Monterey County. The purpose of the project is to improve serviceability and stability of the bridge structures during moderate earthquakes and to address non-standard features of the northbound bridge. As a result of bridge inspection reports, the project is needed to seismically retrofit both the northbound and southbound highway bridges over the Salinas River to improve stability during a moderate seismic event. Also, the shoulders of the northbound bridge will be widened and the railing changed to bring those features up to current standards. Both bridge decks would be resurfaced with polyester concrete. Construction will require TCEs from private property.

CEQA COMPLIANCE (for State Projects only)

Based on an examination of this proposal and supporting information, the following statements are true and exceptions do not apply (See 14 CCR 15300 et seq.):

- If this project falls within exempt class 3, 4, 5, 6 or 11, it does not impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law.
- There will not be a significant cumulative effect by this project and successive projects of the same type in the same place, over time.
- There is not a reasonable possibility that the project will have a significant effect on the environment due to unusual circumstances.
- This project does not damage a scenic resource within an officially designated state scenic highway.
- This project is not located on a site included on any list compiled pursuant to Govt. Code § 85962.5 ("Cortese List").
- This project does not cause a substantial adverse change in the significance of a historical resource.

CALTRANS CEQA DETERMINATION (Check one)

- ☐ Not Applicable – Caltrans is not the CEQA Lead Agency ☒ Not Applicable – Caltrans has prepared an Initial Study or Environmental Impact Report under CEQA
- ☐ Exempt by Statute. (PRC 21080[b]; 14 CCR 15260 et seq.)
 Based on an examination of this proposal, supporting information, and the above statements, the project is:
- ☐ Categorically Exempt. Class . (PRC 21084; 14 CCR 15300 et seq.)
- ☐ Categorically Exempt. General Rule exemption. [This project does not fall within an exempt class, but it can be seen with certainty that there is no possibility that the activity may have a significant effect on the environment (CCR 15061[b][3].)]

Print Name: Senior Environmental Planner or
 Environmental Branch Chief

Print Name: Project Manager

Signature

Date

Signature

Date

NEPA COMPLIANCE

In accordance with 23 CFR 771.117, and based on an examination of this proposal and supporting information, the State has determined that this project:

- does not individually or cumulatively have a significant impact on the environment as defined by NEPA, and is excluded from the requirements to prepare an Environmental Assessment (EA) or Environmental Impact Statement (EIS), and
- has considered unusual circumstances pursuant to 23 CFR 771.117(b).

CALTRANS NEPA DETERMINATION (Check one)

- ☒ **23 USC 326:** The State has determined that this project has no significant impacts on the environment as defined by NEPA, and that there are no unusual circumstances as described in 23 CFR 771.117(b). As such, the project is categorically excluded from the requirements to prepare an EA or EIS under the National Environmental Policy Act. The State has been assigned, and hereby certifies that it has carried out the responsibility to make this determination pursuant to Chapter 3 of Title 23, United States Code, Section 326 and a Memorandum of Understanding dated May 31, 2016, executed between the FHWA and the State. The State has determined that the project is a Categorical Exclusion under:

☐ 23 CFR 771.117(c): activity (c) ()

☒ 23 CFR 771.117(d): activity (d) (13)

☐ Activity listed in Appendix A of the MOU between FHWA and the State

- ☐ **23 USC 327:** Based on an examination of this proposal and supporting information, the State has determined that the project is a Categorical Exclusion under 23 USC 327.

Jason Wilkinson

Print Name: Senior Environmental Planner or
 Environmental Branch Chief

Aaron Henkel

Print Name: Project Manager/DLA Engineer

Signature

Date

Signature

Date

CATEGORICAL EXEMPTION/CATEGORICAL EXCLUSION DETERMINATION FORM

Continuation Sheet

05/MON/101 Dist.-Co.-Rte. (or Local Agency)	R41.3/R41.8 P.M./P.M.	05-1C9600/0513000019 E.A/Project No.	Federal-Aid Project No. (Local Project)/Project No.
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Date of Categorical Exclusion Checklist completion: 12-22-16 Date of ECR or equivalent : 3-15-17

Continued from page 1:

Consultation with USFWS resulted in a determination that the project may affect and is likely to adversely affect California red-legged frog, may affect but not likely to affect San Joaquin kit fox, and may affect but not likely to affect least Bell's vireo.

