Santa Maria River Bridge Replacement

On State Route 1 at the border of San Luis Obispo County and Santa Barbara County, just north of the city of Guadalupe
05-SB-SLO-01-PM 50.3/50.6; PM 0.0/0.3
EA 05-1H440 and Project ID 0516000074

Initial Study
with Proposed Mitigated Negative Declaration/ Environmental Assessment



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code 327 and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration and Caltrans.

May 2020

Caltrans

General Information About This Document

What's in this document:
The California Department of Transportation (Caltrans), as assigned by the Federal Highway Administration, has prepared this Initial Study/Environmental Assessment, which examines the potential environmental impacts of alternatives being considered for the proposed project in Santa Barbara County and San Luis Obispo County in California. The document explains why the project is being proposed, the alternatives being considered for the project, the existing environment that could be affected by the project, potential impacts of each of the alternatives, and proposed avoidance, minimization, and/or mitigation measures.

What you should do:

- Please read the document. Additional copies of the document and the related technical studies are available for review at the following location: Caltrans District 5 Office at 50 Higuera Street, San Luis Obispo, California 93401.
- The document can also be accessed electronically and downloaded at the following website: https://dot.ca.gov/caltrans-near-me/district-5/.
- If you prefer a printed copy or CD version of this document, please contact Matthew Fowler by phone at 805-542-4603 or by email at this address: matt.c.fowler@dot.ca.gov.
- Tell us what you think. If you have any comments regarding the proposed project, please send your written comments to Caltrans by the deadline. Submit comments via U.S. mail to: Environmental Branch Chief, Attention: Matthew Fowler, California Department of Transportation, Environmental Planning, 50 Higuera Street, San Luis Obispo, California, 93401. Submit comments via email to: matt.c.fowler@dot.ca.gov.
- Submit comments by the deadline: ***July 2, 2020.***

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

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

For individuals with sensory disabilities, this document can be made available in Braille, in large print, on audiocassette, or on computer disk. To obtain a copy in one of these alternate formats, please write to or call Caltrans, Attention: Matthew Fowler, Environmental Planning, 50 Higuera Street, San Luis Obispo, California 93401; 805-542-4603 (Voice), or use the California Relay Service 1-800-735-2929 (TTY), 1-800-735-2929 (Voice), or 711.

05-SB-SLO-01-PM 50.3/50.6, PM 0.0/0.3
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Replace the existing Santa Maria River Bridge on State Route 1 at the border of San Luis Obispo County and Santa Barbara County, just north of the city of Guadalupe

INITIAL STUDY
with Proposed Negative Declaration/
ENVIRONMENTAL ASSESSMENT

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

THE STATE OF CALIFORNIA
Department of Transportation
and
Responsible Agencies: California Transportation Commission



John Luchetta
Office Chief, Central Region
Environmental Central Coast Office
California Department of Transportation
CEQA and NEPA Lead Agency

April 21, 2020
Date

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DRAFT
Proposed Mitigated Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Caltrans) proposes to replace the Santa Maria River Bridge (Bridge Number 49-0042) on State Route 1 at the border of San Luis Obispo County and Santa Barbara County, just north of the city of Guadalupe. A new bridge structure would be built next to the existing bridge, which would be removed once construction of the new bridge structure is complete. The new bridge would conform to current design and safety standards. The project would also realign roadways, replant vegetation, and relocate utilities. State Route 1 would remain open to traffic during project construction, and temporary traffic control would be required.

Determination

This proposed Mitigated Negative Declaration is included to give notice to interested agencies and the public that it is Caltrans' intent to adopt a Mitigated Negative Declaration for this project. This does not mean that Caltrans' decision on the project is final. This Mitigated Negative Declaration is subject to change based on comments received from interested agencies and the public.

Caltrans has prepared an Initial Study for this project and, pending public review, expects to determine from this study that the project would not have a significant effect on the environment for the following reasons:

The project would not affect existing or future land use, coastal resources, wild and scenic rivers, timberland, growth, wetlands, cultural resources, paleontological resources, or mineral resources.

The project would have no significant effect on community character, parks and recreational facilities, utilities, emergency services/systems, traffic, transportation, wildfire hazards, hydrology, floodplain, water quality, geology, soils, greenhouse gasses, air quality, noise, hazardous waste, or visual/aesthetics.

The project would have no significantly adverse effect on biological resources because the following mitigation measures would reduce the potential effects to insignificance:

- California red-legged frog habitats disturbed by project-related activities will be returned to their natural configuration at the end of project construction. This measure will be implemented in all areas disturbed by project-related activities, unless it is not feasible, or if a change to the original condition would better benefit California red-legged frogs.
- The project's Biological Study Area will be re-seeded with an appropriate native seed mix to enhance and restore La Graciosa Thistle critical habitat at the end of project construction.

- Project sites would be revegetated with native riparian, wetland, and upland vegetation suitable for the area at the end of project construction to restore and enhance potential species habitat.

_____

John Luchetta
Office Chief, Central Region
Environmental Central Coast Office
California Department of Transportation

_____

Date

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Chapter 1 Proposed Project

1.1 Introduction

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

NEPA Assignment

California participated in the "Surface Transportation Project Delivery Pilot Program" (Pilot Program) pursuant to 23 U.S. Code 327, for more than five years, beginning July 1, 2007, and ending September 30, 2012. The Moving Ahead for Progress in the 21st Century Act (P.L. 112-141), signed by President Barack Obama on July 6, 2012, amended 23 U.S. Code 327 to establish a permanent Surface Transportation Project Delivery Program. As a result, Caltrans entered into a Memorandum of Understanding pursuant to 23 U.S. Code 327 (NEPA Assignment Memorandum of Understanding) with the Federal Highway Administration. The NEPA Assignment Memorandum of Understanding became effective on October 1, 2012, and was renewed on December 23, 2016, for a term of five years. In summary, Caltrans continues to assume Federal Highway Administration responsibilities under NEPA and other federal environmental laws in the same manner as was assigned under the Pilot Program, with minor changes. With NEPA Assignment, the Federal Highway Administration assigned, and Caltrans assumed all of the U.S. Department of Transportation Secretary's responsibilities under NEPA. This assignment includes projects on the State Highway System and Local Assistance projects off of the State Highway System within the state of California, except for certain categorical exclusions that the Federal Highway Administration assigned to Caltrans under the 23 U.S. Code 326 CE Assignment Memorandum of Understanding, projects excluded by definition, and specific project exclusions.

Caltrans proposes to replace the Santa Maria River Bridge (Bridge 49-0042) on State Route 1, just north of the city of Guadalupe, from post miles 50.3 to 50.6 in Santa Barbara County and from post miles 0.0 to 0.3 in San Luis Obispo County. The Santa Maria River Bridge crosses the county line between northern Santa Barbara County and southern San Luis Obispo County. The bridge is about 3 miles east of the Pacific Ocean.

The project location is shown in Figure 1-1, Project Vicinity Map. A more detailed look at the project area is shown in Figure 1-2, Project Location Map. Appendix A contains a preliminary layout of the proposed project.

Figure 1-1 Project Vicinity Map

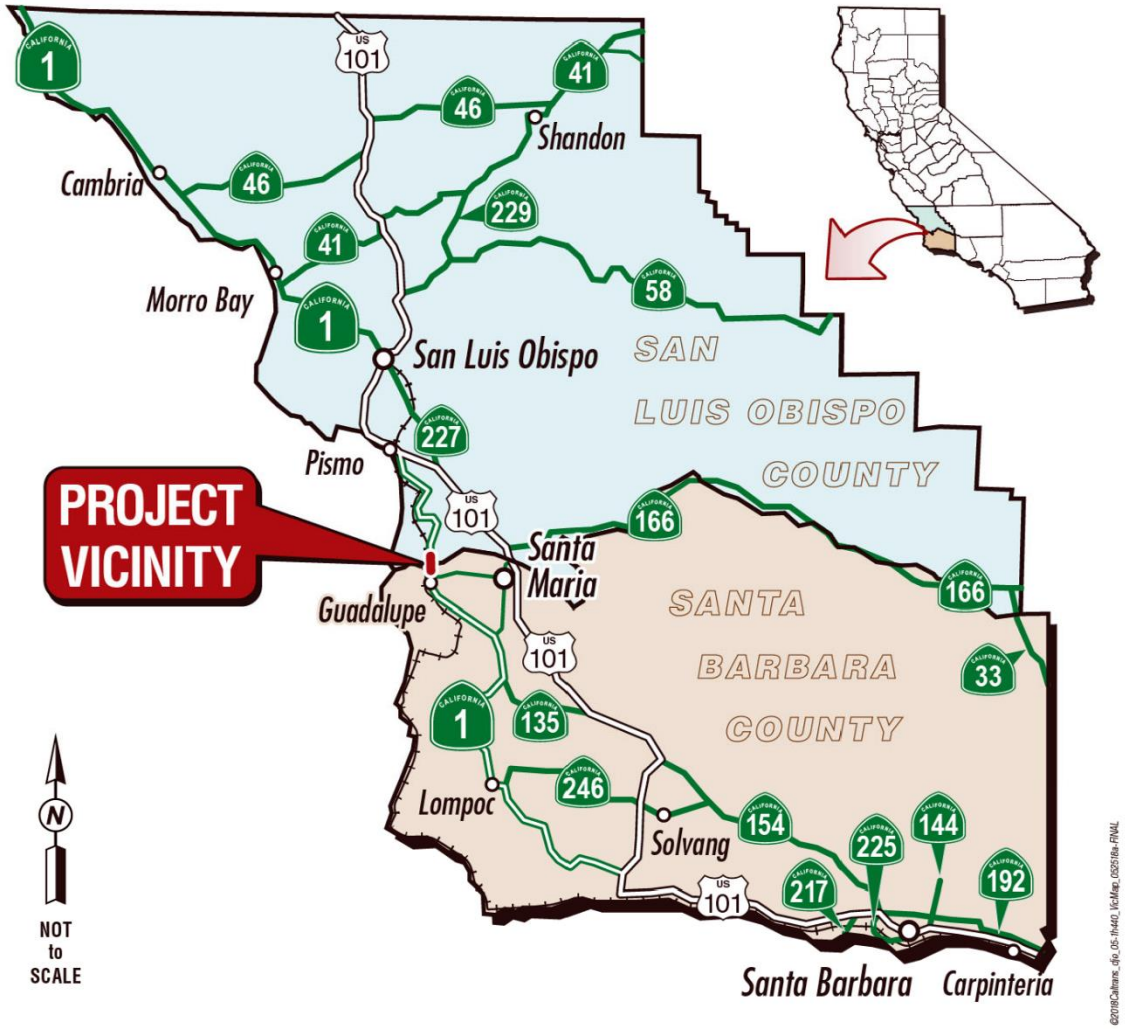
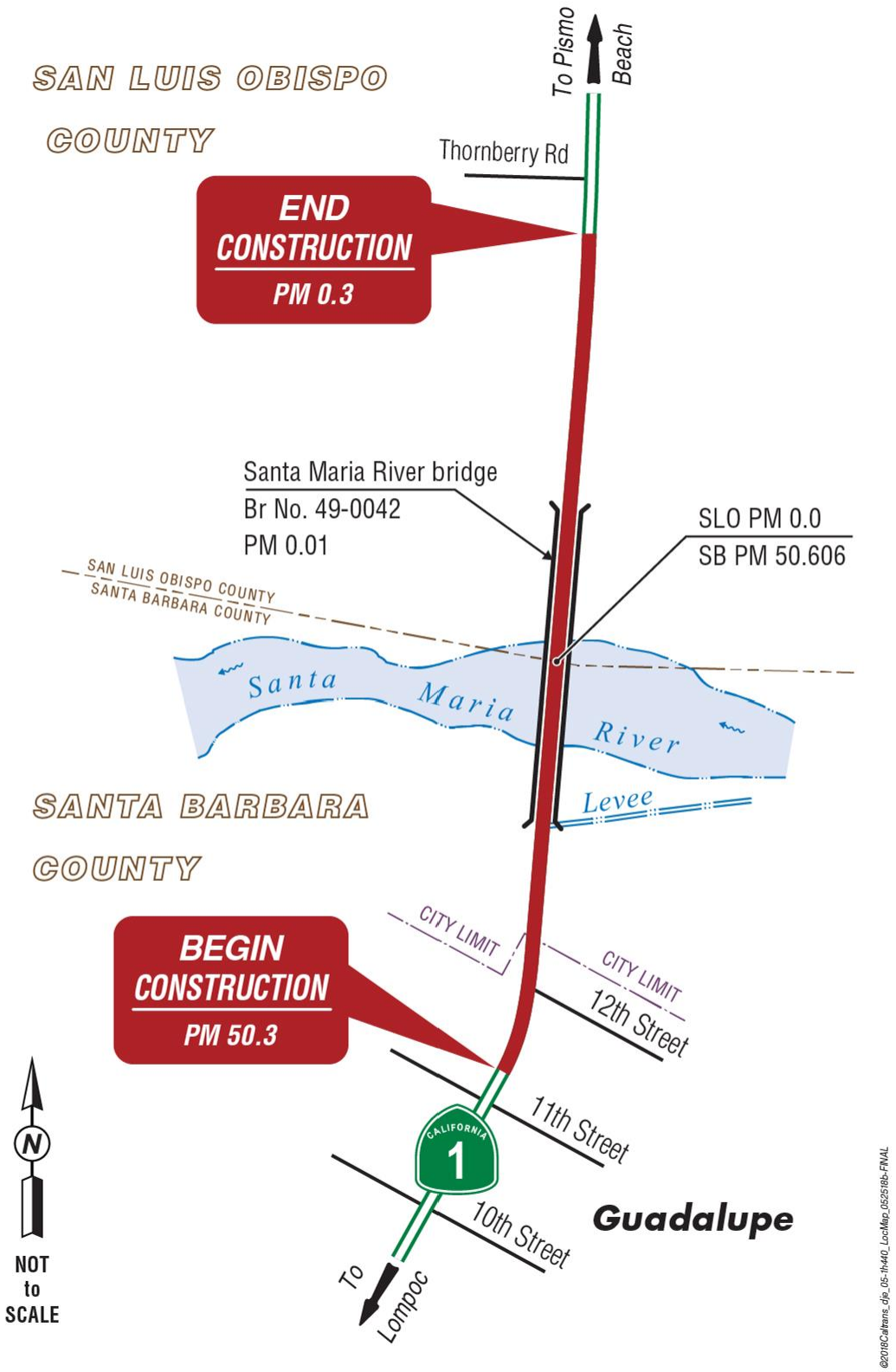


Figure 1-2 Project Location Map



The project would be funded with 2018 State Highway Operation and Protection Program funds. The project is included in the San Luis Obispo Council of Governments' approved 2019 Federal Transportation Improvement Program. The project is also included in the Santa Barbara County Association of Governments' approved Regional Transportation Plan (2017).

The estimated cost of project construction is approximately $29,654,000, with an estimated escalated cost of approximately $33,179,000. Project construction is expected to start in the 2022/2023 fiscal year. The project is expected to be completed in the 2025/2026 fiscal year. Construction personnel are expected to work on the project for about 530 working days, or 24 working months (typically 22 days per working month). It would take up to three construction seasons—typically from June to October—to complete work.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the project is to restore the structural integrity of the Santa Maria River Bridge to ensure the serviceability of State Route 1 and to maintain a safe, multimodal continuity between Santa Barbara County and San Luis Obispo County.

1.2.2 Need

The Santa Maria River Bridge was found to be scour critical and has a history of alkali-silica reactivity as documented in the Bridge Maintenance Fact Sheet. Based on the recommendations of the Bridge Maintenance Fact Sheet, Structure Replacement and Improvement Needs Report, and Bridge Inspection Reports, replacing the Santa Maria River Bridge is required.

1.3 Project Description

Caltrans proposes to replace the existing Santa Maria River Bridge structure. Past bridge inspections have identified multiple evidence of alkali-silica reactions and scour. Bridge inspections have confirmed the presence of alkali-silica reactions in the concrete of the bridge structure. The structural integrity of the bridge has started to deteriorate due to the presence of alkali-silica reactions. Alkali-silica reactions are chemical reactions that cause concrete to swell and crack when exposed to moisture. The presence of alkali-silica reactions causes concrete to spall, which exposes rebars and reduces the strength of concrete. Past bridge inspections have also found evidence of scouring at the piers and exposed pier foundations. The presence of alkali-silica reactions in the concrete increases the potential for scour on the bridge piers, foundations, and abutments. The bridge has been determined to be a "Scour Critical Bridge," which is defined as a bridge that is predicted to fail under certain flood magnitudes, either from analysis or observation. In February 2017, a

Bridge Maintenance Strategy meeting was held, and a Plan of Action was developed, to address the issues on the existing bridge structure. The Plan of Action for the Santa Maria River Bridge initiated the implementation of corrective and preventive measures that included consistent monitoring of the bridge. The goal of the plan was to replace the existing bridge, remove alkali-silica reactions from the structure, and address the scour issue to restore the reliability of access to State Route 1 across the Santa Maria River.

The Santa Maria River Bridge was built in 1955 and seismically retrofitted in 1998. The structure is about 1,200 feet long and about 34 feet wide. The bridge is made up of 24 spans and is supported by 23 pier walls. The bridge consists of two 12-foot lanes with one lane of travel in either direction, two 2-foot shoulders, and two 2.5-foot curbs with concrete curb rails and metal bridge rails. There is no designated pedestrian path on the bridge.

The project is on the Santa Maria River, which is dry most of the year; the river bottom consists of a sandy channel with mixed vegetation along its banks. Although the Santa Maria River Bridge is dry for most of the year, the river does flow during heavy storms and when operations at Twitchell Dam discharge water.

The area that surrounds the project is considered rural, with a mix of mostly agricultural lands, some residential lands, and some commercial lands.

The project is proposing a new wider bridge structure that would meet Caltrans' current design standards and be capable of providing improved pedestrian and bicycle access across the bridge. New abutments and piers would also be built for the new bridge structure. Project construction would involve roadway paving, guardrail upgrades, sidewalk work, and creating more multimodal access.

The project would require a permanent new right-of-way and temporary construction easements. A permanent new right-of-way would be next to an existing Caltrans right-of-way. Temporary construction easements would be required for construction access. Vegetation and tree removal would be required to clear temporary access routes but would be limited to what is necessary for construction. Project demolition and construction activities within the river channel would be required. Temporary construction storage and staging are also required. It is expected that temporary and permanent utility relocation would be required as part of the project.

Temporary traffic management would be implemented in the project area during construction, and temporary construction warning signs would be installed. During project construction, the speed limit in the project area would be temporarily reduced to 55 miles per hour.

Also, the project would include Caltrans' standard measures and plans that are typically included in all Caltrans projects. Caltrans' standard measures and plans are considered features of the project and are evaluated as a part of the project. Caltrans' standard measures and plans are not implemented to address specific

effects, impacts, or circumstances associated with a project, but are instead implemented as a part of the project's design to address issues often encountered in Caltrans' projects. Caltrans' standard measures and plans allow for little discretion regarding their implementation, just as other Caltrans standard project requirements do. Caltrans' standard measures and plans typically include, but are not limited to: Best Management Practices, Landscape Architecture Landscape Planting Plan, Biological Monitoring Plan, Cultural Monitoring Plan, Hazardous Waste Management, Transportation Management Plan, Caltrans Highway Design Manual, Caltrans Standard Specifications, Caltrans Standard Special Provisions, and Caltrans Non-Standard Special Provisions.

Chapter 2 discusses the effects the project may have on the surrounding environment.

1.4 Project Alternatives

Two alternatives are under consideration: a Build Alternative and a No-Build (No-Action) Alternative.

An interdisciplinary team developed the alternatives that are under consideration during the preliminary stages of the project to achieve the project purpose while avoiding or minimizing environmental impacts. Several criteria were taken into consideration when evaluating the various alternatives for the project, including the project's purpose and need, cost, design, construction strategies, and environmental impacts.

1.4.1 Build Alternatives

The Build Alternative, originally identified as Alternative 2 during preliminary stages of the project, would replace the existing Santa Maria River Bridge with a new wider bridge structure on a new alignment. The new bridge would be realigned about 34 feet east from the center line of the existing bridge. The new bridge deck would be thicker, and its elevation would be raised by 2 feet. The new bridge would be about 1,300 feet long and consist of 12 spans and 12 pier structures. Each pier structure would consist of three columns that would be connected by a pier cap. A new bridge abutment would be built to accommodate the new wider bridge structure. The new bridge would include two 12-foot-wide lanes with 8-foot-wide outside shoulders. An 8-foot-wide protected pathway would be included on the southbound (west) side of the new bridge for pedestrian and bicycle use. Standard traffic and pedestrian railings would be installed on the new bridge. The new bridge design would reduce the number of structural and human-made elements in the river. Building the new bridge is not expected to change the existing levee structure along the river.

The new bridge would be built in two stages. The first stage would involve building a new northbound lane on a new alignment to the east of the existing bridge. The

existing northbound lane would be removed after construction of the new northbound lane is complete.

The second stage would involve building a new southbound lane on a new alignment to the west of the new northbound lane. The existing southbound lane would be removed after construction of the new southbound lane is complete.

During project construction, both the northbound and southbound lanes would be maintained for traffic use. Traffic would be directed to use lanes on either the existing bridge or on the new bridge, depending on construction. The existing roadway transitions north and south of the bridge structure and would require pavement adjustments and restriping to fit the new bridge alignment.

This alternative would also involve installing sidewalks, adjusting curbs and gutters, upgrading existing guardrails, installing shoulder backing, and adding pedestrian crossings. The new bridge structure would be within the existing state right-of-way. Additional state rights-of-way would be required for the roadway adjustments at the north and south ends of the bridge to tie in with the existing highway alignment. Partial property acquisition of nearby properties is expected for this alternative.

The estimated cost of the new bridge structure is about $15,536,000. The project is expected to be completed in about 530 working days or about 24 working months (typically 22 days per working month). Project construction would require up to three construction seasons, which typically occur between June to October.

A preliminary design of the Build Alternative is presented in Appendix B.

The Build Alternative would incorporate several of Caltrans' design standards and criteria that address concerns associated with structural, seismic, hydraulic, maintenance, accessibility, operational, traffic, bicycle, and pedestrian, among others.

1.4.2 No-Build (No-Action) Alternative

The No-Build (No-Action) Alternative would leave the existing Santa Maria River Bridge in place as it is. Under the No-Build (No-Action) Alternative, no changes would be made to any part of the bridge, which is expected to continue to deteriorate. This alternative would not address the alkali-silica reactions or the known scour issues identified on the existing bridge structure. These issues would continue to negatively affect the structural integrity of the bridge, which could cause the State Route 1 corridor at this location to not be functional or reliable.

Under the No-Build (No-Action) Alternative, none of the work that has been proposed as part of the project would be conducted. The No-Build (No-Action) Alternative would not improve multimodal access to the bridge, upgrade existing bridge rails, install sidewalks, change curbs and gutters, or change existing utilities.

The No-Build (No-Action) Alternative would not cause project-related impacts because no actions would be conducted.

1.5 Comparison of Alternatives

In the evaluation of the alternatives, the project's purpose and need, cost, and associated environmental impacts were considered.

The Build Alternative would satisfy the purpose of the project because it would address the structural issues identified on the existing Santa Maria River Bridge by replacing the existing bridge with a new bridge. The Build Alternative would satisfy the need of the project because it would remove all traces of alkali-silica reactions that are present in the existing bridge structure and fix the critical scour issue that has been identified. The Build Alternative would permanently and temporarily impact the environment. Permanent impacts would be caused by building the new bridge on a new alignment and acquiring additional rights-of-way to accommodate the new bridge alignment. However, the project would mitigate permanent impacts. Additionally, the new bridge structure would reduce the amount of human-made elements in the river, which would permanently benefit the environment.

Construction activities would temporarily impact vegetation, landscape, and receptors in the project area. However, the project would limit and control temporary impacts to minimize potential project-related disturbances. Though the Build Alternative would affect the existing environmental resources, the environmental analysis indicates that these changes would not be substantial and that the project would have the potential to improve existing biological resources. Chapter 2 in this document provides information regarding the project's potential environmental impacts.

The No-Build (No-Action) Alternative would not satisfy the purpose or need of the project because it would not address the structural issues identified on the existing Santa Maria River Bridge. The No-Build (No-Action) Alternative would not address the presence of alkali-silica reactivity in the existing bridge, the potential scour issue, and would not ensure that the State Route 101 corridor at this location continues to be functional and reliable. Under the No-Build (No-Action) Alternative, there would be no permanent or temporary impacts because no work or disturbance would occur. The No-Build (No-Action) Alternative would not change the existing condition.

1.6 Alternatives Considered but Eliminated from Further Discussion

During the early stages of project development, the project development team studied several potential alternatives through an interdisciplinary approach. Three build alternatives—Alternatives 1, 2, and 3—were originally considered during early preliminary project development. Due to the overall issues of the existing bridge, the

project team determined that the current Build Alternative, originally identified as Alternative 2, was the most prudent alternative. Alternatives 1 and 3 were eliminated early in the project development process, before preparation of the draft environmental document. See below for a description of Alternatives 1 and 3 and the reason they were eliminated from further consideration.

1.6.1 Alternative 1

Alternative 1 proposed to rehabilitate the existing Santa Maria River Bridge. Rehabilitating the existing bridge would have involved replacing the existing girders and bridge rails and changing the pier walls to accommodate a new superstructure. Project construction would have involved widening the bridge deck, extending the pier walls, and installing new bridge spans. Project construction would have also included upgrading guardrails and bridge rails and installing a pathway. The new bridge would have shifted about 15 feet eastward. Building the new bridge would have been conducted in stages, and one-way traffic control would have been required to allow for traffic to pass through the project site.

Though this alternative would have addressed the existing issues on the superstructure, it would not have entirely addressed the presence of alkali-silica reactivity in the concrete piers or the critical scour issue. This alternative was found not to be a prudent solution for addressing the issues affecting the bridge. Also, it was expected that one-way traffic control that would have been required during bridge construction could have adversely impacted traffic in the area. Because of the amount of expected daily traffic on State Route 1 at the project location, implementing one-way traffic control would have created substantial traffic backup and other traffic issues for travelers. Because there are no feasible detours for travelers to bypass bridge construction, it was expected that backed-up traffic and other traffic issues could have potentially impacted local traffic in and around the city of Guadalupe. This could have also potentially impacted the traveling public and the movement of goods in the region.

During the early stages of project development and project investigations, it was determined that Alternative 1 was not expected to be capable of meeting the purpose or need of the project. Also, Alternative 1 had a high potential to cause significant impacts to traffic and the community during project construction. Therefore, Alternative 1 was rejected and eliminated from further consideration, investigation, or discussion.

1.6.2 Alternative 3

Alternative 3 proposed to replace the existing Santa Maria River Bridge on the same alignment. This alternative would have removed the existing bridge structure and replaced it with a new bridge structure, which would have had a wider deck, longer spans, and new pier structures. The number of pier structures in the river would have been reduced to 12. The new bridge would have also included new guardrails, bridge rails, and a pedestrian pathway. The new bridge would have shifted about 15

feet eastward. Construction of the bridge would have been conducted in stages, and one-way traffic control would have been required to allow traffic to pass through the project site.

Though this alternative would have addressed all of the structural issues and restored the structural integrity of the bridge, there was a concern with the construction method. Reconstructing the bridge on the same alignment would have required demolition and construction activities to occur at the same location simultaneously. This alternative would have also required strict one-way traffic control to keep the traveling public safe from construction activities. It was expected that one-way traffic control would have required installing temporary signals north and south of the bridge.

Because of the amount of expected daily traffic on State Route 1 at the project location, using one-way traffic control would have caused potentially adverse impacts to traffic and travelers. Implementing one-way traffic control could have also resulted in substantial traffic backup and disturbance of surrounding traffic.

Because there are no feasible detours for travelers to bypass bridge construction, it was expected that backed-up traffic and other traffic issues could have potentially impacted traffic in the city of Guadalupe and the movement of goods in the region.

During the early stages of project development and project investigations, it was determined that Alternative 3 had the potential to satisfy the purpose and need of the project. However, Alternative 3 had a high potential to cause long-term significant impacts to traffic and regional transportation as a result of long-term highway closure at the bridge location. Therefore, Alternative 3 was rejected and eliminated from further consideration, investigation, or discussion.

1.7 Permits and Approvals Needed

The following permits, licenses, certifications, and/or agreements are expected to be required for the project before construction:

- U.S. Army Corps of Engineers—Section 404 Nationwide permit for impacts to waters of the U.S.
- U.S. Army Corps of Engineers—Section 408 Alteration of Civil Works permit for alteration of existing U.S. Army Corps of Engineers public works project.
- U.S. Fish and Wildlife Service—Section 7 consultation for threatened and endangered species review.
- National Marine Fisheries Service—Section 7 consultation for threatened and endangered species review.
- Regional Water Quality Control Board—Section 401 Certification for impacts to waters of the U.S.

- California Department of Fish and Wildlife—Section 1602 Streambed Alteration Agreement for impacts to streams that are under the jurisdiction of the California Department of Fish and Wildlife.
- California Transportation Commission—Project Funding Approval.

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

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

- **Land Use:** Replacing the bridge is not expected to change or affect existing or future land use in the area, and would be consistent with existing state, regional, and local plans and programs. The project would require minor property acquisition from farmlands that are expected to have a Williamson Act contract next to a highway to accommodate roadway realignment, as detailed in Section 2.1.1, Farmland.
- **Coastal Zone:** Based on coastal zone maps from the California Coastal Commission, the project is outside of the coastal zone. No impacts to coastal resources would occur.
- **Wild and Scenic Rivers:** There are no wild and scenic rivers in or next to the study area, according to the Wild and Scenic Rivers System list, which the National Park Service maintains. Therefore, no impacts to wild and scenic rivers would occur.
- **Parks, Recreational Facilities, and Section 4(f) Resources:** LeRoy Park is about 300 feet west of the project area. The project may cause temporary indirect impacts to LeRoy Park as a result of construction activities. These impacts are further discussed in Section 2.4, Construction Impacts. However, the project is not expected to permanently impact any parks or recreational facilities in the vicinity. No Section 4(f) resources were identified within 0.5 mile of the project area.
- **Timberland:** The project site is not within, next to, or in the vicinity of any timberlands, and it would not impede access to existing timberlands. Therefore, there would be no effects on timberlands.
- **Growth:** The project would replace an existing bridge on an existing highway corridor and would not create new access to previously non-accessible areas. The project would not add new travel lanes on the bridge. The project is not expected to change existing or future predicted traffic patterns. The project would not change existing or future planned development in the vicinity or in the region. A potential future project in the region is the continuation of the Santa Maria River Levee Trail from the city of Santa Maria to State Route 1. The continuation of the Santa Maria River Levee Trail is being proposed by the Santa Barbara County Association of Governments, the city of Santa Maria, and the city of

Guadalupe. At this time, there are no project-related documentations available to analyze potential effects the proposed trail continuation might have on the proposed bridge replacement project. Once project-related documents are prepared for the proposed trail continuation, further analysis can be conducted. However, it is expected that the future trail continuation would connect to State Route 1, which is designated as a Pacific Coast Bike Route, near the Santa Maria River Bridge. The proposed bridge replacement project is not expected to prevent any future development for the Santa Maria River Levee Trail. Instead, the proposed bridge replacement project would support the addition of the separated pathway on the new bridge structure.

- **Community Impacts:** The project would install a separated pathway on the new bridge structure to improve pedestrian access across the new bridge. The new bridge would also include standard travel lanes and shoulders, which would provide improved conditions for cyclists on the bridge. The new bridge is expected to improve public access along this segment of State Route 1. Additionally, the project would fill gaps in existing sidewalks leading up to the new bridge. The project is not expected to negatively affect growth, development, or quality of living in the area. Project construction may temporarily impact community resources; these temporary impacts are further discussed in Section 2.4, Construction Impacts.
- **Paleontology:** The project would not encounter paleontological resources because all work would take place on a bridge, on a roadway, and in river deposits. (Paleontology Review, July 26, 2018)
- **Hazardous Waste and Materials:** The project has a low potential of encountering or disturbing hazardous materials. The project is not near any known hazardous sites. Project activities may disturb potentially hazardous materials that are typically found within the existing bridge or roadway. The project would incorporate Caltrans' standard practices to test for and control potentially hazardous materials that may be encountered during the project construction process. The project is not expected to cause adverse effects as a result of encountering, disturbing, or transporting hazardous materials. (Hazardous Waste Memo, March 9, 2018)
- **Energy:** The project would not increase the existing capacity on the highway or the bridge and is unlikely to change existing energy consumption during operation. The project would include a separated multimodal path that could be used by pedestrians and cyclists. The multimodal path would also encourage alternative modes of transportation and potentially reduce fuel usage. The project would not cause a permanent new demand for energy consumption. Energy use during project construction would be temporary; methods and procedures that would help conserve energy, such as using recycled materials or shutting off idling equipment, would be implemented.
- **Hydrology:** Though the Santa Maria River has a base flood (100-year flood) rate of 118,000 cubic feet per second, the river does not flow most of the year and, in some years, does not flow at all. Water flow within the Santa Maria River is

controlled by operations at Twitchell Dam, which is upstream from the project location. The Santa Maria River's maximum recorded discharge is not near the 100-year flow rate. Also, there are no records of flooding issues related to the bridge. The project is not expected to change the overall hydraulic characteristics of the Santa Maria River or make up a significant floodplain encroachment as defined in Section 650.105q of the Code of Federal Regulations 23. A Federal Emergency Management Agency Flood Insurance Rate Map of the project area is shown in Appendix C. (Location Hydraulic Study, January 10, 2019)

- **Wildfire:** Based on available fire hazard maps from San Luis Obispo County and Santa Barbara County, the project is not within a wildfire hazard zone. The project is surrounded by unincorporated farmland in San Luis Obispo County and a mix of urban and agricultural areas in Santa Barbara County. The project is in an area that is not prone to wildfires. The project would incorporate precautions to prevent fire incidents during construction as part of the code of safe practices in accordance with the California Division of Occupational Safety and Health – Fire Protection and Prevention Guidance.

2.1 Human Environment

2.1.1 Farmland

Regulatory Setting

The National Environmental Policy Act and the Farmland Protection Policy Act (Farmland Protection Policy Act, 7 U.S. Code 4201-4209; and its regulations, 7 Code of Federal Regulations Part 658) require federal agencies, such as the Federal Highway Administration, to coordinate with the Natural Resources Conservation Service if their activities may irreversibly convert farmland (directly or indirectly) to non-agricultural use. For purposes of the Farmland Protection Policy Act, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

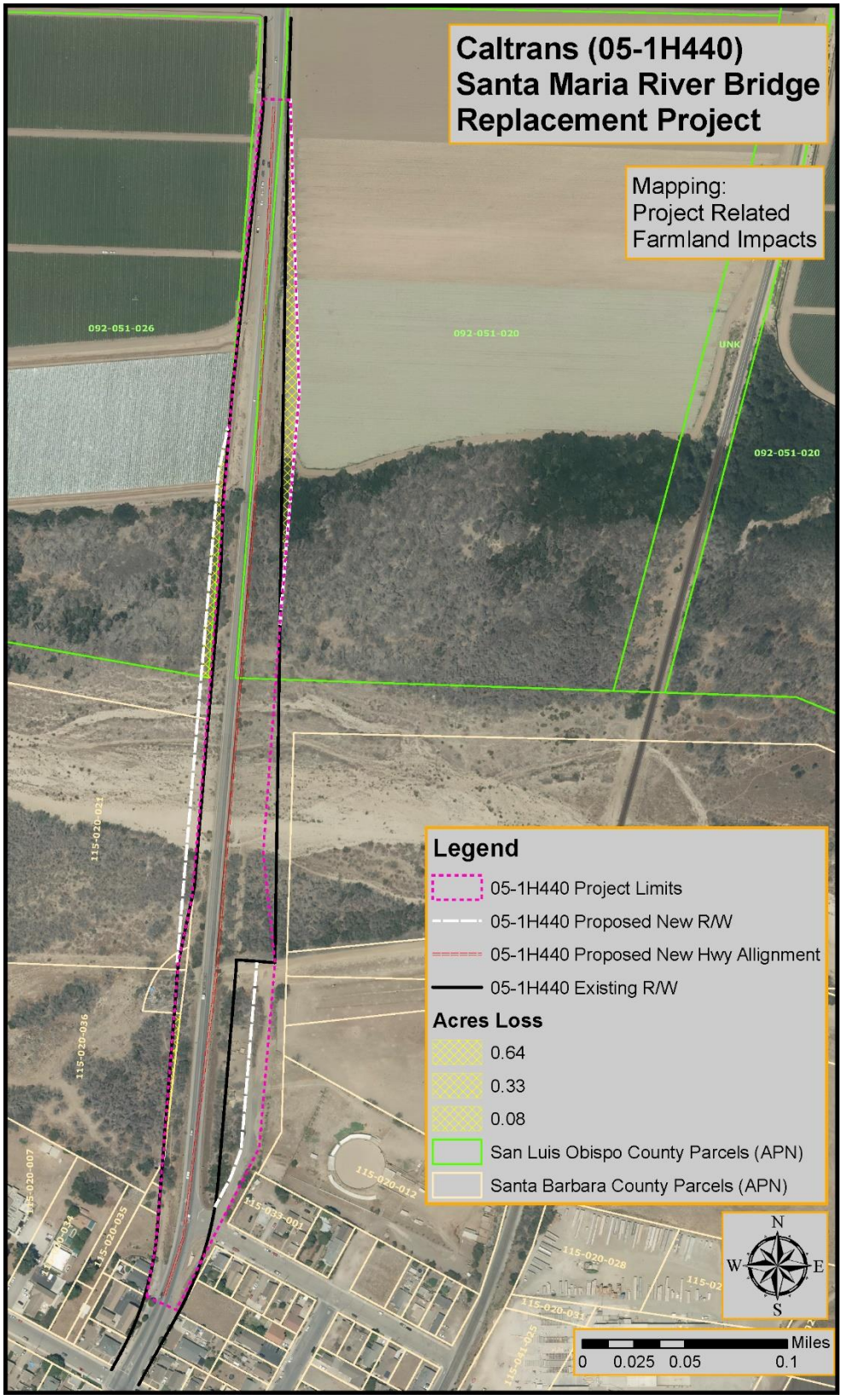
The California Environmental Quality Act requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act contract are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

Affected Environment

This section is based on the Farmland Assessment Memo that was completed for the project on April 17, 2019. Assessor's Parcel Numbers are used to identify properties in this section.

The project is in a rural setting in northern Santa Barbara County and southern San Luis Obispo County. A review of public land use data for San Luis Obispo County and Santa Barbara County identified agricultural land uses next to the project site. In Santa Barbara County, land uses that surround the project area are mixed, identified as either vacant, agricultural, or residential. Within the project footprint, Assessor's Parcel Number 115-020-036 is identified as farmland property in Santa Barbara County. In San Luis Obispo County, the land use that surrounds the project site is identified as agricultural, which includes two farmland properties within the project footprint: Assessor's Parcel Number 092-051-020 and Assessor's Parcel Number 092-051-026. Both farmland properties in San Luis Obispo County are within the Oso Flaco Agricultural Preserve and are expected to be under a Williamson Act contract. Figure 2-1 shows the farmlands that are within the project area.

Figure 2-1 Farmland Acquisition for the Project



Environmental Consequences

The project or project-related construction activities are not expected to prevent the continuation of existing farmland activities in the area. However, construction activities may temporarily generate dust that could be carried by the wind and settle on nearby farms.

The project would require shifting the existing State Route 1 eastward and expanding the existing state right-of-way in the project area. The project would also require partial property acquisition of three nearby properties that are currently identified for farmland use.

The following information summarizes the expected partial acquisition that would be required for each farmland property as part of the project:

- Assessor's Parcel Number 115-020-036, about 0.08 acre
- Assessor's Parcel Number 092-051-020, about 0.64 acre
- Assessor's Parcel Number 092-051-026, about 0.33 acre

Santa Barbara County

Within Santa Barbara County, it is expected that the project would require the partial acquisition of about 0.08 acre from Assessor's Parcel Number 115-020-036, which is about 15.0 acres in size. Acquiring the required 0.08 acre for the project would result in the loss of about 0.53 percent of farmable land from the property. It is expected that the project's required partial acquisition of Assessor's Parcel Number 115-020-036 would not prevent the continuation of agricultural practices on the property. Assessor's Parcel Number 115-020-036 is not under a Williamson Act contract.

San Luis Obispo County

The project would require partial acquisition of property from two nearby farmland properties within San Luis Obispo County, identified as Assessor's Parcel Number 092-051-020 on the east side of State Route 1 and Assessor's Parcel Number 092-051-026 on the west side of State Route 1.

It is expected that the project would require partial acquisition of about 0.64 acre out of about 282 acres from Assessor's Parcel Number 092-051-020. The required partial acquisition would result in the loss of about 0.23 percent of farmable land from the farmland property.

It is expected that the project would require partial acquisition of about 0.33 acre out of about 308 acres from Assessor's Parcel Number 092-051-026. The required partial acquisition would result in the loss of about 0.11 percent of farmable land from the farmland property.

The project is expected to acquire new property totaling about 0.97 acre out of about 590 acres shared between two farmland properties. The project would result in the loss of about 0.34 percent of farmable land in San Luis Obispo County. It is expected that the project's partial property acquisition from Assessor's Parcel Number 092-051-020 and Assessor's Parcel Number 092-051-026 would not prevent the continuation of agricultural practice on the properties.

Assessor's Parcel Number 092-051-020 and Assessor's Parcel Number 092-051-026 are within the Oso Flaco Agricultural Preserve and are expected to be under a Williamson Act contract.

Williamson Act Land

The project would acquire portions of property that are expected to be under a Williamson Act contract. The following criteria must be met to allow the project to affect Williamson Act land:

> *The Williamson Act, California Government Code Section 51292, prohibits a public agency from acquiring farmland within an agricultural preserve unless the following are made:*
>
> *a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.*
>
> *b) If the land is an agricultural land covered under a Williamson Act contract, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.*

Regarding criterion (a), the proposed Build Alternative and the alternatives considered but eliminated from further discussion had similar project limits, structure designs, estimated project costs, potential impacts, and project locations.

The existing bridge structure is nearly surrounded by farmland properties and is next to an agricultural preserve. There were few options to place the new bridge structure in order for it to remain connected with State Route 1. Therefore, cost was not a factor in considering the location of the project.

Regarding criterion (b), the existing State Route 1 system runs directly through the Oso Flaco Agricultural Preserve, and the project's proposed State Route 1 alignment would be designed to best fit within the existing Caltrans right-of-way. The project's proposed State Route 1 alignment would follow a previous alignment of State Route 1 that had been removed when the existing bridge was built. The project was based on a direct route with logical beginning and ending points to fulfill the project's purpose and need. Therefore, no other land within or outside the preserve offers a feasible place for the project's proposed State Route 1 shift that would allow it to connect with the remaining State Route 1 system.