The following measures are included in the project:

- Prior to any ground-disturbing activities, environmentally sensitive area (ESA) fencing shall be installed around jurisdictional waters, potential wetlands, and other areas to be avoided during construction.
- Refueling, maintenance, and staging of equipment and vehicles shall occur at least 60 feet away from aquatic or riparian habitat and not in a location from where a spill could drain directly toward aquatic habitat.
- Preconstruction surveys shall be conducted for protected species.
- Training sessions on protected species shall be conducted for all construction personnel.
- Construction monitoring shall be conducted for steelhead and burrowing owl, if present. Buffers shall be placed around owl burrows.
- Exclusion zones for protected species shall be implemented as necessary and work could be required to cease if avoidance is not feasible.
- Construction windows as identified in the attached tables C-1 and C-2 shall be observed unless otherwise directed by the District biologist.
- If there is discovery of California red-legged frog or San Joaquin kit fox during construction, work shall cease and the Ventura office of U.S. Fish and Wildlife contacted.
- No night work that requires overhead lighting or that would create noise in excess of the nighttime exterior noise level standards for Monterey County shall be permitted.
- Use of rodenticides and herbicides in project areas will be restricted.

Salinas River Bridges Seismic Retrofit

05-MON-101 PM R41.3/R41.8

EA 1C9600/05 1300 0019

Table C - 1 Avoidance Dates for Construction Activities

Protected Habitat/Species	Restricted Activity	Protected Activity/location	Avoidance Dates (inclusive)
Burrowing owl	Work within established buffers	Occupied burrows during <i>non-breeding</i> season	September 1 through January 31
Burrowing owl	Work within established buffers	Occupied burrows during <i>breeding</i> season	February 1 through August 31
California red-legged frog	Work within river channel	Active channel	November 1 through April 14
Least Bell's vireo; bats; birds (general)	Remove vegetation	Nesting season	February 15 through August 31
Monterey dusky-footed woodrat	Grading or removing vegetation within 25-foot buffer	Breeding season/nests	October 1 through December 31
Steelhead	Work within river channel	Active channel	November 1 through June 14
Swallows; white-throated swifts; bats	Install exclusionary devices	Nesting season	September 1 through February 14
Riverine	Work within channel, including stream diversion	River channel	November 1 through May 31
Riverbed/floodplain	Any construction	Ca Fish & Wildlife jurisdiction	Periods of rain or high flow

Table C - 2 Triggers that Affect Construction Activities

Protected Habitat/Species	Trigger	Action	Timing to Resume Activity
American badger	individual(s)/den found	cease work within 100' of badger and/or den	Den found vacant for three consecutive nights
American badger	pupping den found	cease work within 100' of den	Pups have weaned; den abandoned
Bats	active bats with dependent young detected on bridge	cease work within 150' of the maternal roost; contact biologist	Biologist approval
Birds (general)	construction activities within 100' of potential habitat during nesting season	pre-construction survey	Within 2 weeks of survey
Birds (general)	active nest found	buffer established (radius to be determined in field)	Juveniles fledged; biologist approval
Burrowing owl	occupied burrows found	cease work within burrow buffers: non-breeding season radius = 160', breeding season radius = 250'	None – buffers shall remain off limits
Burrowing owl	permanent avoidance of burrow buffers not feasible	temporary avoidance of burrow buffers	Burrowing Owl Exclusion Plan in place
California red-legged frog	detected in the project area	cease work; U.S. Fish & Wildlife and California Fish & Wildlife contacted within 48 hours	Consultation completed

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California red-legged frog	work in channel must occur during wet season	temporarily postpone work	U.S. Fish & Wildlife approval obtained
Least Bell's vireo	individual observed within 100' of project site	buffer established (radius to be determined in field)	When individual is greater than 100' away
Least Bell's vireo	active nest found within 100' of project site	Cease work immediately	Consultation completed
Monterey dusky-footed woodrat	nests located	cease work within 25' buffer	Outside breeding season
Monterey dusky-footed woodrat	nest cannot be avoided	dismantle nest by hand	Nest is dismantled and unoccupied
Monterey dusky-footed woodrat	young are encountered during nest dismantling	dismantling activity stopped; material replaced	2-3 weeks if nest is empty
San Joaquin kit fox	individual(s) detected	cease work; U.S. Fish & Wildlife and California Fish & Wildlife contacted	Biologist approval
Steelhead	avoidance dates for work in channel cannot be avoided	temporarily postpone work	Biologist approval
Swallows; white-throated swift	active nests containing eggs or young detected	cease work within 250' of nest	Biologist approval
Riverine	Work must occur in channel between June 15 and Oct 31	contact regulatory agencies	Permission granted