Because the project meets the necessary criteria allowing for the acquisition of Williamson Act-protected farmland, the project can acquire the Williamson Act-protected farmland.

The project would acquire about 0.97 acre of farmland that is expected to be under a Williamson Act contract, shared between Assessor's Parcel Number 092-051-020 and Assessor's Parcel Number 092-051-026. The partial property acquisition is not expected to prevent the existing farmland properties from continuing their agricultural activities or from maintaining their existing Williamson Act contract. Though the project would acquire farmland, the project would not adversely affect farmlands or farmlands under a Williamson Act contract. The project would comply with the California Environmental Quality Act guidelines because it would not result in the cancellation of a Williamson Act contract for parcels exceeding 100 acres.

Avoidance, Minimization, and/or Mitigation Measures

Adequate compensation would be provided for property acquisition, including relocation assistance for residents and businesses as required by law. Caltrans right-of-way agents would work with affected property owners to address issues of concern and compensation for their property's fair market value and any temporary loss of production due to the project.

Projects under a Williamson Act contract would need to comply with all conditions of the act including, but not limited to, the following:

- California Government Code Section 51291(c): When land in an agricultural preserve is acquired by a public entity, the public entity will notify the Director of Conservation within 10 working days. The notice will include a general explanation of the decision and the findings made pursuant to Section 51292.
- California Government Code Section 51291(d): If, after giving the notice required under subdivision (c) and before the project is completed within an agricultural preserve, the public agency or person proposes any significant change in the public improvement, it will give notice of the changes to the Director of Conservation and the local governing body responsible for the administration of the preserve. Within 30 days thereafter, the Director of Conservation and the local governing body may forward to the public agency or person their comments with respect to the effect of the change to the public improvement on the land within the preserve and the compliance of the changed public improvements with this article. Those comments will be considered by the public agency or person, if available within the time limits set by this subdivision.

The following avoidance and minimization measures would be implemented to address potential impacts on farmland resources:

1) The project would limit the amount of right-of-way that is acquired from nearby farmland properties; it would only acquire right-of-way that is necessary for project completion.
2) To the extent possible, construction-related storage, staging, and access would avoid properties that are currently involved in agricultural activities or properties that are identified as prime farmland.
3) Infill materials that would be used in the project would not be obtained from borrow sites that contain prime farmland.
4) Areas next to farmland properties that are disturbed during construction would be re-stabilized using native vegetation and soils that are clear of invasive plant species at the end of construction. Soil amendments, if used, must comply with the requirements of the California Food and Agricultural Code. Soil amendments must not contain paint, petroleum products, pesticides, or any other chemical residues that are harmful to animal life or plant growth.
5) The construction contract would include provisions to protect against the spread of invasive species.
6) When selecting sites for other project-related mitigations (e.g., wetland restoration, replanting, etc.), the project would avoid prime farmland to the extent possible.
7) Construction activities would be coordinated with local farmland operators to ensure that access to nearby farmland properties is maintained during project construction.
8) Appropriate measures pertaining to dust control would be implemented during project construction.

2.1.2 Utilities and Emergency Services

Affected Environment

Utilities

Overhead utility lines and utility poles, which provide electrical service, are next to the existing bridge on the western and eastern sides. The utility lines cross over the Santa Maria River between two utility poles on the western side and two utility poles on the eastern side. There are no utility poles within the riverbed or within the existing bridge structure. North of the bridge, the utility lines on the western side continue to run parallel above State Route 1; the utility lines on the eastern side are underground. South of the bridge, both the western and eastern utility lines are underground before entering the limits of the city of Guadalupe.

Emergency Services

Emergency services in the project vicinity are provided by the Guadalupe Fire Department, the Guadalupe Police Department, and the California Highway Patrol. The Guadalupe Fire Department and the Guadalupe Police Department are about 0.3 mile southeast of the project site. The nearest California Highway Patrol office is about 10 miles east of the project area in the city of Santa Maria.

Environmental Consequences

Utilities

The project would relocate utilities for the realignment of the existing highway. The aboveground utility lines east of the existing bridge would be relocated before construction. Underground utility lines east of the existing State Route 1 may need to be relocated based on their location relative to the proposed new roadway alignment. Utility location verification would be conducted before construction. It is expected that utilities in conflict with the new roadway alignment would need to be relocated within the project limits.

Emergency Services

Construction staging activities could cause temporary and intermittent delays to emergency responders that require access through the project site.

During project construction, emergency services might require access through the project site and the bridge structure to respond to emergencies. Access through the project site and the bridge structure would be maintained during construction, with two lanes available for traffic use. The need for any temporary lane closures during construction would be communicated to the appropriate emergency service agency. Additionally, a Traffic Management Plan would be implemented to inform, guide, and assist emergency responders to ensure the continuation of adequate service and minimize potential delays in response times.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures have been incorporated into the project to address the potential temporary adverse effects of project construction on utility services and emergency services:

Utilities

1) Temporarily relocated utilities would remain in operation during project construction.

2) Before starting utility relocation activities, coordination with utility users would be required to inform them about the date and timing of potential service disruptions.

3) The Caltrans Right-of-Way Manual and the Federal Utility Relocation and Accommodation on Federal-Aid Highway Projects Program Guide would be used to process utility relocations.

Emergency Services

4) The Caltrans resident engineer that is assigned to the project would regularly coordinate with local emergency responders on project activities that could potentially affect emergency response times.

5) A Transportation Management Plan would be adopted and would allow emergency service vehicles to access the project site during construction to minimize response delays.

2.1.3 Traffic and Transportation/Pedestrian and Bicycle Facilities

Regulatory Setting

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

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

Affected Environment

The existing bridge consists of two 12-foot lanes, two 2-foot shoulders, and two 32-inch-wide curbs that support metal bridge rails. While there are no designated sidewalks or cycling lanes within the project limits, pedestrians and cyclists use the bridge to travel along State Route 1.

State Route 1 and the Santa Maria River Bridge provide the main access for residents, workers, businesses, and industries in the surrounding region. The nearest river crossing is Bonita School Road, which is about 3.5 miles east of the project site. Bonita School Road is a partially paved roadway that runs across the riverbed. State Route 1 also intersects with State Route 166, which connects the city of Guadalupe to the city of Santa Maria to the east.

An Amtrak passenger railway line is about 1,000 feet east of the project limits; an Amtrak station is in the city of Guadalupe, about a mile south of the project limits. Available parking in industrial and commercial areas is typically provided in designated parking lots. On-street parking is also available throughout the city and within residential areas.

The city of Guadalupe provides the Guadalupe Flyer transit bus within the city limits. The service also serves the city of Santa Maria. The Guadalupe Flyer does not have any transit routes within the project limits or on State Route 1.

Environmental Consequences

The project could cause delays to vehicles, cyclists, and pedestrians during construction. However, traffic control would be used to ensure that State Route 1 and the Santa Maria River Bridge would remain open to vehicles, cyclists, and pedestrians to minimize potential delays during construction.

The new bridge would include 12-foot travel lanes with 8-foot shoulders, concrete barriers with bicycle rails, and an 8-foot pathway for pedestrians and cyclists. The new 8-foot shoulders would provide access for cyclists and emergency service providers. The new 8-foot pathway would provide access for pedestrians and cyclists that is separated from traffic. The new bridge structure is expected to provide improved access for vehicles, cyclists, and pedestrians traveling on State Route 1 and crossing the Santa Maria River Bridge.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would be implemented for the project:

1) Traffic control would be used to ensure that the public can continue to access State Route 1 during project construction.

2) The project would include Caltrans' Standard Specifications and Caltrans' Standard Special Provisions to address potential traffic issues that would result from project construction, and to provide potential traffic management strategies during construction.

2.1.4 Visual/Aesthetics

Regulatory Setting

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

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

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

Affected Environment

This section is based on the Visual Impact Assessment that was completed for the project on March 15, 2019.

State Route 1 within San Luis Obispo County and Santa Barbara County is a north-south highway that follows the coastline along the Pacific Ocean. The project is about 3 miles east of the Pacific Ocean. Within the project limits, the highway is classified as a two-lane conventional highway and as a rural major arterial roadway.

Land use within the project limits is mostly agricultural. The city of Guadalupe sits along State Route 1, just south of the project, at the mouth of the Santa Maria Valley. The city of Guadalupe is defined by its central business district along State Route 1, its residential neighborhoods that extend to the east and west, and its agricultural land. State Route 1, which passes through the center of town, serves as the city's main street. The largest cities serving the region are Arroyo Grande to the north and Santa Maria to the east.

The region has a rural visual character. Agriculture, open space and recreation, homes, and varied industries make up much of the land use. Several planned residential subdivisions have been built north and south of the project site and are continuing to be developed. Though the region is becoming more suburbanized, the area still maintains much of its rural character, due in large part to the abundant cropland, open space, riparian areas, and dunes.

The landscape that surrounds the region is mostly flat with some hills to the north and south. The regional landscape can be broadly defined as an old marine terrace that follows the Santa Maria River to the Pacific Ocean. Much of the region is made of sand dune complexes along the beach and transitions into wide mesas inland. The coastal dune complex, which extends from the shoreline to as far as about 2 miles inland, is among the largest of its type in California. Creeks and drainages in the region have an east-west orientation on their way to the ocean. The native landscape of the inland portions of the region include coast live oak woodland, chaparral, and grasslands, with healthy riparian corridors along the Santa Maria River, creeks, and drainage ways.

Specialized plant communities are found along the coastline and into the dune complex. Eucalyptus trees were introduced into the area as a forest crop and have

since become established over much of the Nipomo Mesa to the north. The large stature of eucalyptus groves creates a dominant visual element throughout much of the inland area. The region also includes portions of the Santa Maria Valley to the east, consisting of broad, flat agricultural croplands.

Scenic Vistas and Resources

Scenic vistas in the project vicinity include views of the Santa Maria River riverbed, a riparian corridor, distant views of the mountains to the south and northeast, and the dunes to the west. From the project site, the Santa Maria River is the most visually dominant scenic element because of how close it is to the highway. The inland hills also contribute to the scenic vista, but are less visually dominant because of intervening vegetation, topography, and viewing distance. The existing overhead utilities that are parallel to the bridge take away from the scenic vista and add visual clutter to the views.

Visual Character of the Site and its Surroundings

The existing visual character of the project area is based mostly on its proximity to the Santa Maria River and the surrounding agricultural land. The city of Guadalupe and the highway itself also contribute to the overall character of the site and its surroundings.

Although the existing Santa Maria River Bridge is a dominant visual element in the immediate project vicinity, it is not a particularly memorable or architecturally unique structure. The existing bridge rail does, however, contribute to the rural visual character of the setting in terms of its age, open appearance, rail-and-picket style, and materials.

Environmental Consequences

As seen from State Route 1, the main public viewpoint, the project would temporarily affect views. When the new bridge is built, the riverbed and distant hills would remain visible and the scenic vista would remain intact. The proposed taller bridge rail and pathway railing would minimally affect views of the scenic vista in the area.

The new bridge deck profile would be slightly raised to allow for a higher vantage point for views of the surrounding landscape. However, this higher vantage point would cause overhead utility wires to be more directly in view and interfere with the quality of the scenic vista.

Because State Route 1 is not classified as an Officially Designated State Scenic Highway within the project limits, there would be no damages to scenic resources along the highway.

Proposed project elements above the bridge deck, such as barriers and railings, would be visible from the highway. By themselves, these types of elements are common and would not be seen as unexpected visual elements in a highway setting. However, the new pathway—with its additional concrete barrier, pedestrian fencing, and bicycle railing—would be a new, unique visual element along the highway

corridor. The new barrier and railing would be taller than the existing barrier. When viewed with the wider road shoulders and pathway, the new barrier would increase the visual scale and appearance of the structure. The new configuration and additional hardware would create a more utilitarian appearance and would add a degree of visual clutter to the setting. As a result, these visual changes would cause a low reduction of rural character and visual quality to the immediate project area.

Though the project would remove existing riparian trees and other plants, any vegetation removed would be fully replaced and established. As a result, the riverbanks would, over time, be fully revegetated and result in a natural-appearing visual condition. Construction access roads and areas of demolition, if restored to natural-appearing landforms, would reduce the noticeability of disturbance and engineered changes.

The project would not affect daytime or nighttime views because it would not introduce new lighting or sources of glare.

Avoidance, Minimization, and/or Mitigation Measures

The project would implement the following avoidance and minimization measures to ensure that it is consistent with the aesthetic and visual resource protection goals along State Route 1:

1) The type and appearance of all new bridge rails, bicycle railing, and pedestrian railing would be determined in consultation with the city of Guadalupe. Open-type bridge railing and pathway railing would be considered as well.

2) All existing overhead utilities that are next to the new bridge would either be placed in the bridge structure, attached to the bridge in the least visible way, and/or placed underground.

3) All wing walls, retaining walls, and slope paving, if required, would be treated with a rough texture such as “rip-out” or something similar to discourage graffiti.

4) Preserve as much existing vegetation as possible. Prescriptive clearing, grubbing, and grading techniques that would save the most existing vegetation should be used.

5) Revegetate all areas disturbed by the project with appropriate native plant species.

6) Following construction, re-grade and recontour all new construction access roads, demolition areas, staging areas, and other temporary uses as necessary to match the surrounding pre-project topography.

2.1.5 Cultural Resources

Regulatory Setting

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

The National Historic Preservation Act of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation (36 Code of Federal Regulations 800). On January 1, 2014, the First Amended Section 106 Programmatic Agreement among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, and Caltrans went into effect for Department projects, both state and local, with Federal Highway Administration involvement. The Programmatic Agreement implements the Advisory Council on Historic Preservation's regulations, 36 Code of Federal Regulations 800, streamlining the Section 106 process and delegating certain responsibilities to the Department. The Federal Highway Administration's responsibilities under the Programmatic Agreement have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 U.S. Code 327).

The California Environmental Quality Act (CEQA) requires the consideration of cultural resources that are historical resources and tribal cultural resources, as well as "unique" archaeological resources. California Public Resources Code Section 5024.1 established the California Register of Historical Resources and outlined the necessary criteria for a cultural resource to be considered eligible for listing in the California Register of Historical Resources and, therefore, a historical resource. Historical resources are defined in California Public Resources Code Section 5020.1(j). In 2014, Assembly Bill 52 added the term "tribal cultural resources" to CEQA, and Assembly Bill 52 is commonly referenced instead of CEQA when discussing the process to identify tribal cultural resources (as well as identifying measures to avoid, preserve, or mitigate effects to them). Defined in California Public Resources Code Section 21074(a), a tribal cultural resource is a California Register of Historical Resources or local register eligible site, feature, place, cultural landscape, or object which has a cultural value to a California Native American tribe. Tribal cultural resources must also meet the definition of a historical resource. Unique archaeological resources are referenced in California Public Resources Code Section 21083.2.

California Public Resources Code Section 5024 requires state agencies to identify and protect state-owned historical resources that meet the National Register of Historic Places listing criteria. It further requires Caltrans to inventory state-owned structures in its rights-of-way.

Affected Environment

The discussion of this section is based on the Cultural Resource Review that was completed for this project on October 4, 2018, and the Cultural Resource Revalidation that was completed for this project on September 23, 2019.

Letters were sent out to the regional Native American tribal groups on December 19, 2018, as part of Section 106 consultation and formal notification under Assembly Bill 52.

The project is in an area that has been highly disturbed due to past development projects and ongoing agricultural activities. A review of cultural resource documentation on state files revealed that the project area had previously been surveyed during past projects, and no cultural resources were identified. A field survey was conducted in the project area and confirmed the substantial level of disturbance, and suggested a low probability for intact subsurface cultural deposits.

The existing Santa Maria River Bridge was determined to be a Category 5 bridge in the Caltrans Statewide Historic Bridge Inventory, which is not eligible for listing in the National Register of Historic Places or the California Register of Historical Resources. The bridge is not considered a historic resource, according to the California Environmental Quality Act. There are no other historic built environment resources within the project limits that the project could potentially affect.

Environmental Consequences

Invitation for consultation as part of Section 106 was offered, but no formal consultation has been requested by recipients.

The project does not have the potential to affect cultural resources directly or indirectly within the project limits.

Avoidance, Minimization, and/or Mitigation Measures

No cultural-related measures are required for the project because the project is not expected to affect cultural resources.

The project would include the following Caltrans standard provisions that deal with the chance discovery of previously unknown cultural materials or human remains during project construction:

1) If cultural materials are discovered during construction, all earth-moving activities within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.

2) If human remains are discovered during construction, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner should be contacted. If the coroner thinks the remains are of Native American origin, he or she would notify the Native American Heritage Commission, who, per California Public Resources Code Section 5097.98, would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact the District 5 Environmental Branch so that staff could work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Additional provisions of California Public Resources Code Section 5097.98 must be followed as applicable.

2.2 Physical Environment

2.2.1 Water Quality and Stormwater Runoff

Regulatory Setting

Federal Requirements: Clean Water Act

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

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

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

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

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

The Section 404(b)(1) Guidelines were developed by the U.S. Environmental Protection Agency in conjunction with the U.S. Army Corps of Engineers and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative that would have less adverse effects. The guidelines state that the U.S. Army Corps of Engineers may not issue a permit if there is a least environmentally damaging practicable alternative to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order.

The guidelines also restrict permitting activities that violate water quality or toxic effluent standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the U.S. Army Corps of Engineers, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 Code of Federal Regulations 320.4. A discussion of the least environmentally damaging practicable alternative determination, if any, for the document is included in Section 2.3.2, Wetlands and Other Waters.

State Requirements: Porter-Cologne Water Quality Control Act

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

Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act.

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

State Water Resources Control Board and Regional Water Quality Control Boards

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

National Pollutant Discharge Elimination System Program

Municipal Separate Storm Sewer Systems

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

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

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

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

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

Construction General Permit

Construction General Permit, Order Number 2009-0009-DWQ (adopted on September 2, 2009, and effective on July 1, 2010), as amended by Order Number 2010-0014-DWQ (effective February 14, 2011), and Order Number 2012-0006-DWQ (effective on July 17, 2012). The permit regulates stormwater discharges from construction sites that result in a Disturbed Soil Area of 1 acre or greater, and/or are smaller sites that are part of a larger common plan of development.

By law, all stormwater discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least 1 acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than 1 acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting

from the activity as determined by the Regional Water Quality Control Board. Operators of regulated construction sites are required to do the following: develop Stormwater Pollution Prevention Plans; implement sediment, erosion, and pollution prevention control measures; and obtain coverage under the Construction General Permit.

The Construction General Permit separates projects into Risk Levels 1, 2, and 3. Risk Levels are determined during the planning and design phases and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory stormwater runoff, potential hydrogen and turbidity monitoring, and before-construction and after-construction aquatic biological assessments during specified seasonal windows.

For all projects subject to the permit, applicants are required to develop and implement an effective Stormwater Pollution Prevention Plan. In accordance with the Caltrans Statewide Stormwater Management Plan and Standard Specifications, a Water Pollution Control Program is necessary for projects with disturbed soil area less than 1 acre.

Section 401 Permitting

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

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

Affected Environment

This section is based on the Water Quality Assessment that was completed for the project on July 25, 2018.

The project is on the Santa Maria River. The Santa Maria River is formed at the junction of the Cuyama River and Sisquoc River and drains directly to the Pacific Ocean. The Cuyama River, the Sisquoc River, and the Santa Maria River are major components of the Santa Maria River watershed. The Santa Maria River and the

Sisquoc River are part of the Santa Maria River Valley Groundwater Basin. Water flow on the Santa Maria River is highly regulated by the Twitchell Dam, which is on the Cuyama River. During much of the year, the Santa Maria River is dry, and the presence of water is either the result of dam releases or heavy rain events. Engineered levees line most of the southern banks of the Santa Maria River.

The project is on a portion of the Santa Maria River that is regulated by the Central Coast Regional Water Quality Control Board and the Central Coast Plan. The Santa Maria River watershed has been identified on the Central Coast Regional Water Quality Control Board 2008 list for Total Maximum Daily Load Priority Schedule of impaired waters.

Environmental Consequences

The project would demolish an existing bridge structure and build a new bridge structure over the Santa Maria River.

During project construction, various project activities would occur above, next to, and within the river. Construction-related activities are expected to cause temporary and intermittent impacts to water quality because foreign materials may enter the river. The project is not expected to cause long-term impacts to water quality because the Santa Maria River is dry for most of the year. If water is present in the river during bridge construction, no work would be allowed to occur when water is flowing.

The project would result in 10.5 acres of disturbed soil. The acres would account for bridge construction areas, structure excavation areas, potential local road excavation areas, road shoulder approaches to the bridge, and potential contractor stockpiling/staging areas. Additionally, 0.4 acre of new net impervious surface area would be added because of the wider deck on the new bridge structure. The project is not expected to cause groundwater impacts.

The project would incorporate a variety of temporary Caltrans standard engineering practices during construction to protect water quality. Such practices would include but would not be limited to: litter prevention and collection, spill control and prevention, soil stabilization, runoff and sediment control, erosion control, and job site management. Also, permanent features may be incorporated into the project after construction to provide long-term protection to water quality, such as vegetated swales, sand filters, and runoff basins.

Avoidance, Minimization, and/or Mitigation Measures

The project would comply with water pollution protection provisions in Caltrans' Standard Specifications, and the National Pollutant Discharge Elimination System permit for Caltrans, as well as Section 20-3, Erosion Control, of Caltrans' Standard Specifications.

The following measures would be implemented to minimize impacts on water quality and stormwater runoff for this project:

1) The project would implement appropriate Best Management Practices and construction practices to minimize and avoid potential impacts to the river channel as a result of construction activities.

2) Work in the river would be performed during the dry season, which is typically from June to October, and only if there is no water flow. When work is near streams, erosion and sediment controls would be implemented to keep sediment out of the stream channel.

3) A Stormwater Pollution Prevention Plan would be prepared before ground disturbance activities and would be implemented during construction as required per Caltrans' standard practices.

4) The project would isolate equipment staging and spoil/material storage areas away from the river channel using appropriate stormwater control barriers.

5) When in-channel work is required, the project would stabilize access routes to the river to reduce tracking mud and dirt in and out of the river channel.

6) The project would preserve existing vegetation outside of the active work area.

7) At minimum, the following Best Management Practices would be implemented:

    a) Install appropriate fencing to control sediment. Fencing should be installed only where sediment-laden water can pond to allow the sediment to settle out.

    b) Install fiber rolls along the slope contour above the high-water level to intercept runoff, reduce flow velocity, release the runoff as sheet flow, and remove sediment from the runoff. In a stream environment, fiber rolls should be used with other sediment control methods.

    c) Use a gravel bag berm or barrier to intercept and slow the flow of sediment-laden sheet flow runoff. In a stream environment, gravel bag barriers can allow sediment to settle from runoff before water leaves the construction site and can be used to isolate the work area from the stream. Gravel bag barriers are not recommended as a perimeter sediment control practice around streams.

2.2.2 Geology, Soils, Seismicity and Topography

Regulatory Setting

For geologic and topographic features, the key federal law is the Historic Sites Act of 1935, which establishes a national registry of natural landmarks and protects "outstanding examples of major geological features." Topographic and geologic features are also protected under the California Environmental Quality Act.

This section also discusses geology, soils, and seismic concerns as they relate to public safety and project design. Earthquakes are prime considerations in the design and retrofit of structures. Structures are designed using the Caltrans Seismic Design Criteria. The Seismic Design Criteria provide the minimum seismic requirements for highway bridges designed in California. A bridge's category and classification will determine its seismic performance level and which methods are used for estimating the seismic demands and structural capabilities. For more information, see the Caltrans Division of Engineering Services, Office of Earthquake Engineering, Seismic Design Criteria.

Affected Environment

This section is based on the Structures Preliminary Geotechnical Report that was completed for the project on November 7, 2016.

Regional Geology and Seismicity

The project is in the Coast Ranges geomorphic province of California. The project site is about 2.8 miles southwest of the San Luis Range-Oceano fault, which has a maximum credible earthquake magnitude of 6.8. The project site is not within a known Alquist-Priolo Earthquake Fault Zone.

Site Conditions

Subsurface conditions in the vicinity of the project site are composed of quaternary alluvium, which consists of alluvium and river channel deposits. The channel condition is described as "sandy gravel with fairly heavy shrub growth."

The soil from the ground surface to about 45-50 feet below ground surface contains layers of stiff clay, soft clayey silt, very loose silt, slightly compact silt, slightly compact sand, compact sand, and dense sand. In general, below 45-50 feet from the ground surface, the soils are dense to very dense sand.

During a 1953 field investigation, groundwater was seen at 60.5 feet below ground surface. However, groundwater may also be encountered at higher elevations during and shortly after times of surface flows within the channel. Though no surface water was seen during the site visit on October 26, 2016, groundwater may still exist within the foundation soils.

Environmental Consequences

No known active faults are within 1,000 feet of the project area, and there is no potential for ground rupture in the project area.

The project is in an area where there is the potential for liquefaction (where soil turns to a jelly-like consistency during seismic ground shaking) due to the soil composition and groundwater in the creek bed.

Though the project area would experience strong seismic ground shaking in the event of a large earthquake, the project would be designed according to Caltrans' seismic standards, as provided in the Highway Design Manual, minimizing the risk for strong seismic ground shaking for construction workers and the traveling public. It is expected that the following foundation types may be used for the project: cast-in-drilled-hole concrete piles, cast-in-steel-shell concrete piles, driven open-ended pipe piles, or driven displacement piles.

A subsurface geotechnical investigation was conducted for this project. All subsurface study was done within the existing state right-of-way and from the roadway surface. The information gathered from this investigation is currently being analyzed, and its findings would be used to determine the final bridge structure design. The project's final bridge structure design would be determined after the project document is approved and before project construction starts.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measure would be implemented for the project:

1) The project would design the new structure according to Caltrans' seismic design standards, as provided in the Highway Design Manual, to reduce the potential of failure due to an earthquake, liquefaction, erosion, or other geological hazards.

2.2.3 Noise

Regulatory Setting

The California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA) of 1969 provide the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and foster a healthy environment. The requirements for noise analysis and consideration of noise abatement and/or mitigation, however, differ between CEQA and NEPA.

California Environmental Quality Act

CEQA requires a strict baseline versus build analysis to assess whether a proposed project will have a noise impact. If a project is determined to have a significant noise impact under CEQA, then CEQA dictates that mitigation measures must be incorporated into the project unless those measures are not feasible. The rest of this

section will focus on the NEPA/Title 23 Part 772 of the Code of Federal Regulations noise analysis; see Chapter 3 of this document for further information on noise analysis under CEQA.

National Environmental Policy Act and 23 Code of Federal Regulations 772

For highway transportation projects with Federal Highway Administration involvement (and Caltrans, as assigned), the Federal-Aid Highway Act of 1970 and its implementing regulations (23 Code of Federal Regulations 772) govern the analysis and abatement of traffic noise impacts. The regulations require that potential noise impacts in areas of frequent human use be identified during the planning and design of a highway project. The regulations include noise abatement criteria that are used to determine when a noise impact would occur. The noise abatement criteria differ depending on the type of land use under analysis. For example, the noise abatement criteria for residences (67 A-weighted decibels) is lower than the noise abatement criteria for commercial areas (72 A-weighted decibels). Table 2.1 lists the noise abatement criteria for use in the NEPA/23 Code of Federal Regulations 772 analysis.

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

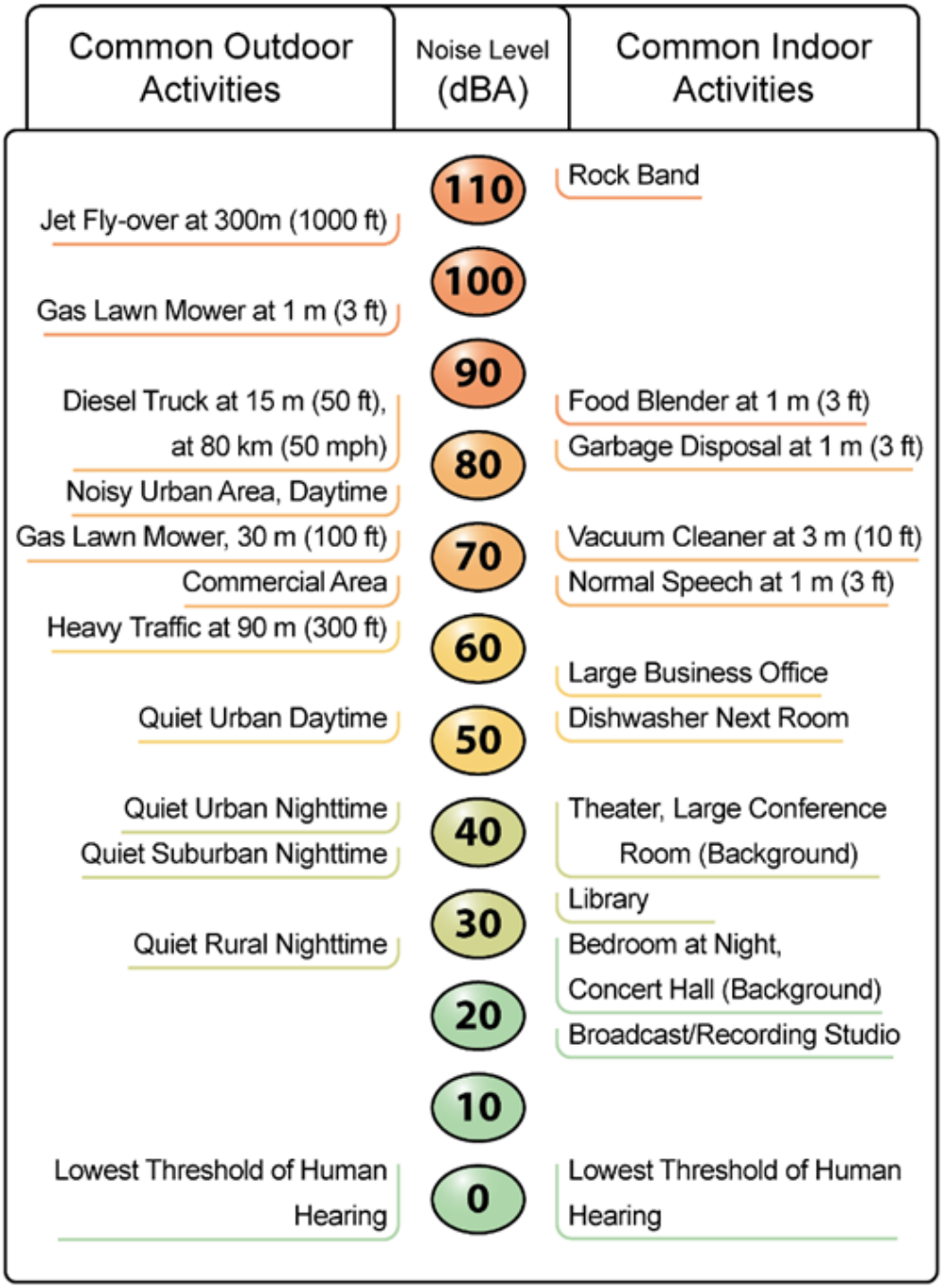
According to Caltrans' *Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects, May 2011*, a noise impact occurs when the predicted future noise level with the project substantially exceeds the existing noise level (defined as a 12 A-weighted decibel or more) or when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

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

Table 2.1 Noise Abatement Criteria

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

Figure 2-2 Noise Levels of Common Activities



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

Affected Environment

This section is based on the Noise Study Report that was completed for the project on October 18, 2018.

The technical report evaluated the project per 23 Code of Federal Regulations 772.7. Under 23 Code of Federal Regulations 772.11, noise abatement must be considered for Type 1 projects if the project is predicted to cause a traffic noise impact.

The Noise Study Report measured noise levels as A-weighted decibels, which are an expression of relative loudness perceived by the human ear.

For this analysis, the existing condition year is identified as 2017 and the future condition of the project is identified as 2037. Traffic noise was evaluated under existing conditions, No-Build (No-Action) Alternative conditions (future conditions with no project), and Build Alternative conditions (future conditions with the project).

The highest average traffic volumes on State Route 1 are predicted to occur during evening hours. Therefore, traffic volumes during evening hours were used in the analysis.

Land Uses and Terrain

Land uses in the vicinity consist mostly of agricultural, single-family homes, multi-family homes, and commercial retail. The lands that surround the existing bridge are mainly agricultural and fallow. The area south of the existing bridge is mainly residential, which encompasses the city of Guadalupe. The terrain is mostly flat, with little change in elevation throughout the project limits.

Based on the noise abatement criteria, the Activity Category for the surrounding area is identified as B (residential) and F (agricultural).

Noise Measurement Methods

As stated in Caltrans' *Traffic Noise Analysis Protocol*, noise abatement is considered only where frequent human use occurs and where a lowered noise level would be beneficial. Though all land uses are evaluated in this analysis, the focus is on locations of frequent human use that would benefit from a lowered noise level. This noise impact analysis focuses on locations with defined outdoor activity areas, such as residential backyards and common use areas in multi-family homes.

The evaluation for short-term noise impacts was focused in the vicinity of 11th Street and 12th Street, identified as Area A and presented in Figure 2-3. Area A contains homes south of the bridge near 11th Street, which is shown in Figure 2-3 as R-4 and R-5. Short-term noise monitoring was also done for three homes next to the highway, shown in Figure 2-3 as R-1, R-2, and R-3. Area A is identified as containing Activity Category B, with a noise abatement criterion of 67 A-weighted decibels.

Field-gathered data (short-term noise measurements, traffic volumes and speeds, vehicle mist information, and site-specific geographical information) were used to calibrate the traffic noise model so that it could be used to predict existing and future noise levels in the project area. Once calibrated, the traffic noise model was used to predict peak-hour noise levels with and without the project, and to determine if any applicable noise abatement measures would need to be considered for the project.

Environmental Consequences

The project is considered a Type 1 project, which involves building a highway at a new location, physically changing an existing highway, adding through-traffic lanes, or restriping existing pavement.

Temporary noise impacts during construction are discussed in Section 2.4, Construction Impacts.

Traffic Noise Model - Existing Noise Levels

The following information summarizes the existing noise levels for five locations in Area A:

- Location R-1: 60 A-weighted decibels
- Location R-2: 65 A-weighted decibels
- Location R-3: 68 A-weighted decibels
- Location R-4: 67 A-weighted decibels
- Location R-5: 68 A-weighted decibels

Modeled traffic noise levels for locations R-1 and R-2 are below the noise abatement criterion of 67 A-weighted decibels.

Modeled traffic noise levels for locations R-3, R-4, and R-5 are considered to exceed the noise abatement criterion of 67 A-weighted decibels.

Traffic Noise Model - Future Noise Levels

No-Build (No-Action) Alternative Conditions

The following information summarizes the predicted noise levels for locations in Area A under the No-Build (No-Action) Alternative conditions:

- Location R-1: 61 A-weighted decibels
- Location R-2: 65 A-weighted decibels
- Location R-3: 68 A-weighted decibels
- Location R-4: 68 A-weighted decibels
- Location R-5: 69 A-weighted decibels

The predicted future noise level is the result of expected increases in future traffic volumes in the area without the proposed highway realignment. Under the No-Build (No-Action) Alternative, the increase in noise levels of future conditions is predicted to be 0 to 1 A-weighted decibel higher than existing conditions.

Because the predicted noise levels at locations R-1 and R-2 are below the noise abatement criteria, noise abatement measures are not required.

The predicted noise levels for locations R-3, R-4, and R-5 would approach or exceed the noise abatement criteria.

Noise abatement measures are not required under the No-Build (No-Action) Alternative conditions because no actions or changes would be made.

Build Alternative Conditions

The following information summarizes the predicted noise levels for locations in Area A under the Build Alternative conditions:

- Location R-1: 65 A-weighted decibels
- Location R-2: 67 A-weighted decibels
- Location R-3: 67 A-weighted decibels
- Location R-4: 68 A-weighted decibels
- Location R-5: 68 A-weighted decibels

The predicted future noise level is the result of expected increases in traffic volumes in the area with the proposed highway realignment.

The increase in noise levels of future conditions under the Build Alternative is predicted to be 0 to 4 A-weighted decibels higher than existing conditions.

Though the modeled future noise level is predicted to increase by 4 A-weighted decibels at location R-1, it would remain below the noise abatement criterion of 67 A-weighted decibels. Therefore, noise abatement measures would not be required.

The modeled future noise level at location R-2 is predicted to be 67 A-weighted decibels, which would approach the noise abatement criteria. Because of this, traffic noise impacts could occur, and noise abatement measures must be considered.

Modeled future noise levels at locations R-3, R-4, and R-5 are expected to remain the same or slightly decrease from the predicted future No-Build (No-Action) Alternative condition, but would still exceed the noise abatement criterion of 67 A-weighted decibels.

Though modeled future noise levels at locations R-3, R-4, and R-5 are predicted to approach or exceed the noise abatement criterion under the Build Alternative condition, predicted increases in future noise levels would not be attributed to the proposed highway realignment. This is because under the No-Build (No-Action) Alternative condition, modeled future noise levels at these locations are also predicted to approach or exceed the noise abatement criterion. Therefore, the proposed highway realignment is not expected to induce noise impacts for locations R-3, R-4, and R-5.

Under the Build Alternative, there is either no net change or a slight decrease in the predicted change in noise levels between the existing and future conditions. Future noise levels in Area A are predicted to be attributable to future increases in traffic noise that would occur regardless of whether the Build Alternative was implemented.

Noise Abatement

Noise abatement is considered where project-related noise impacts are predicted in areas of frequent human use. According to 23 Code of Federal Regulations 772(13)(c) and 772(15)(c), federal funding may be used for the following abatement measures:

- Construction of noise barriers, including the acquisition of property rights, either within or outside the highway right-of-way.
- Traffic management measures including, but not limited to, traffic control devices and signing for prohibition of certain vehicle types, time-use restrictions for certain vehicle types, modified speed limits, and exclusive lane designations.
- Changing horizontal and vertical alignments.
- Acquire real property or interests (mainly unimproved property) to serve as a buffer zone to pre-empt development that would be adversely impacted by traffic noise.

- Noise insulation of Activity Category D land use facilities. Post-installation maintenance and operational costs for noise insulation are not eligible for federal-aid funding.

Consideration for Build Alternative

The future noise level in Area A under the Build Alternative condition is predicted to approach or exceed the noise abatement criterion for locations R-2, R-3, R-4, and R-5.

Noise abatement measures were evaluated for location R-2 because the predicted noise levels at this location are expected to approach or exceed the noise abatement criterion of 67 A-weighted decibels. A 16-foot-tall soundwall was the abatement measure that was evaluated for the single residential receptor at location R-2. However, it was determined that this abatement measure was not feasible due to the following restrictions:

- The receptor is on the corner of a residential lot at the intersection of State Route 1 and 12th Street.
- Due to the cross street and driveway entrance to the home, the soundwall could only be installed along the edge of State Route 1 and cannot be wrapped around the corner.
- The soundwall would have ended before the intersection of State Route 1 and 12th Street because of sight distance safety implications for vehicles entering and exiting the highway from 12th Street.
- Due to these restrictions, the soundwall would not be effective at reducing traffic noise and would not provide the minimum reduction of 5 A-weighted decibels that is required to be considered acoustically feasible.

Noise abatement measures were considered for locations R-3, R-4, and R-5 because the predicted noise levels at these locations are expected to approach or exceed the noise abatement criterion of 67 A-weighted decibels. However, abatement measures would not be feasible or effective at these locations for the following reasons:

- These receptors are on residential lots that contain pedestrian sidewalks and residential driveways that are right next to the highway.
- The residential driveways would prevent the construction of a continuous noise barrier along the edge of the highway. Having gaps in the noise barrier is not expected to provide the minimum reduction of 5 A-weighted decibels that is required to be considered feasible.
- The driveways and sidewalks would also prevent changing the horizontal or vertical alignment of the highway, which would result in an effective noise abatement.

- Acquiring buffer zones is not feasible because the nearby properties are already developed and contain residents.

Figure 2-3 Area A, Short-term Noise Monitoring and Modeling Locations



Avoidance, Minimization, and/or Noise Abatement Measures

It was predicted that location R-2 would experience an increase in noise levels as a result of the project. Though abatement measures were evaluated for location R-2, it was determined that no feasible and effective abatement measure was possible for this location.

It was predicted that locations R-3, R-4, and R-5 would experience an increase in noise levels with or without the project. Though abatement measures were considered, there were no feasible measures that could provide an effective noise abatement for these locations.

Measures to address temporary noise impacts caused by project construction are discussed in Section 2.4, Construction Impacts.

2.3 Biological Environment

2.3.1 Natural Communities

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

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

Affected Environment

The information used in this section is based on the Natural Environment Study that was completed for the project on November 22, 2019.

The project's Biological Study Area occurs in a partially developed urban/agricultural area. The Biological Study Area is made up of State Route 1, the surrounding state right-of-way, and private lands in San Luis Obispo County and Santa Barbara County. The Santa Maria River is largely undeveloped and makes up most of the Biological Study Area. The southern end of the Biological Study Area is in the city of Guadalupe. The area contains ranches, storefronts, and homes, and extends through the Santa Maria River and ends in agricultural fields north of the Santa Maria River Bridge. The entire Biological Study Area occurs within the Santa Maria River watershed.

The topography in the Biological Study Area is relatively flat with no major changes in elevation.

The dominant vegetation within the Biological Study Area outside of the Santa Maria River can be characterized as developed or agricultural land, or an area that is regularly disturbed by human activities such as farming, ranching, or urban development. Plant communities are made up of mostly non-native species, including non-native grasses. Ruderal habitat, made up of common weedy species that grow on highly disturbed soils, occurs in the right-of-way along State Route 1 and on the outer edges of the riparian habitat. Common species found onsite from this community include slender wild oat *(Avena barbata),* several species of brome *(Bromus diandrus, Bromus madritensis, Bromus hordeaceus),* pineapple weed (*Matricaria discoidea*), and Russian thistle *(Salsola tragus).*

Within the Santa Maria River channel itself, the vegetation consists of 40-50 percent of species that are common in non-beach sandy areas and 50-60 percent mule fat scrub. The mule fat scrub alliance is a shrub-dominated community with about 50 percent mule fat *(Baccharis salicifolia)* cover and a sparse herbaceous layer. This habitat is typical of floodplains and stream channels, and accurately represents the river's wide braided channel system. Other shrubs found in this community of the Biological Study Area include California sagebrush *(Artemisia californica),* coyote bush *(Baccharis pilularis),* dune bush lupine *(Lupinus chamissonis),* black sage *(Salvia mellifera),* and blue elderberry *(Sambucus nigra ssp. Caerulea).* Many native and exotic herbaceous species occur in the understory, including fiddleneck *(Amsinckia),* California primrose (*Oenothera californica ssp. californica*), lamb's quarters *(Chenopodium album),* California croton (*Croton californicus*), Canadian horseweed *(Erigeron canadensis),* stinging nettle *(Urtica dioica),* and sticky phacelia *(Phacelia viscida var. viscida).*

A willow thicket occurs next to the river channel and extends to meet the developed and agricultural land. The dominant species is arroyo willow *(Salix lasiolepis),* but a few other species of willow were documented within the Biological Study Area including red willow *(Salix laevigata)* and sandbar willow (*Salix exigua var. hindsiana*). There is no persistent understory, but some fennel *(Foeniculum vulgare)* exists in the understory near the edges of the riparian area, as well as native and non-native grasses and herbs.

Habitat Connectivity

The Santa Maria River is a seasonably dry, vegetated riverbed that connects the Los Padres Mountains to the Pacific Ocean. Because the river provides miles of connected habitat through a highly developed area, it likely serves as a wildlife corridor for a variety of species. Birds and bats use the bridge structure and riparian forest that borders the river to forage on the insects in the river channel. Small-to-medium-sized mammals are prevalent in the riverbed because it provides continuous habitat and sandy friable soils for them to burrow, forage, and disperse. Amphibians in the area rely on the wet riverbed and surrounding agricultural ditches to breed, forage, and disperse and therefore are likely to move through the riverbed year-round.

On a larger level, the Santa Maria River lies between two large natural land block areas: the Sierra Madre Mountains and the Casmalia Hills. The river is surrounded by developed agricultural lands and urban environments, making it an important corridor for wildlife moving or dispersing between the two land blocks. Agricultural fields are often tilled, mowed, and picked, which make them poor lands for wildlife dispersal. Urban landscapes do not provide enough cover or natural forage for wildlife dispersal. The Santa Maria River provides a wildlife corridor on a local and regional scale.

Environmental Consequences

About 1.4 acres of permanent impacts would occur in unpaved ruderal/disturbed areas where the new State Route 1 alignment would be shifted onto.

Permanent impacts would also occur at each of the new bridge pier locations. However, the new bridge structure would require 12 pier structures and would remove the existing 23 pier walls, which would result in a net gain of streambed habitat. Also, due to the highway realignment, there are areas of the existing road that would no longer be a part of the new highway. These areas would be restored and landscaped within state right-of-way, totaling about 0.5 acre. The restored area and the net gain of streambed habitat is subtracted from the total new areas of permanent impacts.

Temporary impacts include equipment staging areas, access roads, and work areas that are needed to build the new bridge and remove the existing bridge. These impacts would include tree and vegetation removal, grading, compaction by construction equipment, and foot traffic that would be required to build the new bridge. About 6.4 acres of temporary impacts would occur along the east and west sides of the highway, the areas that surround the existing and proposed Santa Maria River Bridge, and access roads on the northeast and southwest sides of the bridge.

Habitat Connectivity

Habitat connectivity along the Santa Maria River within the Biological Study Area could be temporarily disrupted during construction activities. The new bridge structure would have longer spans and longer gaps between each individual pier structure, which means there would be larger gaps between permanent structures than what exists now. These design features would result in a more open area and provide improved habitat conditions for migrating species. During project construction, measures would be implemented to avoid impacts to migrating steelhead species that use the river for migration, as discussed in Section 2.3.2, Wetlands and Other Waters.

Avoidance, Minimization, and/or Mitigation Measures

The proposed measures would be implemented to avoid and minimize potential project impacts to natural communities.

Also, measures described in Section 2.3.2, Wetlands and Other Waters would avoid and minimize potential impacts on natural communities caused by project activities.

1) Temporary environmental sensitive area fencing and/or flagging would be installed on the perimeter of the project area to prevent potential impacts on natural communities outside of the project area.
2) At the end of project construction, all areas temporarily impacted by project activities would be revegetated through erosion control seedings along the roadside and replacement tree plantings in the riparian zone.
3) All areas temporarily impacted by project activities would be returned to their original grade and contour after construction.

2.3.2 Wetlands and Other Waters

Regulatory Setting

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

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

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

in nature and cause minimal environmental effects. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

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

The executive order for the Protection of Wetlands (Executive Order 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, Executive Order 11990 states that a federal agency, such as 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. A Wetlands Only Practicable Alternative Finding must be made.

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

The Regional Water Quality Control Boards were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the

Porter-Cologne Act are permitted by Water Discharge Requirements and may be required even when the discharge is already permitted or exempt under the Clean Water Act. Through the Porter-Cologne Water Quality Control Act, the Regional Water Quality Control Board asserts jurisdiction over waters of the state of California, which is generally the same as waters of the U.S. but may also include isolated waterbodies. The Porter-Cologne Act defines waters of the state of California as "surface water or groundwater, including saline waters, within the boundaries of the state." In compliance with Section 401 of the Clean Water Act, the Regional Water Quality Control Boards also issue water quality certifications for activities that 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

The information used in this section is based on the Natural Environment Study completed for this project on November 22, 2019.

An assessment and delineation of potentially jurisdictional areas were conducted within the Biological Study Area by Caltrans biologists on August 30, 2018, during the dry season.

For most of the months leading up to field work, precipitation levels were average. No wetlands were found during the survey of the Biological Study Area. Delineated potential jurisdictional areas (wetland and riparian) within the Biological Study Area are shown in Appendix D. A total of 3.18 acres of the U.S. Army Corps of Engineers jurisdictional area, 12.57 acres of the Regional Water Quality Control Board jurisdictional area, and 12.57 acres of California Department of Fish and Wildlife jurisdictional area were delineated within the Biological Study Area. These findings may be subject to final verification by the respective agencies.

Environmental Consequences

Impacts on jurisdictional areas within the project area are necessary to provide access to the Santa Maria River Bridge during project construction. The project would require temporary construction access to riparian areas, unvegetated streambanks, and streambeds. Temporary impacts would include tree and vegetation removal, clearing and grubbing, ground compaction, and disturbance.

The existing Santa Maria River Bridge is supported by 23 pier walls that measure 15.67 feet long and 1.67 feet wide. Each pier wall footprint measures about 26.16 square feet for a total of 601.88 square feet of existing permanent pier structures in the Biological Study Area. The new bridge would be supported by 12 sets of three piers that are each 4 feet in diameter, which is equivalent to 453 square feet of permanent pier structure in the Biological Study Area. This is a reduction of about 148.88 square feet of permanent impacts, which would cause a net gain of streambed habitat.

The project footprint would avoid all wetlands, and impacts would be restricted to the riparian area, streambed, and streambank of the Santa Maria River that is right next to the highway bridge.

Work in jurisdictional areas would occur during the dry season for two consecutive years when the Santa Maria River is unlikely to be flowing. Because no work would occur when the river is flowing, there would be no negative impacts on water quality.

Avoidance, Minimization, and/or Mitigation Measures

The following measures would be implemented to avoid and minimize the project's potential impacts on jurisdictional areas:

1) Before any ground-disturbing activities, temporary environmentally sensitive area fencing and/or flagging would be installed around wetland resources within the project limits to ensure that these areas are not impacted by project activities. The location of environmentally sensitive area fencing and/or flagging would be included on design plans and delineated in the field before construction starts.

2) During construction, all project-related hazardous material spills within the project site would be cleaned up immediately. The contractor would keep spill prevention and cleanup materials readily accessible onsite at all times during construction.

3) During construction, cleaning and refueling equipment and vehicles would occur only within a designated staging area. This area would either be a minimum of 100 feet from jurisdictional areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas would conform to Caltrans' Construction Site Best Management Practices.

4) Each season after construction has been completed in jurisdictional areas, contours would be restored as close as possible to their original condition.

5) All trees removed would be replaced at a 1 to 1 ratio or 3 to 1 ratio depending on their species and size.

6) Vegetated streambanks disturbed by project activities would be revegetated with a native seed mix that consists of the existing natural community type. However, they would not be monitored for success because river flows could potentially disturb the streambanks as part of the natural geomorphic process that is typical of this type of river system.

2.3.3 Plant Species

Regulatory Setting

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

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

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

Affected Environment

The information used in this section is based on the Natural Environment Study that was completed for the project on November 22, 2019.

Caltrans biologists conducted botanical surveys on May 7, 2018 and June 27, 2018. The surveys were floristic in nature and were conducted when target species were flowering and identifiable.

A query of California Natural Diversity Database documents for special-status plant taxa, the official U.S. Fish and Wildlife Service species list for the project area, and the California Native Plant Society Rare Plant Inventory was made to identify special-status plant species within the Biological Study Area.

Potential habitat occurs within the Biological Study Area for the following special-status plant species: La Graciosa thistle *(Cirsium loncholepis)* and black-flowered figwort *(Scrophularia atrata).*

No special-status plant species were seen during appropriately timed surveys.

Because of its threatened and/or endangered status, the La Graciosa thistle is discussed in Section 2.3.5, Threatened and Endangered Species.

Environmental Consequences

Though suitable habitat for the black-flowered figwort occurs in the Biological Study Area, no plants were found during appropriately timed field surveys.

No special-status plant species were seen, and none are expected to occur within the project area. Therefore, the project is not expected to affect any special-status plant species.

Based on a lack of suitable habitat and no observations during appropriately timed floristic surveys, the Federal Endangered Species Act Section 7 effects determination is that the project would not affect the following federally listed plant species: Gambel's watercress *(Rorippa gambelii),* marsh sandwort *(Arenaria paludicola),* salt marsh bird's beak *(Cordylanthus maritimus ssp. maritimus),* spreading navarretia *(Navarretia fossalis),* Gaviota tarplant *(Deinandra increscens),* Pismo clarkia *(Clarkia speciosa ssp. immaculata),* Lompoc yerba santa *(Eriodictyon capitatum),* beach layia *(Layia carnosa),* and Nipomo mesa lupine *(Lupinus nipomensis).* There would be no effect on designated critical habitats for these federally listed plant species.

Avoidance, Minimization, and/or Mitigation Measures

The project is not expected to impact any plant species. No avoidance, minimization, or mitigation measures are required for plant species.

2.3.4 Animal Species

Regulatory Setting

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

Federal laws and regulations pertaining to wildlife include the following:

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

State laws and regulations pertaining to wildlife include the following:

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

Affected Environment

The information used in this section is based on the Natural Environment Study that was completed for the project on November 22, 2019.

A query of California Natural Diversity Database documents for special-status animal species—federally listed, state listed, California Fully Protected Species, California Species of Special Concern, and/or protected by the Migratory Bird Treaty Act and California Fish and Game Code—and the official U.S. Fish and Wildlife Service species list for the project area was made to identify special-status animal species within the Biological Study Area.

In addition, numerous species of nesting birds that do not appear in the California Natural Diversity Database or U.S. Fish and Wildlife Service species list were included for consideration based on the presence of suitable habitat. Such species have the potential to occur in the Biological Study Area and are protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503. The "roosting bats" category was added for the various species of bats that are known to roost in bridges and are protected by the California Environmental Quality Act.

The Biological Study Area includes potential habitat for the following special-status animal species: California tiger salamander *(Ambystoma californiense),* California red-legged frog *(Rana draytonii),* Northern California legless lizard *(Anniella pulchra),* Coast horned lizard *(Phrynosoma blainvillii),* southwestern willow flycatcher *(Empidonax traillii extimus),* Least Bell's vireo (*Vireo bellii pusillus*), burrowing owl *(Athene cunicularia),* Swainson's hawk *(Buteo swainsoni),* pallid bat *(Antrozous pallidus),* western red bat *(Lasiurus blossevillii),* Townsend's big-eared bat *(Corynorhinus townsendii),* American badger *(Taxidea taxus),* South-Central Coast California steelhead Distinct Population Segment (*Oncorhynchus mykiss*), and Southern California steelhead Distinct Population Segment (*Oncorhynchus mykiss*).

Due to their threatened and/or endangered status, the following animal species are discussed in Section 2.3.5 Threatened and Endangered Species: California tiger salamander, California red-legged frog, southwestern willow flycatcher, Least Bell's vireo, burrowing owl, Swainson's hawk, South-Central Coast California steelhead Distinct Population Segment, and Southern California steelhead Distinct Population Segment.

Bats

Multiple bat species may use the Santa Maria River Bridge for night roosting, including the pallid bat, western red bat, and Townsend's big-eared bat. The Santa

Maria River Bridge was evaluated as the only structure capable of providing habitat for roosting bats within the Biological Study Area. Evidence of night roosting was seen under most of the bridge spans in corners where the bridge deck meets the pier walls. Dark stains and bat droppings were found in most corners of the bridge spans, showing that much of the bridge structure can support night roosting by bats. During wildlife surveys, no bats were seen roosting during the day. No cracks or crevices suitable for day roosting were found. Based on these surveys, it is inferred that the Santa Maria River Bridge serves as a night roosting structure for bats using the Santa Maria River to forage.

American Badger

The American badger is a California Department of Fish and Wildlife-designated Species of Special Concern. Most of the Biological Study Area has friable soils and supports foraging and burrowing habitat for the American badger. There is also the potential for an American badger to enter the Biological Study Area due to the transitory nature of the species.

While no American badgers were found during multiple survey visits to the Biological Study Area, the species typically stays inside its den for most of the day. Portions of the Biological Study Area have friable soils, especially in the riverbed of the Santa Maria River, so habitat to support the species exists onsite. Also, the scour wall along the southern ordinary high-water mark of the Santa Maria River has some medium-to-large den entrances that are the appropriate size and shape for an American badger.

The Biological Study Area provides suitable foraging habitat for the American badger; it also provides habitat to support several small reptile, rodent, and insect communities. Due to the American badger's transitory nature, there is also the potential for the badger to use the Santa Maria River as a movement corridor to cross through the Biological Study Area.

Coast Horned Lizard and Northern California Legless Lizard

These California Department of Fish and Wildlife-listed Species of Special Concern are discussed together because they have similar habitat requirements and because the project has similar potential impacts to both species.

Coast horned lizards can be found in areas with an exposed gravelly sandy substrate with scattered shrubs, clearings in riparian woodlands, dry uniform chaparral, and annual grasslands. Meanwhile, Northern California legless lizards are found in coastal dunes, valley-foothills, chaparral, and coastal scrub habitats.

All of the general wildlife surveys were done during warm, dry weather when California horned lizards are normally active above ground. While suitable habitat occurs in the Biological Study Area for both species, neither one was found during general wildlife surveys. Though no individuals were found during surveys, both species are known to burrow under the surface of sandy soil or leaf litter. Also, the

sandy river bottom in the Biological Study Area provides suitable habitat for the Coast horned lizard, so presence of this species cannot be ruled out.

Nesting Birds

The list of birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503 is extensive, and not all birds that are protected by these laws are included in the Natural Environment Study. Numerous nesting bird species that are protected by these two regulatory laws have the potential to nest in habitats within the Biological Study Area.

Environmental Consequences

Bats

Removing the bridge would cause a temporary loss of night roosting habitat for bats until the new structure is completed. However, the proposed construction schedule would allow the new bridge to be partially built before the existing bridge is demolished. This would ensure that new night roosting habitat would be in place before the existing habitat is removed. Additional artificial bat-roosting structures would be added to the new Santa Maria River Bridge to promote and improve bat roosting on the new bridge structure.

American Badger

While the project is not expected to have a direct or indirect impact on the American badger, excavation within the project area has the potential to kill, injure, or displace animals that may be present. Ground-disturbing activities may cause dust and vibrations, which could temporarily discourage foraging or traveling American badgers from entering the Biological Study Area.

Coast Horned Lizard and Northern California Legless Lizard

While the project is not expected to adversely impact these species, excavation activities within the project area could kill, injure, or displace burrowing animals that may be present. Environmentally sensitive area fencing may temporarily block animals that use the Santa Maria River as a wildlife corridor during construction. Project activities may indirectly impact both of these species by temporarily reducing potential foraging or burrowing habitat areas. Indirect impacts from increased dust levels, vibration, and noise may also discourage these species from living or foraging in the Biological Study Area and force them to venture away.

Nesting Birds

Estimated impacts on potential nesting habitat throughout the Biological Study Area include riparian, vegetated, and non-vegetated streambank communities. Temporary construction access would cause most of the temporary impacts on potential nesting habitat. Removing vegetation, including riparian trees, could directly impact active bird nests and any eggs or young birds living in nests, but only if vegetation is removed during the nesting bird season, from February 1 to August 31. The understory vegetation that surrounds impacted trees would also be removed, which could disturb prey such as insects, small mammals, and reptiles. Removing potential

nesting trees for two consecutive work seasons would temporarily reduce the availability of nesting and roosting habitat. However, the extent of the riverbed for miles upstream and downstream of the Biological Study Area is bordered by riparian trees that could support any displaced bird species. Noise and dust associated with construction could also cause indirect impacts. Noises created by large construction equipment could change perching, foraging, and/or nesting behaviors. Dust could disturb air quality, reduce sight visibility, and hide potential prey. While the temporary loss of vegetation that supports potential nesting habitat would occur, trees would be mitigated through onsite replacement plantings. Implementing avoidance and minimization measures such as appropriately timing vegetation removal, conducting pre-activity surveys, and installing exclusion zones would reduce the potential for adverse effects to nesting bird species.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measure would be implemented to protect animal species from project-related impacts:

1) Before starting stream dewatering, Caltrans staff would conduct a worker environmental training program, which would describe special-status species, their legal/protected status, their proximity to the project site, and avoidance/minimization measures to be implemented during the project.

Bats

The following measures apply to all bats that are protected by the California Department of Fish and Wildlife or under the California Environmental Quality Act and are intended to avoid impacts on night-roosting bats that may use the Santa Maria River Bridge:

2) No night work would occur during construction to avoid impacting or harming bats that may use the new or existing Santa Maria River Bridge.
3) Specific day and night artificial bat roosting habitat and/or structures would be added to the new bridge structure. Day roosting habitat such as wedges and small crevices that are just big enough for roosting bats would be provided on the new bridge. Additionally, wooden bat boxes would be installed underneath the northern span of the new bridge. These bat boxes would provide a windbreak and thermal buffer for bats roosting at night.

American Badger

The following measures are intended to avoid impacts on the American badger:

4) A pre-construction survey would be conducted for the American badger no less than 14 days and no more than 30 days before starting construction or project-related activities that are likely to impact the species. The survey would identify American badger habitat features on the project site, evaluate American badgers' activities and, if possible, assess the potential impacts on the American badger by proposed activities. The status of all dens should be determined and mapped.

Known dens, if found occurring within the footprint of the activity, would be monitored for three days to determine the current use. If no American badger activity is seen during this period, the dens would be destroyed immediately to prevent future use. If American badger activity is seen at the dens during this period, the dens would be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the dens are determined to be unoccupied would they be excavated under the direction of a biologist.

5) If the pre-construction survey reveals an active den or new information regarding American badger presence within the area of potential impact, Caltrans would notify the California Department of Fish and Wildlife.

6) Before groundbreaking, a qualified biologist would conduct an environmental education and training session for all construction personnel. Before, during, and after the site-disturbance and/or construction phase, use of pesticides or herbicides should be in compliance with all federal, state, and local regulations. No rodent control pesticides would be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and difenacoum. This is necessary to minimize the possibility of primary or secondary poisoning of American badgers or other special-status species.

7) Project employees would be directed to exercise caution when driving within the project area. A 20-mile-per-hour speed limit would be strongly encouraged within the project site. Construction activity would be restricted within the project site.

8) A litter control program would be established at each project site. No canine or feline pets or firearms—except for those associated with law enforcement officers and security personnel—would be allowed on construction sites to avoid harassing, killing, or injuring American badgers.

9) Maintenance and construction excavations that are more than 2 feet deep would be covered (e.g., with plywood, sturdy plastic, steel plates, or equivalent), filled in at the end of each working day, or have escape ramps no greater than 200 feet apart to prevent trapping American badgers.

Coast Horned Lizard and Northern California Legless Lizard

The following measures are intended to avoid impacts on the Coast horned lizard and Northern California legless lizard:

10) A Caltrans biologist would monitor initial excavation and vegetation removal.

11) Coast horned lizards, Northern California legless lizards, or any species (excluding state or federally listed species) that are discovered during monitoring would be captured by a Caltrans biologist and relocated to suitable habitat that is outside of the area of potential impact. Observations of Species of Special Concern or other special-status species would be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion.

12) Pre-construction surveys would be conducted within 14 days of construction. Caltrans biologists would place plywood boards around the bridge to attract Northern California legless lizards. If Northern California legless lizards are found during these checks, they would be relocated outside the construction area.

Nesting Birds

Avoidance and minimization measures listed for jurisdictional areas would also apply to all bird nesting habitat impacted by the project. The following additional measures would also apply to all birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503:

13) To avoid potential impacts on nesting birds, vegetation removal for the project would be scheduled to occur outside of the nesting bird season, which is typically from September 1 to January 31.

14) If vegetation removal or other construction activities are proposed to occur during the nesting bird season (February 1 to August 31), a Caltrans biologist would conduct a nesting bird survey no more than three days before construction.

15) During construction, active bird nests would not be disturbed, and eggs or young birds of native migratory birds that are covered would not be killed, destroyed, injured, or harassed at any time. Environmentally sensitive area designations would be in place where nests must be avoided. A qualified biologist would establish environmentally sensitive areas. Depending on the sensitivity of the species in question, work in environmentally sensitive area zones would occur only under the supervision of a biological monitor until young birds have fledged (permanently left the nest) or a qualified biologist has determined that nesting activity has otherwise stopped.

16) Trees that must be removed would be noted on design plans. Before starting any ground-disturbing activities, high visibility fencing, or flagging would be installed around the dripline of trees within the project limits.

17) No rodent control pesticides would be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and difenacoum. This is a necessary precaution to avoid secondary poisoning to raptors that hunt and feed on rodents and other small animals.

2.3.5 Threatened and Endangered Species

Regulatory Setting

The main federal law protecting threatened and endangered species is the Federal Endangered Species Act (16 U.S. Code Section 1531, et seq.; see also 50 Code of Federal Regulations Part 402). This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration, are required to consult with the U.S. Fish and

Wildlife Service and National Marine Fisheries Service to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species.

The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of the Federal Endangered Species Act defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (California Fish and Game Code Section 2050, et seq.). The California Endangered Species Act emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife is the agency responsible for implementing the California Endangered Species Act. California Fish and Game Code Section 2081 prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in California Fish and Game Code Section 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

The California Endangered Species Act allows for take incidental to otherwise lawful development projects; for these actions, an Incidental Take permit is issued by the California Department of Fish and Wildlife. For species listed under both the Federal Endangered Species Act and the California Endangered Species Act requiring a Biological Opinion under Section 7 of the Federal Endangered Species Act, the California Department of Fish and Wildlife may also authorize impacts to the California Endangered Species Act species by issuing a Consistency Determination under California Fish and Game Code Section 2080.1.

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

Affected Environment

The information used in this section is based on the project's Natural Environment Study prepared on November 22, 2019.

La Graciosa Thistle

The La Graciosa thistle was not found during surveys within the Biological Study Area, though there is a low possibility of occurrence. Federally designated critical habitat for the La Graciosa thistle occurs within part of the Biological Study Area that is encompassed by the Santa Maria River and next to riparian areas. Outside these areas, the primary constituent elements for the La Graciosa thistle are absent. The developed urban and agricultural areas north and south of the river lack the primary constituent elements required for La Graciosa thistle habitat.

Southern California Steelhead Critical Habitat

The Biological Study Area falls within designated critical habitat for the Southern California steelhead. The Biological Study Area could provide freshwater migration corridors during periods of high rainfall and increased downstream flow when adults are migrating upstream. The Biological Study Area could also provide migration corridors for juveniles as they make their way from spawning sites upstream back to the Pacific Ocean. Flows in the Santa Maria River are controlled mostly by the Twitchell Dam, so the river channel is dry much of the year. The streambed in the Biological Study Area is dry most of the year, so the primary constituent elements for the Southern California steelhead are only met during heavy rains or when the dam releases sufficient water. During all surveys, the Santa Maria River was dry in the entire Biological Study Area and surrounding area.

Southern and South-Central Coast California Steelhead

The Southern California Coast is the southernmost portion of the native steelhead range in North America. Because the steelhead in this region have adapted to seasonal flows following rains, they can use intermittent streams such as the Santa Maria River. Because of the Twitchell Dam, the Santa Maria River is dry unless water is released from the Twitchell Reservoir through the dam. When the Santa Maria River is dry, there is no connectivity from the Cuyama River and Sisquoc River to the Pacific Ocean, so steelhead migratory pathways are blocked. Specific surveys for steelheads were not performed for this project because the Santa Maria River is dry for most of the year, and water was not present during any surveys. The Twitchell Dam and the Santa Maria River are not expected to have any surface flows during the dry season, so no migrating steelheads would be present during project construction. Juvenile and adult steelheads may be present during annual water releases from the Twitchell Reservoir or during a series of very heavy precipitation events outside the working season.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Swainson's Hawk

These three federally protected nesting bird species are addressed as a group because suitable habitat is present within the Biological Study Area, and they have similar habitat requirements.

The southwestern willow flycatcher is a federally endangered species that nests and forages almost exclusively in dense riparian vegetation with standing water or saturated soil.

The Least Bell's vireo is a state and federally endangered species that lives on the Southern California coast during the summer. The species occurs in low riparian areas near water or in dry river bottoms.

The Swainson's hawk is a state and federally protected raptor; the California Department of Fish and Wildlife classifies it as a Fully Protected Species. The species breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands. The Swainson's hawk prefers to nest in solitary trees or trees that are part of small riparian groves next to streams and rivers.

No Swainson's hawks, southwestern willow flycatchers, or Least Bell's vireos were seen during field surveys in the Biological Study Area. Species-specific surveys were not conducted.

The riparian zone in the Biological Study Area consists mostly of mature arroyo willow with a ruderal understory dominated by hemlock and non-native grasses. This could provide roosting habitat for Swainson's hawks and other raptors. The riparian zone serves as marginal habitat for birds such as the southwestern willow flycatcher and Least Bell's vireo. Both bird species prefer earlier successional stages in the riparian zone, which is lacking within the Biological Study Area.

California Tiger Salamander

The California tiger salamander is federally listed as an endangered species and a state threatened species. California tiger salamander habitat includes a variety of areas, including aquatic, riparian, and upland habitats. This species requires seasonal water for breeding and small mammal burrows, crevices in logs, piles of lumber, and cracks in the ground for refuge.

The nearest known occurrence of the California tiger salamander is about 4.5 miles south of the project and south of the city of Guadalupe. Given the distance from known breeding ponds and the fact that the city of Guadalupe acts as a dispersal barrier, a California tiger salamander appearing in the Biological Study Area is highly unlikely.

California Red-Legged Frog

The California red-legged frog is federally listed as a threatened species and a state Species of Special Concern. Currently, Monterey County, San Luis Obispo County, and Santa Barbara County support the largest remaining California red-legged frog populations within California. California red-legged frog habitat includes a variety of areas, including aquatic, riparian, and upland habitats. This species prefers aquatic habitats with waters that exhibit little or no flow.

Protocol-level surveys were not done for the California red-legged frog for this project because its presence was inferred based on local records and suitable habitat in and next to the project area. Formal habitat assessments were made and

submitted to the U.S. Fish and Wildlife Service for review. The species was not found during habitat assessment surveys.

Habitat assessment surveys were done in October after the first rain of the fall season, which did not provide enough water to fill the agricultural ditches in the Biological Study Area. The agricultural ditches are the only water features that could provide standing water deep and still enough for California red-legged frogs. Suitable breeding habitat is found throughout the agricultural ditches bordering the Caltrans right-of-way and the agricultural fields. The Santa Maria River habitat does not hold water long or consistently enough to provide breeding habitat, but suitable dispersal habitat is found in nearby riparian habitats.

The nearest California Natural Diversity Database record of the California red-legged frog is 1.6 miles south of the project area, where two adult California red-legged frogs were found in 2005. Also, 28 adults and 15 juveniles were found during the survey season of 2002 in an agricultural ditch about 2.5 miles north of the Biological Study Area. There are also several occurrences of California red-legged frogs within the Santa Maria River and nearby agricultural ditches about 3 to 10 miles upstream of the Biological Study Area.

Environmental Consequences

La Graciosa Thistle

The project is expected to have little or no effect on the La Graciosa thistle because there is a low probability of the species occurring within the project limits and no La Graciosa thistle is expected to be found when project construction starts.

The Federal Endangered Species Act Section 7 effects determination is that the project would not affect the La Graciosa thistle.

The project would temporarily affect up to 1.63 acres of designated La Graciosa thistle critical habitat within the Santa Maria River and the surrounding riparian area. However, the whole area does not provide the required primary constituent elements necessary to meet the definition of critical habitat for the La Graciosa thistle. Areas that are highly developed by ranching, agriculture, and urban housing are only marginal critical habitat because they do not meet all of the requirements. Also, designated critical habitat for the La Graciosa thistle in California totals about 24,133 acres. The 1.63 acres that the project may affect represent less than 0.001 percent of the total designated critical habitat for this species.

Vegetation removal and grading would temporarily impact the primary constituent elements for La Graciosa thistle critical habitat. Soils that could support critical habitat could be removed or compacted during construction activities. However, all impacts on La Graciosa thistle critical habitat are temporary. The site would be restored to provide better habitat conditions than what are currently found. Trees would be replanted at a 1 to 1 ratio or a 3 to 1 ratio, native seeds would be used to replace existing non-native and invasive species, and the ground would be

recontoured to its original grade. Critical habitat would be left in a better condition than what currently exists, following construction and revegetation.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect and is likely to adversely affect La Graciosa thistle critical habitat. The extent and effects of temporary disturbances are estimated to be low because the area is less than 0.001 percent of the total La Graciosa thistle critical habitat. Avoidance and minimization measures would be in place during project construction to protect critical habitat, including revegetating critical habitat that is disturbed by project activities.

Southern California Steelhead Critical Habitat

The project would temporarily impact an estimated 1.20 acres of critical habitat for the Southern California steelhead. Because the presence of primary constituent elements in the Biological Study Area depends on rains and whether water is released from Twitchell Dam, the estimated impacts on Southern California steelhead critical habitat match the ordinary High-Water Mark measurement of the Santa Maria River.

The project would not cause long-term effects on Southern California steelhead critical habitat. The bridge replacement would cause a net reduction of permanent human-made structures in the streambed by about 148.88 square feet. The new bridge structure would have longer spans between sets of pier structures and longer gaps between each pier structure, which means there would be larger gaps between permanent structures than there are now. These design features would provide more open habitat for migrating Southern California steelhead.

Implementing the project would also cause temporary impacts on dry streambed habitat. Moving equipment into the stream channel, building the new bridge, and demolishing the existing bridge would be performed while the Santa Maria River is dry to avoid impacts on migrating Southern California steelhead. Work on the bridge deck would occur when the Santa Maria River is flowing, but no in-channel work would occur in Southern California steelhead critical habitat. Also, any impacts on Southern California steelhead critical habitat during the dry season would be minimized through the implementation of avoidance and minimization measures.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect but is not likely to adversely affect Southern California steelhead critical habitat. The placement of new bridge structures before the removal of existing bridge structures in the Santa Maria River channel could cause a temporary change of habitat for Southern California steelheads during the wet season. The extent and effects of this are estimated to be low because the requirements for fish passage would be maintained during times when the river is flowing, and no work would occur when the Santa Maria River is flowing. Consultation with the National Marine Fisheries Service would be required for temporary effects on Southern California steelhead critical habitat that would cause a net gain of habitat.

Southern and South-Central Coast California Steelhead

The project does not have the potential to take any Southern California steelhead because all in-stream work would occur when the Santa Maria River is dry and free from aquatic species. The project has been designed to completely avoid work during the wet season when fish could be present. Water quality would not be affected because all work in the river channel would occur when water is not present.

During the wet season, the new bridge would be partially built, but the old bridge would not be demolished. Migrating Southern California steelhead may experience a temporary decrease in habitat area during this period, but the amount of habitat reduced by the new pier structures would be very small.

Following construction, Southern California steelhead would benefit from a reduction in permanent structures in the water. Because the new bridge would have a smaller pier footprint and longer bridge spans between pier structures, migrating Southern California steelhead would have fewer passage impediments in the Biological Study Area.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect but is not likely to adversely affect Southern California and South-Central California Coast steelheads. The basis for this determination is that steelhead presence has been inferred (based on the best available information), but there would be no expected take of an individual because all in-channel work would occur when the Santa Maria River is dry. Consultation with the National Marine Fisheries Service would be required.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Swainson's Hawk

As discussed in Section 2.3.4, Animal Species, impacts to these bird species would be related to the removal of vegetation that could directly impact active bird nests and any eggs or young birds living in nests, but only if vegetation is removed during the nesting bird season (February 1 to August 31). Indirect impacts could also result from noise and dust associated with construction.

While the temporary loss of vegetation that supports potential nesting habitat would occur, trees would be mitigated through onsite replacement plantings.

The Federal Endangered Species Act Section 7 effects determination is that the project would not affect the southwestern willow flycatcher and Least Bell's vireo. Although Swainson's hawks have historically been noted within the Biological Study Area, the last sighting was recorded in 1896. The project is not expected to result in take of any state listed species, as defined by the California Endangered Species Act and, therefore, would not require a 2081 Incidental Take permit.

California Tiger Salamander

No California tiger salamanders were found in the Biological Study Area during appropriately timed surveys. No California tiger salamanders are expected to be

found within the project area during project construction because dispersal barriers would keep them from entering the work area. No avoidance, minimization, or mitigation measures are expected for the California tiger salamander.

The Federal Endangered Species Act Section 7 effects determination is that the project would not affect and would have no take of California tiger salamanders. The basis of this determination is based on the fact that the city of Guadalupe would act as a dispersal barrier for the nearest known species to occur south of the project area.

California Red-Legged Frog

Though California red-legged frogs were not found during habitat assessment surveys of the project area, they are expected to be present due to the presence of potentially suitable habitat conditions.

Building the access road and the new Santa Maria River Bridge could potentially cause direct impacts through the temporary removal of upland and aquatic habitat, as well as injuring or killing California red-legged frogs.

The potential need to capture and relocate California red-legged frogs would subject these animals to stresses that could result in adverse effects. Injury or death could occur via accidental crushing by worker foot-traffic or construction equipment.

Indirect effects could also occur from temporarily removing habitat, and noise and vibrations from construction equipment. The temporary reduction and fragmentation of upland dispersal habitat and aquatic breeding habitat could provoke California red-legged frogs—that typically use the Biological Study Area for breeding—to travel farther to find suitable aquatic or upland habitat. Lastly, California red-legged frogs could be flushed from the Biological Study Area because of noises and ground tremors caused by moving trucks and construction equipment.

Though the above impacts could occur, habitat fragmentation and temporary disturbances are unlikely to have a negative influence on the population as a whole. The Biological Study Area is surrounded by continuous streambed and riparian habitat for several miles to the east and west, so the proposed project is not expected to cause a strain on local populations in search of suitable nearby upland or temporary aquatic habitat. Also, the Biological Study Area is surrounded by agricultural fields that provide a large network of agricultural ditches that could provide marginal breeding habitat. Any individuals temporarily displaced from the Biological Study Area would not need to travel far to find suitable habitat. No work would occur in the wetted streambank to avoid impacting California red-legged frogs when they are most likely to be present in the Santa Maria River.

The Federal Endangered Species Act Section 7 effects determination is that the project may affect and is likely to adversely affect the California red-legged frog. The basis for this determination is that presence of the California red-legged frog has been inferred in the entire Biological Study Area, including construction areas. There

is also a potential for take of the species during construction. Formal consultation with the U.S. Fish and Wildlife Service would be required. It is expected that a Programmatic Biological Opinion would be obtained for potential impacts to California red-legged frogs.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance, minimization, and/or mitigation measures would be implemented to protect special-status species from project-related impacts:

La Graciosa Thistle Federally Designated Critical Habitat

The avoidance and minimization measures discussed in Section 2.3.2, Wetlands and Other Waters are also applicable to federally designated critical habitat for the La Graciosa thistle. Also, the following measures are proposed to further mitigate potential impacts on critical habitat:

1) To preserve as much seed bank as feasible, the first 6 inches of topsoil would be stockpiled and preserved before construction and would be returned to the Santa Maria River and the associated riparian zone after construction work is complete.
2) The Biological Study Area would be seeded with an appropriate native seed mix to enhance and restore La Graciosa thistle critical habitat.

Southern California Steelhead Critical Habitat

The following measures would be implemented to avoid and minimize potential adverse impacts on Southern California steelhead critical habitat:

3) Before construction starts, a qualified biologist would conduct a worker environmental training program that would include a description of protected species and habitats, their 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 other relevant permit conditions.
4) During construction, in-stream work would be limited from June 15 through October 31, when the creek is dry. Deviations from this work window would be made only with concurrence from regulatory resource agencies.
5) In-stream construction work would be performed only in a dry work environment. Dewatering and clear water diversions are not expected, but if they are required, they would be performed according to Caltrans' Construction Site Best Management Practices (2017). The upstream and downstream passage of adult and juvenile fish would be maintained at all times, according to current National Marine Fisheries Service guidelines and criteria.
6) Before construction, the contractor would prepare and sign a Water Pollution Control Plan or a Stormwater Pollution Prevention Plan that complies with the Caltrans Stormwater Quality Handbook (Caltrans 2017). Provisions of this plan would be implemented during and after construction to avoid and minimize erosion and stormwater pollution in and near the work area.

7) During construction, all project-related hazardous material spills within the project site would be cleaned up immediately. The contractor would keep spill prevention and cleanup materials readily accessible onsite at all times during construction.
8) Erosion control measures would be implemented during construction. Silt fencing, fiber rolls, and barriers would be installed at the project site, jurisdictional waters, and riparian habitat.
9) During construction, cleaning and refueling equipment and vehicles would occur only within a designated staging area. This area would either be a minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas would conform to Caltrans' Construction Site Best Management Practices applicable to attaining zero discharge of stormwater runoff.
10) Immediately upon completing in-channel work, all in-channel structures would be removed in a manner that minimizes disturbance to downstream flows and water quality.
11) All temporary excavations and fills within the project limits would be removed, and the affected areas would be returned to pre-construction elevations.

Southern and South-Central Coast California Steelhead

Avoidance and minimization measures for Southern California Coast and South-Central Coast California steelhead critical habitat apply to steelhead species as well. In addition, the following measure would be implemented to avoid and minimize potential adverse impacts on Southern California Coast and South-Central Coast California steelhead resulting from the project:

12) During construction, no work would occur during the wet season. No work would occur in the river channel while there are surface flows.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Swainson's Hawk

Avoidance and minimization measures discussed in Section 2.3.4, Animal Species would also apply to these bird species. In addition, the following measure would be implemented specifically for these three species:

13) If an active nest for the southwestern willow flycatcher or Least Bell's vireo is found within 100 feet of the Biological Study Area, or if a Swainson's hawk nest is found 500 feet from the Biological Study Area, all project activities would immediately stop while Caltrans coordinates with applicable regulatory agencies to determine if additional measures are necessary.

California Red-Legged Frog

Avoidance and minimization measures discussed in Section 2.3.2, Wetlands and Other Waters would also avoid and minimize temporary and long-term impacts on the California red-legged frog and its habitat.

14) Only U.S. Fish and Wildlife Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

15) Ground disturbance activities would not start until written approval is received from the U.S. Fish and Wildlife Service stating that the biologist is qualified to conduct the work.

16) A U.S. Fish and Wildlife Service-approved biologist would survey the project area for no more than 48 hours before work activities start. If any California red-legged frogs are found and are likely to be injured or killed by work activities, the approved biologist would be allowed enough time to move them from the site before work starts. The U.S. Fish and Wildlife Service-approved biologist would relocate the California red-legged frogs to a nearby location that contains suitable habitat that would not be affected by project activities. The relocation site would be in the same drainage to the extent practicable. Caltrans would coordinate with the U.S. Fish and Wildlife Service on the relocation site before the capture of any California red-legged frogs.

17) Before project activities start, a U.S. Fish and Wildlife Service-approved biologist would conduct a training session for all construction personnel. At a minimum, the training would include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

18) A U.S. Fish and Wildlife Service-approved biologist would be present at the worksite until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans would designate a person to monitor onsite compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist would ensure that this monitor receives training in identifying California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommend that work be stopped because California red-legged frogs would be affected in a manner that was not expected by Caltrans and the U.S. Fish and Wildlife Service during a review of the proposed action, they would notify the resident engineer immediately. The resident engineer would resolve the situation by requiring all actions that are causing these effects to be stopped. When work is stopped, the U.S. Fish and Wildlife Service would be notified as soon as possible.

19) During project activities, all trash that may attract predators or scavengers would be properly contained, removed from the worksite, and disposed of regularly. Following construction, all trash and construction debris would be removed from work areas.

20) Without the U.S. Fish and Wildlife Service's permission, all refueling, maintenance, and staging of equipment and vehicles would occur at least 60 feet

from riparian habitat or water bodies and not in a location where a spill would drain directly toward aquatic habitat. The monitor would ensure that habitat is not contaminated during such operations. Before work starts, Caltrans would ensure that a plan is in place for a prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and the appropriate measures to take should a spill occur.

21) Habitat contours would be returned to a natural configuration at the end of project activities. This measure would be implemented in all areas that are disturbed by project activities, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or if changing the original contours would benefit the California red-legged frog.

22) The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to complete the project. Environmentally sensitive areas would be established to confine access routes and construction areas to the minimum area necessary to complete construction and to minimize the impact on California red-legged frog habitat. This goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

23) Caltrans would attempt to schedule work when impacts on the California red-legged frog would be minimal. For example, work that would affect large pools, which may support breeding would be avoided to the maximum degree practicable during the breeding season (November through May). Isolated pools that are important to maintaining California red-legged frogs throughout the driest portions of the year would be avoided to the maximum degree practicable during the late summer and early fall. During project planning, habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and Wildlife Service would be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.

24) To control sedimentation during and after project completion, Caltrans would implement Best Management Practices issued under the authority of the Clean Water Act. If Best Management Practices are ineffective, Caltrans would attempt to fix the situation immediately with the U.S. Fish and Wildlife Service.

25) If a worksite must be temporarily dewatered by pumping, intakes would be screened with wire mesh with openings no larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water would be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. After construction activities are completed, any diversions or barriers to flow would be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Changing the streambed would be minimized to the maximum extent possible. Any imported material would be removed from the streambed after the project is completed.

26) Unless approved by the U.S. Fish and Wildlife Service, water would not be impounded in a manner that may attract California red-legged frogs.

27) A U.S. Fish and Wildlife Service-approved biologist would permanently remove any individuals of exotic species, such as the American bullfrog *(Rana catesbeiana),* signal crayfish *(Pacifastacus leniusculus),* red swamp crayfish *(Procambarus clarkii),* and centrarchid fishes from the project area to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist would be responsible for ensuring that his or her activities are in compliance with the California Fish and Game Code.

28) If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas would not be included in the amount of total habitat permanently disturbed.

29) To ensure that diseases are not transported between worksites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force would be followed at all times.

30) Project sites would be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials would be used to the extent practicable. Invasive and exotic plants would be controlled to the maximum extent practicable. This measure would be implemented in all areas that are disturbed by project activities, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

31) Caltrans would not use herbicides as the main method for controlling invasive and exotic plants. However, if it is determined that using herbicides is the only feasible method for controlling invasive plants at a specific project site, Caltrans would implement the following additional protective measures for the California red-legged frog:

    a. Caltrans would not use herbicides during the breeding season for the California red-legged frog.

    b. Caltrans would conduct surveys for the California red-legged frog immediately before herbicides are used. If California red-legged frogs are found, they would be relocated to suitable habitat that is far enough from the project area that no direct contact with herbicides would occur.

    c. Giant reed and other invasive plants would be cut, hauled out by hand, and painted with glyphosate-based products, such as AquaMaster or Rodeo.

    d. Licensed and experienced Caltrans staff or a licensed and experienced contractor would use a hand-held sprayer for foliar application of AquaMaster or Rodeo where large monoculture stands occur at an individual project site.

    e. All precautions would be taken to ensure that no herbicide is used on native vegetation.

    f. Herbicides would not be used on or near open water surfaces—no closer than 60 feet from open water.

    g. Foliar applications of herbicides would not occur when wind speeds are more than 3 miles per hour.

h. No herbicides would be used within 24 hours of forecasted rain.

i. Qualified Caltrans staff members or contractors would apply all herbicides to minimize overspray and to ensure that all applications are made in accordance with the label recommendations and required and reasonable safety measures. A safe colored dye would be added to the mixture to visually indicate treated sites. Using herbicides would be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs' Endangered Species Protection Program county bulletins.

j. All herbicides, fuels, lubricants, and equipment would be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Before work starts, Caltrans would ensure that a plan is in place for a prompt and effective response to accidental spills. All workers would be informed of the importance of preventing spills and the appropriate measures to take should a spill occur.

2.3.6 Invasive Species

Regulatory Setting

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

Affected Environment

The information used in this section is based on the project's Natural Environment Study prepared on November 22, 2019.

In total, 31 invasive plant species were identified by the online California Invasive Plant Council Database and were seen within the Biological Study Area: sweet vernal grass *(Anthoxanthum odoratum),* slender wild oat *(Avena barbata),* black mustard *(Brassica nigra),* ripgut brome *(Bromus diandrus),* soft chess brome *(Bromus hordeaceus),* red brome *(Bromus madritensis ssp. rubens),* Italian thistle *(Carduus pycnocephalus),* tocalote *(Centaurea melitensis),* poison hemlock *(Conium maculatum),* common brass buttons *(Cotula coronopifolia),* Bermuda grass *(Cynodon dactylon),* cape ivy *(Delairea odorata),* perennial veldt grass *(Ehrharta calycina),* redstem filaree *(Erodium cicutarium),* Italian ryegrass *(Festuca perennis),* rattail fescue *(Festuca myuros),* fennel *(Foeniculum vulgare),* cutleaf geranium *(Geranium dissectum),* foxtail barley *(Hordeum murinum),* perennial pepperweed *(Lepidium latifolium),* sweet alyssum *(Lobularia maritima),* horehound *(Marrubium*

vulgare), tree tobacco *(Nicotiana glauca),* English plantain *(Plantago lanceolata),* rabbitsfoot grass *(Polypogon monspeliensis),* wild radish *(Raphanus raphanistrum),* castor bean *(Ricinus communis),* curly leaved dock *(Rumex crispus),* Russian thistle *(Salsola),* milk thistle *(Silybum marianum),* and tamarisk *(Tamarix).*

The following six exotic plant species with an invasiveness rating of "High" were seen in the Biological Study Area: red brome, cape ivy, perennial veldt grass, fennel, perennial pepperweed, and tamarisk.

These invasive plant species are distributed throughout the Biological Study Area within the Caltrans right-of-way and the Santa Maria River riverbed.

Environmental Consequences

The project has the potential to spread invasive species through contaminated equipment entering and exiting construction sites, the inclusion of invasive species in seed mixtures and mulch, and the improper removal and disposal of invasive species where seeds may spread along the highway.

It is expected that any identified invasive species would be controlled and removed from the project area during project construction. In addition, invasive species would be removed from project restoration areas.

Avoidance, Minimization, and/or Mitigation Measures

To ensure that the project does not promote the introduction or spread of invasive plant species into the Biological Study Area, Caltrans' Standard Specifications, appropriate Best Management Practices, along with measures from Section 2.3.2, Wetlands and Other Waters, and Section 2.3.5, Threatened and Endangered Species would be implemented.

2.4 Construction Impacts

Project construction is expected to start sometime during the 2022/2023 fiscal year and end in the 2025/2026 fiscal year. Project completion is expected to take about 530 working days, or about 24 working months, spread over three construction seasons (typically from June to October).

Demolition and construction-related activities would cause temporary impacts. A variety of construction equipment would be used.

For the Build Alternative, most of the construction activities would occur during the dry season (typically from June to October). The Build Alternative would require a two-stage construction process for bridge demolition and construction. The first stage would involve building half of the new bridge and demolishing half of the existing bridge. The second stage would involve building the other half of the new bridge and demolishing the other half of the existing bridge. The project would also include pavement and sidewalk work.

The project would require creating access and haul roads for equipment and construction crews. The project would also need to establish a staging/storage site for equipment and materials. Temporary construction easements and access areas would be required. During construction, temporary environmentally sensitive area fencing would be installed to prevent disturbances to areas of environmental concern. During construction, State Route 1 would remain open to traffic. Project construction activities are not expected to change the existing levee structure on the Santa Maria River.

Affected Environment

Parks and Recreational Facilities

LeRoy Park is about 300 feet west of the project; the park is also west of State Route 1 on the north side of 11th Street. The park is about 8 acres and contains open space, picnic tables, barbecue equipment, a playground, restrooms, and a building for the Boys and Girls Clubs of America.

Air Quality

The project is in the South Central Coast Air Basin, which consists of San Luis Obispo County, Santa Barbara County, and Ventura County. The Santa Barbara County Air Pollution Control District and San Luis Obispo County Air Pollution Control District regulate air quality in the basin.

Santa Barbara County is considered to be non-attainment of California Ambient Air Quality Standards for ozone and airborne particulate matter that is less than 10 microns in diameter. Santa Barbara County is considered to be in attainment or unclassified of all National Ambient Air Quality Standards.

San Luis Obispo County is considered to be non-attainment of California Ambient Air Quality Standards for ozone and particulate matter that is less than 10 microns in diameter. San Luis Obispo County is considered to be in attainment of the California Ambient Air Quality Standards for particulate matter that is less than 2.5 microns in diameter. San Luis Obispo County is also in attainment of the National Ambient Air Quality Standards for particulate matter that is less than 10 microns in diameter and particulate matter that is less than 2.5 microns in diameter. The eastern portion of the county is considered to be non-attainment of the federal ozone standard due to transient emissions originating mainly in the Bay Area and Central Valley.

The project lies in a mostly rural area, with farmlands in San Luis Obispo County on the north side of the project limits and habitable dwellings in Santa Barbara County on the south side of the project limits.

Noise

The existing land uses within the project area are single-family homes, multi-family homes, and commercial retail stores. The lands that surround the existing bridge are mostly agricultural and fallow, with one commercial paper processing facility northwest of the bridge, just across the border into San Luis Obispo County. The

area south of the existing bridge is mostly residential, encompassing the city of Guadalupe. The terrain is made up of mostly flat agricultural fields, with little change in elevation throughout the project limits.

Emergency Services

Emergency services in the project vicinity are provided by the Guadalupe Fire Department, Guadalupe Police Department, Santa Barbara County Sheriff's Office, and the Santa Maria Area California Highway Patrol.

Traffic and Transportation

State Route 1 provides access to State Route 166 to the south and local roadways along the State Route 1 alignment. The Santa Maria River Bridge provides a critical river crossing for the surrounding areas in the vicinity of the project site. The next nearest river crossing is on Bonita School Road, which is about 4 miles east of the project site.

The existing bridge is open to vehicle and cyclist traffic. There is no designated pedestrian access on the existing bridge.

Community Character

The city of Guadalupe gateway monument "welcome sign" is within the project limits, on the northbound side of State Route 1, just south of 12th Street. The city of Guadalupe owns and maintains the monument. The monument was built in 2019 and is one of three that the city owns. The monument is built out of concrete blocks and cement, with a mix of architectural features. The base of the monument is concrete and has been shaped, painted, and colored to mimic sand dunes. The monument is a beige color, adorned with ceramic tiles that display the city's name, logo, and local landscape.

The monument is within the state right-of-way; the city of Guadalupe obtained a permit from Caltrans to install the monument. When Caltrans issued the permit to the city of Guadalupe, it included a set of conditions. One of the permit's conditions required the city of Guadalupe to relocate the monument at Caltrans' request. Based on Caltrans' Gateway Monument Policy, Caltrans is obligated to:

- Encourage gateway monuments to be located outside of the state right-of-way.
- Consider installing community identifiers before allowing gateway monuments on the state right-of-way.

Environmental Consequences

Parks and Recreational Facilities

During construction, access to LeRoy Park would not be affected because the project limits do not include 11th Street. Construction-related activities would produce noise that may be heard from users of LeRoy Park. Though the noise may be heard, construction noise would be temporary and intermittent. Construction-related noise is not expected to affect park operations. Construction-related activities

would also generate fugitive/errant dust that could be windblown toward the park. However, dust generated during project construction would be temporary and intermittent and is not expected to adversely affect park operations.

Air Quality

Certain construction activities, such as demolition, grading, and paving can cause temporary impacts on air quality and generate air pollutants. The exhaust from construction equipment contains hydrocarbons, oxides of nitrogen, carbon monoxide, suspended particulate matter, and odors. Equipment emissions can vary every day, depending on the level of activity, the specific type of operation, and the current weather conditions. Using heavy equipment during project construction can also generate fugitive dust that may temporarily impact the local air quality.

Earthwork, which is expected to generate dust, would be required for the improvements associated with the project. Removing the existing bridge structure would require demolition activities, which could create nuisance dust near the work location.

Due to the small scope and footprint of work and its location, the project presents a minimal potential to expose nearby residents to inhalable construction emissions.

With the implementation of standard construction dust and emission minimization practices and procedures, it is expected that project emissions of particulate matter (dust) and equipment emissions would be well within the daily thresholds of the Santa Barbara County Air Pollution Control District and San Luis Obispo County Air Pollution Control District.

Noise

Noise from construction activities is expected to intermittently dominate the noise environment in the area immediately surrounding the project. Noise impacts from project construction are a function of the noise generated by construction equipment, the location and sensitivity of nearby receptors, and the timing and duration of noise-generating activities. Nearby homes may be exposed to temporary construction noise during project construction.

No adverse noise impacts from construction activities are expected because construction noise would be short term, intermittent, and overshadowed by local traffic noise. In addition, Caltrans' Standard Specifications for noise control would be implemented to reduce the potential for noise disturbances to nearby homes.

Emergency Services

During project construction, bridge access for emergency services would be maintained. Traffic control during project construction may temporarily delay emergency service providers. The project would not affect emergency service access to interconnecting roads from State Route 1 or local roads in the project vicinity.

Temporary lane closures would be communicated to the appropriate fire, law enforcement, and other emergency service agencies to ensure continued adequate service. A Transportation Management Plan would be implemented to assist emergency service providers during project construction and to minimize delays.

Traffic and Transportation

During construction, temporary lane closures on State Route 1 may result in temporary and intermittent traffic delays for travelers in the project area. The effects would be minor because State Route 1 would remain open throughout the construction of the bridge.

Community Character

The roadway that approaches the bridge would need to be adjusted to match the new bridge alignment. State Route 1 would shift eastward. The new alignment would then conflict with the gateway monument that is south of 12th Street. Based on the current project design, the project is expected to require the monument to be removed from the state right-of-way, which may temporarily impact the city of Guadalupe's community character.

Caltrans would coordinate with the city of Guadalupe to investigate the potential to install community identifiers as a substitute for the monument. If community identifiers are to be installed, they would be placed within the project limits and incorporated into the project design. Using community identifiers is expected to improve community character and increase community presence to the traveling public.

Avoidance, Minimization, and/or Mitigation Measures

The following avoidance and minimization measures would be implemented to reduce potential impacts caused by project construction activities.

Parks and Recreational Facilities

1) The avoidance and minimization measures that are required to address temporary construction-related impacts on air quality and noise would also be applicable to minimizing potential construction-related impacts on parks and recreational facilities.

Air Quality

2) The Caltrans Standard Specifications section that pertains to dust control and dust palliative application is required for all construction contracts and would effectively reduce and control construction-emission impacts.
3) The provisions of Caltrans Standard Specifications Section 10-5 Dust Control, and Section 14-9 Air Pollution Control, require the contractor to comply with all rules, ordinances, and regulations of the California Air Resources Board and San Luis Obispo County Air Pollution Control District.

4) The project-level Stormwater Pollution Prevention Plan would address water pollution control measures that cross-correlate with standard dust emission minimization measures, such as covering soil stockpiles, watering haul roads, dewatering excavated areas, and grading areas.
5) A Debris Containment and Collection Plan would be included in the project's standard special provisions to effectively capture and collect all demolition debris and waste materials to prevent any materials from entering the creek channel or migrating offsite during windy conditions. All stockpiled construction debris should at least be covered daily or be hauled off as soon as possible.
6) If inspections during construction determine that lead paint or asbestos is present, the project may need to implement Work Area Monitoring of the ambient air and soil in and around the work area to verify the effectiveness of any containment system.

Noise

7) Project construction would be conducted in accordance with Caltrans Standard Specifications Section 14.8-02.
8) The following measures would be included to minimize temporary project related noise impacts:

    a. Each internal combustion engine that is used on the job would be equipped with a muffler that is recommended by the manufacturer. No internal combustion engine would be operated without an appropriate muffler.
    b. Notify surrounding homes in advance of the construction schedule when unavoidable construction noise and upcoming construction activities that are likely to produce an adverse noise environment are expected. This notice would be given two weeks in advance. The notice would include the dates and duration of proposed construction activities and would be published in local news media. The District 5 Public Information Office would post notices of the proposed construction and potential community impacts after receiving them from the resident engineer.
    c. Limit all phases of construction to acceptable hours, Monday through Friday. Night work would not be conducted unless it is necessary for project completion.
    d. Shield especially loud pieces of stationary construction equipment.
    e. Locate portable generators, air compressors, etc., away from sensitive noise receptors.
    f. Limit grouping major pieces of operating equipment in one area to the greatest extent feasible.
    g. Place heavily trafficked areas (such as the maintenance yard) and construction-oriented operations in locations that would be the least disruptive to surrounding sensitive noise receptors.

h. Ensure that all equipment items, such as mufflers, engine covers, and engine vibration isolators, have the manufacturers' recommended noise abatement measures intact and operational. Internal combustion engines used for the job would be equipped with a muffler or baffle that is recommended by the manufacturer.

i. Consult Caltrans district noise staff if complaints are received during the construction process.

Emergency Services

9) During project construction, Caltrans' resident engineer would contact and inform local emergency service providers of construction activities that could potentially affect emergency access or emergency response times. Caltrans' resident engineer would coordinate with emergency responders to avoid potential conflicts with established emergency response plans.

10) The project would use temporary traffic control and temporary traffic management during construction to ensure that emergency access through the project site and on State Route 1 is maintained.

Traffic and Transportation

11) Traffic access on State Route 1 would be maintained during project construction. The project would use temporary traffic control and temporary traffic management to allow traffic to access the project limits.

Community Character

12) The project would incorporate aesthetic treatments and/or design features that may be required as part of any planned community identifiers.

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

Cumulative impacts on 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 Guidelines Section 15120 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 the California Environmental Quality Act can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act can be found in 40 Code of Federal Regulations Section 1508.7.

Affected Environment

The information and analysis in this section come from the Natural Environment Study that was completed for the project on November 22, 2019.

The first step in conducting a cumulative impact analysis is to identify resources that have the potential to be affected by the project or are currently in poor or declining health. For the Santa Maria River Bridge replacement project, the following resources have the potential to be affected by the project and are currently in poor and declining health: La Graciosa thistle critical habitat and the California red-legged frog species.

For the second step, a Resource Study Area must be identified for each affected resource. The boundary of the Resource Study Area for a cumulative impact analysis is often broader than the boundary used for a project-specific analysis, which typically consists of a geographic region or designated area.

Cumulative impact analyses are then conducted by considering the effects of past, present, and reasonably foreseeable future projects within the Resource Study Area that may have or could have an impact on resources identified in the first step.

La Graciosa Thistle Critical Habitat

La Graciosa thistle critical habitat was first designated on March 17, 2004 and included about 41,000 acres in San Luis Obispo County and Santa Barbara County. The designation of the critical habitat was revised on November 3, 2009, with about 24,000 acres in San Luis Obispo County and Santa Barbara County. The Designated Critical Habitat intends to conserve the physical and biological features required to sustain populations of the La Graciosa thistle by identifying areas that contain sufficient elements to support the life and growth of the species. There are currently six separate Designated Critical Habitat units for the La Graciosa thistle.

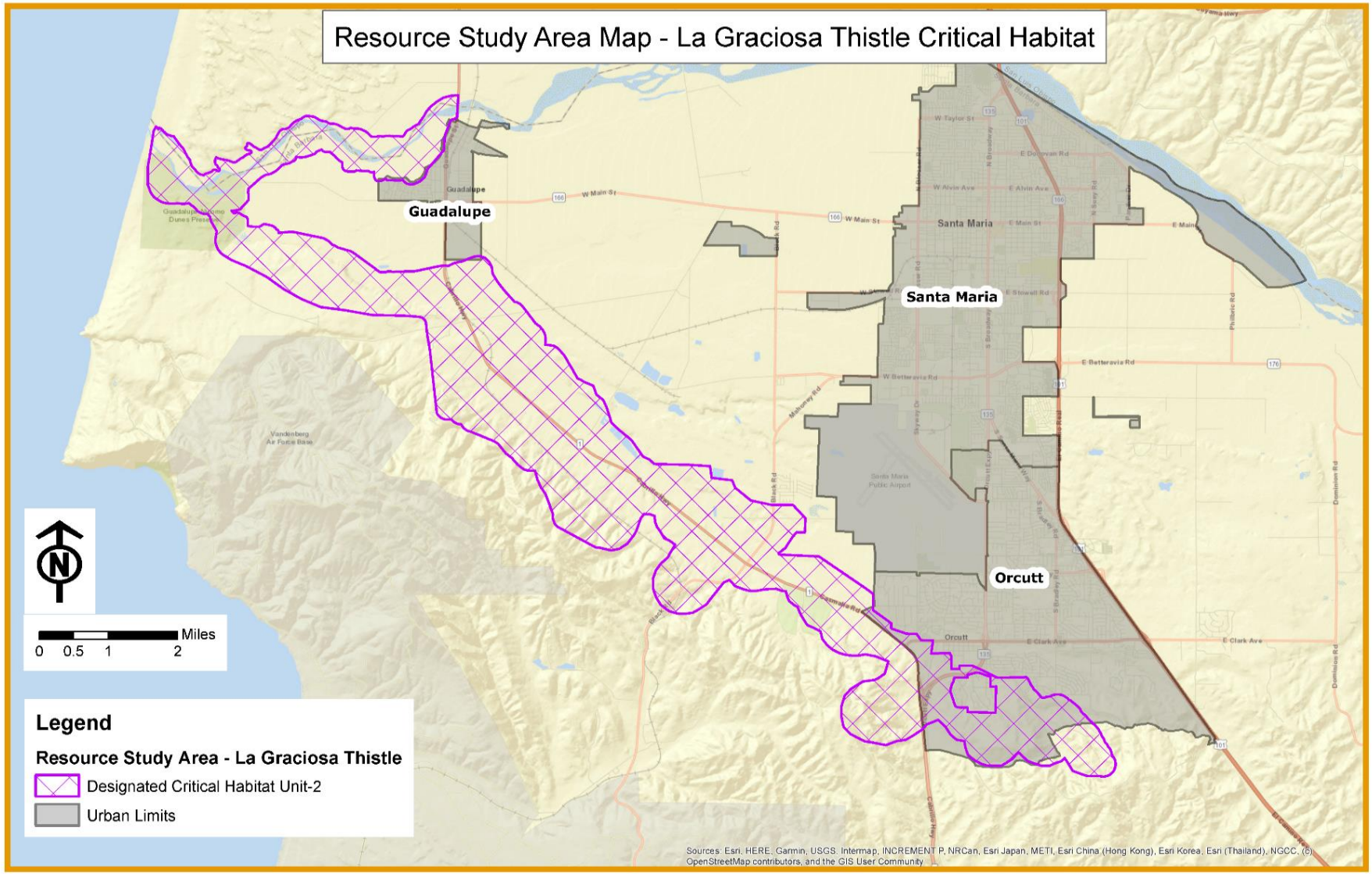
The project area is partially within Unit 2—also known as the Santa Maria River-Orcutt Creek unit—of the Designated Critical Habitat for the La Graciosa thistle. For this analysis, Unit 2 of the Designated Critical Habitat for the La Graciosa thistle is used as the Resource Study Area (see Figure 2.5-1).

For most of its entirety, Unit 2 is within the northwestern portion of Santa Barbara County and is within the area of the California Water Service and the Santa Maria Valley Planning. The size of Unit 2 is about 13,000 acres and runs for about 15 miles. From the existing Santa Maria River Bridge, the boundary of Unit 2 extends west, following the Santa Maria River channel, where it reaches the Pacific Coast. From the coast, the boundary extends in a southeastern direction, following Orcutt Creek and State Route 1, until it reaches the unincorporated community of Orcutt and ending at the northern limits of the Solomon Hills.

Unit 2 includes the northwestern portion of the city of Guadalupe, southwestern portion of the unincorporated community of Orcutt, southeastern portions of the Guadalupe sand dunes, and the northern portions of the Rancho Guadalupe Dunes Preserve. Much of Unit 2 contains rural lands that are zoned for agricultural use. Most of the agricultural lands within Unit 2 are involved in California's Williamson Act, which is an agricultural preservation program. Urban environments are next to Unit 2, and urban development has occurred next to or within Unit 2 in the past. There is the potential that future urban development may occur next to or within the existing boundaries of Unit 2.

The current health of the La Graciosa thistle critical habitat in Unit 2 is poor, and the current trend is barely stable. Much of the land within Unit 2 is used for agricultural activities; very little is considered undisturbed. However, the current stability is attributed to the presence of agricultural lands. Many of the agricultural lands are involved in agricultural preservation programs, which help discourage future development projects and limit allowable farmland activities. There is still the potential for Unit 2 to be affected by development projects as a result of potential future growth in the region. New urban development could result in the loss of existing potential habitat and the increasing presence of non-native species.

Figure 2-4 Resource Study Area for La Graciosa Thistle Critical Habitat



California Red-Legged Frog Species

The California red-legged frog was listed as a federally threatened species in 1996 and is considered a California Species of Special Concern. The historic range for the California red-legged frog extended along the coast, from southern Mendocino County and inland from the vicinity of Redding, California to northwestern Baja California, Mexico. Currently, California red-legged frogs are found mostly in the coastal streams and wetlands of Monterey County, San Luis Obispo County, and Santa Barbara County.

California red-legged frogs can be found in a variety of areas, including aquatic, riparian, and upland habitats. California red-legged frogs can also occur in suitable habitat areas within 2 miles of a breeding site because they use both riparian and upland habitats for foraging, shelter, cover, and non-dispersal movement. It is estimated that this species has been eliminated from about 70 percent of its historic range due to habitat loss and possibly due to the introduction of non-native predatory species.

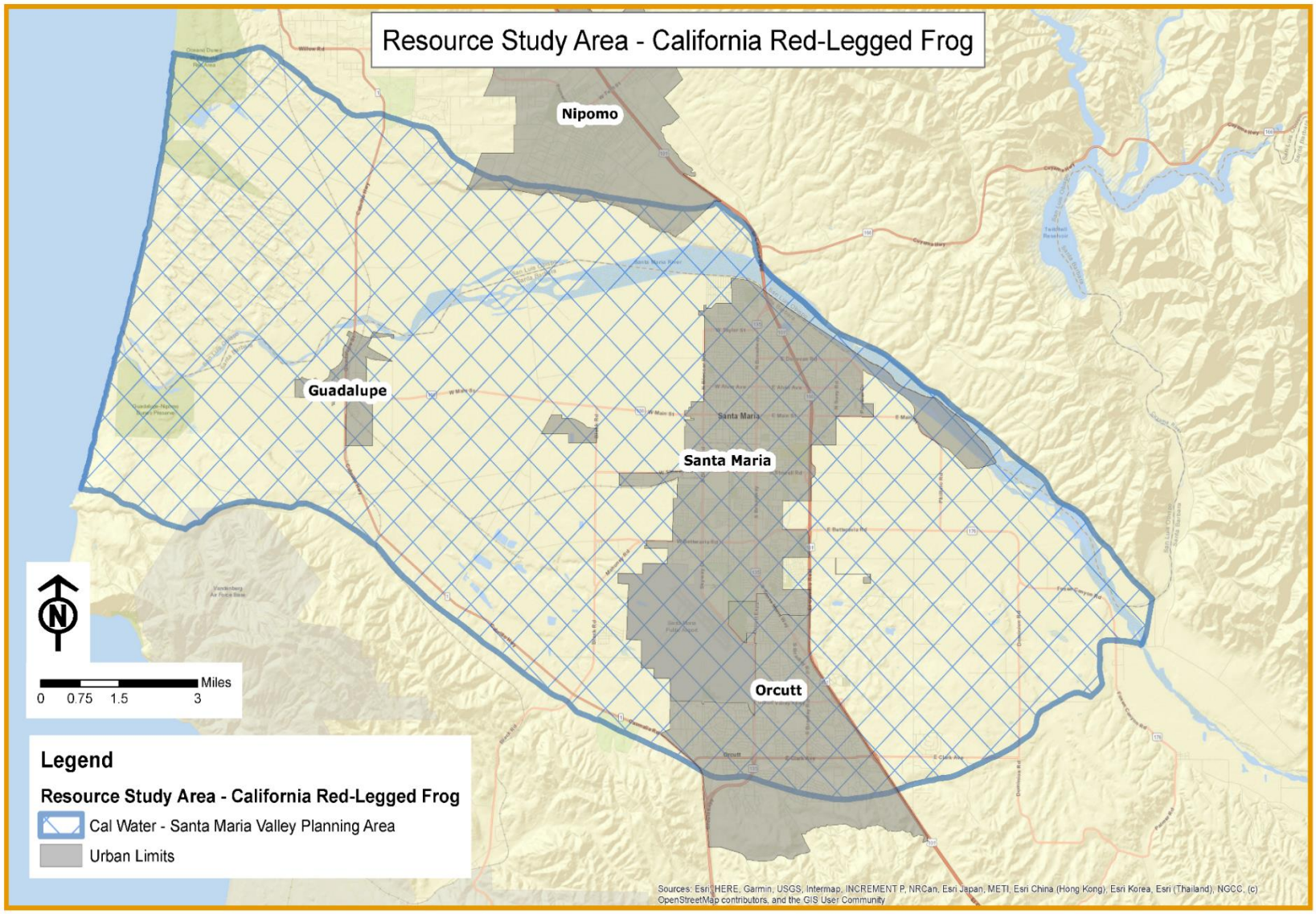
A Final Recovery Plan for this species was approved in 2002. According to the plan, delisting the California red-legged frog could occur by 2025 if recovery criteria are met.

The Resource Study Area for the California red-legged frog species is defined by the California Water Service - Santa Maria Valley Planning Area (see Figure 2.5-2), which is a subset of the greater Santa Maria River Watershed. The Resource Study Area is within the Santa Maria River - Santa Ynez River Core Area, which is identified by the Final Recovery Plan for the species.

The planning area is within the southeastern corner of San Luis Obispo County and within the northwestern corner of Santa Barbara County. The planning area is bounded by the Pacific Ocean on the west, the Casmalia and Solomon Hills along the south, the Suey and Tepusquet ridges along the east, and the Nipomo Mesa on the north. The Santa Maria River flows northwest along the eastern boundary before heading southwest toward the ocean. The planning area contains a mix of rural and urban environments. Urban environments in the planning area are focused along major roadways. A majority of the planning area is rural and is mainly used for agricultural practices. The planning area contains the city of Santa Maria, the city of Guadalupe, the unincorporated community of Orcutt, and part of the community of Nipomo. The planning area also contains portions of the Guadalupe-Nipomo Dunes, the Santa Maria Valley, and the Santa Maria River.

Within the California Water Service - Santa Maria Valley Planning Area, multiple California red-legged frog occurrences have been documented in the California Natural Diversity Database. There are currently no protected California red-legged frog habitats within the planning area.

Figure 2-5 Resource Study Area for California Red-Legged Frog



The current health of the California red-legged frog species within the California Water Service - Santa Maria Valley Planning Area is considered poor; the overall trend for the species in the region is expected to be in decline. Past occurrence records suggest that existing California red-legged frogs are inhabiting marginal areas between or in agricultural fields in the region. The main reason for the expected declining trend is the potential for the continuation of future development in the Santa Maria Valley, which would remove any remaining potentially suitable dispersal, refuge, or breeding habitats.

Environmental Consequences

Potential direct and indirect impacts to identified resources caused by the proposed project and other current and reasonably foreseeable projects are evaluated as part of the cumulative analysis.

Information on current and reasonably foreseeable projects is based on what was obtainable from Caltrans, the city of Santa Maria, the city of Guadalupe, the unincorporated community of Orcutt, Santa Barbara County, and San Luis Obispo County.

Current and Reasonably Foreseeable Projects

The Neighborhoods of Willow Creek and Hidden Canyon

This project occurs within the Resource Study Areas for La Graciosa thistle critical habitat and the California red-legged frog. This project is in Santa Barbara County, about 1 mile west from the unincorporated community of Orcutt. The project is on the south side of State Route 1, between Solomon Road and Black Road. The project proposes to develop two new neighborhoods around the existing Rancho Maria Golf Club. The project would occur on undeveloped parcels, totaling about 177 acres. About 80 acres would be developed into 146 single-family homes and the remaining 97 acres would be left as undisturbed open space. A Subsequent Environmental Impact Report was prepared in June 2019 and was publicly circulated for review and comment from June 21, 2019, to August 5, 2019. Approval of the Subsequent Environmental Impact Report is pending.

Santa Barbara County Public Works Department - Laguna County Sanitation District, Final Habitat Conservation Plan

This project occurs within the Resource Study Areas for La Graciosa thistle critical habitat and the California red-legged frog. The final habitat conservation plan is around the existing wastewater reclamation plant that is at the end of Dutard Road, about 2 miles west from the Santa Maria Airport. The habitat conservation plan was developed for the construction, operation, and maintenance of existing and proposed facilities on and off the Laguna County Sanitation District property. The plan provides an assessment of the existing habitat in the planning area, evaluates the effects of the proposed development, operation, and maintenance activities on special-status species, and offers mitigation plans to offset habitat loss and/or incidental take of special-status species that could result from the proposed

development, operation, or maintenance activities. The final habitat conservation plan was completed in May 2017.

Solomon Canyon Capital Preventive Maintenance Project

This project occurs within the Resource Study Areas for La Graciosa thistle critical habitat and the California red-legged frog. The project is in Santa Barbara County on State Route 1, from Solomon Road near the unincorporated community of Orcutt to the intersection of State Route 1 and State Route 166 in the city of Guadalupe. The project is a Caltrans maintenance project (EA 05-1G130) that would overlay the existing highway pavement and repair heavily distressed pavement on a 20-mile segment of State Route 1. The project would also involve the following: installing shoulder backing; upgrading existing guardrails; repairing, replacing, or upgrading dikes and curbs; replacing traffic striping, and upgrading and raising existing drainage inlets. Project activities would occur within the existing Caltrans right-of-way, and on areas that are already disturbed by past projects and maintenance activities. Project activities are limited to the existing highway surface and nearby unpaved surfaces. A Natural Environment Study was completed for the project in September 2017. The environmental document for the project was approved in May 2018. The project design plans were approved in October 2019. Project construction is expected to start in July 2020.

Solomon Canyon Rumble Strip and Shoulder Widening Project

This project occurs within the Resource Study Areas for La Graciosa thistle critical habitat and the California red-legged frog. The project is in Santa Barbara County on State Route 1, from the intersection of State Route 1 and State Route 135 near the unincorporated community of Orcutt to the intersection of State Route 1 and State Route 166 in the city of Guadalupe. The project is a Caltrans safety project (EA 05-1H610) that would install wider shoulders and rumble strips along the existing highway pavement to reduce the number and severity of roadside departure crashes. The project is currently doing environmental studies; an approved project document is not expected until April 2021. Project construction is not expected to start until 2024.

Municipal Projects

Various municipal projects occur within the Resource Study Areas for La Graciosa thistle critical habitat and the California red-legged frog. The city of Santa Maria, the city of Guadalupe, and the unincorporated community of Orcutt are within the Santa Maria Valley. These municipalities have several development plans within their boundaries that may include urban development, infrastructure development, agricultural development, and recreational development. Municipal development plans are often part of the general or community plans. Many of these development plans proposed future projects that are expected to support the well-being of the municipality. Often these future projects would occur on the fringes or infills of the municipality and of varying scope and scale. Specific projects within the municipalities may not be identified in the plans, which show the types of projects that are expected for a location. Development projects that occur on infills are

expected to have little or no potential to affect natural resources, although they may have the potential to support non-native species. Development projects that occur on the fringes or outside of the urban boundary have a greater potential to affect existing natural resources because these developments would most likely result in the loss of potential species or habitats. It is expected that any proposed development project within each municipality would require site investigations, and any special-status species or habitats that are identified onsite would need to be considered for protection.

La Graciosa Thistle Critical Habitat

The Neighborhoods of Willow Creek and Hidden Canyon

Based on the Subsequent Environmental Impact Report, the La Graciosa thistle is identified as a special-status species that has the potential to occur within the project site. The report states that potentially significant impacts on special-status plant species caused by project activities can be mitigated to less than significant. The project plans to avoid impacting special-status plant species to the greatest extent possible. If avoiding special-status plant species is not feasible, the project plans to mitigate at a ratio of 2 to 1 for species or habitats. The report does not call out measures specifically for the La Graciosa thistle species or habitat.

Santa Barbara County Public Works Department - Laguna County Sanitation District, Final Habitat Conservation Plan

Based on the final habitat conservation plan, the planning area does contain a critical habitat unit for the La Graciosa thistle. It is expected that temporary and permanent activities associated with the plan could result in direct and indirect impacts to La Graciosa thistle critical habitat. The activities associated with the plan have the potential to adversely affect critical habitat for the La Graciosa thistle of varying conditions. However, the La Graciosa thistle has not been recorded within the planning site. The plan expects that protective measures would be used for La Graciosa thistle critical habitat to avoid or minimize potential impacts. Also, any disturbed critical habitat areas would be restored to mitigate for impacts.

Solomon Canyon Rumble Strip and Shoulder Widening Project

Based on the Natural Environment Study that was completed for the project, the project is partially within Unit 2 of the federally designated critical habitat for the La Graciosa thistle. The project is expected to cause permanent and temporary impacts to designated La Graciosa thistle critical habitat. Permanent impacts would result from installing new roadway features that would be placed outside of the existing paved roadway. Temporary impacts would result from construction activities, such as equipment operation, worker foot traffic, and temporary staging. However, the existing critical habitat within the project limits is ruderal and already highly disturbed. Also, no La Graciosa thistle was seen within the project area during appropriately timed surveys, and none is expected to occur within the project area. The project is not expected to adversely impact the La Graciosa thistle or potential critical habitat within the project area.

Solomon Canyon Rumble Strip and Shoulder Widening Project

Although environmental studies have not been completed for this project, the project is expected to be within Unit 2 of the federally designated critical habitat for the La Graciosa thistle based on the project location. Because this project would occur in the same area as the Solomon Canyon Capital Maintenance Project, it is expected that this project would result in similar findings for the La Graciosa thistle and its critical habitat. It is also expected that this project would not cause project-related impacts to the La Graciosa thistle or its critical habitat within the project limits because the project area is already in a poor or disturbed condition.

Municipal Development Projects

The city of Guadalupe and the unincorporated community of Orcutt are next to the Resource Study Area for La Graciosa thistle critical habitat. There is the potential for municipal development projects to affect designated critical habitat areas directly or indirectly. It is expected that municipal projects that occur within the boundaries of the municipality would not drastically affect designated critical habitat areas. However, it is expected that the future growth trend of existing municipalities has the potential to negatively affect existing La Graciosa thistle critical habitats. It is expected that development projects that have the potential to affect federally designated critical habitats may require a U.S. Fish and Wildlife Service Section 7 consultation for threatened and endangered species review, along with possible mitigation measures to offset potential impacts.

Based on the above-listed projects, Unit 2 of the designated critical habitat for the La Graciosa thistle would continue to be impacted. The disturbances would include permanent and temporary impacts to designated critical habitat areas. However, some of the critical habitat areas that would be disturbed are in poor condition or are not expected to support the La Graciosa thistle. Projects that have the potential to disturb critical habitat areas that can support the La Graciosa thistle are proposing avoidance, minimization, and/or mitigation measures to offset project impacts. Based on the analysis of cumulative impacts to La Graciosa thistle critical habitat in the Resource Study Area, cumulative impacts would occur. However, each project is expected to offset their contribution to cumulative impacts through project avoidance, minimization, or mitigation measures.

The Santa Maria Bridge Replacement project is not expected to substantially contribute to cumulative impacts on the La Graciosa thistle critical habitat within the Resource Study Area. Potential La Graciosa thistle critical habitat that the project would temporarily disturb would be revegetated and restored, as discussed in Section 2.3.5, Threatened and Endangered Species. Also, the project is not expected to permanently impact La Graciosa thistle critical habitat.

California Red-Legged Frog Species

The Neighborhoods of Willow Creek and Hidden Canyon

Based on the Subsequent Environmental Impact Report, occurrences of California red-legged frogs have been documented in and near the project area. The project

expects that California red-legged frogs may be present and use potential habitat within the project site. The report states that impacts on California red-legged frogs are potentially significant but can be mitigated for. The project plans to avoid impacting California red-legged frogs to the greatest extent possible. Potential California red-legged frog habitats within the project site would be identified and avoided. Also, the project plans to establish an offsite conservation easement as compensatory mitigation to offset impacts on California red-legged frogs and their associated habitat.

Santa Barbara County Public Works Department - Laguna County Sanitation District, Final Habitat Conservation Plan

Based on the final habitat conservation plan, an Incidental Take permit from the California Department of Fish and Wildlife is expected for California red-legged frogs. Though the planning area is not within or near any designated critical habitat units, California red-legged frogs have been documented within and around the planning area. The final habitat conservation plan expects that California red-legged frogs may travel through the planning area during dispersal or use potential habitats within and around the planning area. Activities covered in the final habitat conservation plan would cause temporary and permanent impacts to California red-legged frog upland refuge and/or dispersal habitats. Construction activities or normal plant operations could indirectly impact California red-legged frogs. The final habitat conservation plan proposes several avoidance, minimization, and mitigation measures to address impacts to California red-legged frogs, which include a conservation easement to permanently protect about 132 acres of upland refuge and aquatic breeding habitat.

Solomon Canyon Capital Preventive Maintenance Project

Based on the Natural Environment Study, the project is expected to cause minimal direct and indirect impacts to California red-legged frogs. The project's potential to impact California red-legged frogs is expected to be low because of their lack of presence during reconnaissance surveys. The project would propose avoidance and minimization measures to protect California red-legged frogs that may be encountered during project construction; compensatory mitigation is not expected for the project.

Solomon Canyon Rumble Strip and Shoulder Widening Project

Though environmental investigations have not been completed for this project, it is expected that California red-legged frogs have the potential to be found within the project area based on the project location. Because this project would occur in the same areas as the Solomon Canyon Capital Maintenance Project, it is expected to result in similar findings for California red-legged frogs. It is anticipated that this project will have the potential for frog presence within the project limits. The project would implement appropriate avoidance and minimization measures to protect California red-legged frogs.

Municipal Development Projects

The city of Santa Maria, the city of Guadalupe, the unincorporated community of Orcutt, and the community of Nipomo are within the Resource Study Area for California red-legged frogs. There is the potential for municipal development projects to affect California red-legged frogs directly and indirectly. Construction activities associated with municipal projects could potentially kill California red-legged frogs if they are found within the project site. Municipal projects could also disrupt refuge sites or dispersal routes that California red-legged frogs may use. The future growth trend of existing municipalities in the area could negatively affect California red-legged frogs. Municipal projects that could impact California red-legged frogs would require a U.S. Fish and Wildlife Service Section 7 consultation for threatened and endangered species review. Municipal projects would also be required to use measures to avoid impacting California red-legged frogs.

Based on the above-listed projects, California red-legged frogs could be impacted within the Resource Study Area. However, it is very likely that projects would adopt measures to avoid, minimize, and mitigate potential impacts to California red-legged frogs. Projects that occur in the Resource Study Area have the potential to disrupt California red-legged frog refuge sites, breeding sites, and dispersal routes, which could also negatively affect the species. Future development in the region is expected to displace California red-legged frogs in the Resource Study Area. This would also cause potentially significant cumulative impacts on California red-legged frogs. Based on the analysis of cumulative impacts on California red-legged frogs in the Resource Study Area, there is a high potential for cumulative impacts to the species, which is expected to continue to decline. However, each project is expected to include avoidance, minimization, or mitigation measures to protect California red-legged frogs from potentially cumulative impacts.

Construction activities associated with the Santa Maria River Bridge Replacement project could contribute to cumulative impacts on California red-legged frogs within the Resource Study Area. However, the project is not expected to substantially contribute to cumulative impacts on California red-legged frogs within the Resource Study Area. The project would use measures to avoid and minimize potential impacts to California red-legged frogs during project construction. The project would not permanently impact California red-legged frog refuge sites, breeding sites, or dispersal routes in the project vicinity. The project would include measures to protect existing potential habitats and restore areas that are disturbed during construction as discussed in Section 2.3.5, Threatened and Endangered Species. The measures would also have the potential to improve existing conditions for California red-legged frogs in the long term.

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Chapter 3 CEQA Evaluation

3.1 Determining Significance under CEQA

The proposed project is a joint project by Caltrans and the Federal Highway Administration and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the National Environmental Policy Act (known as NEPA) and the California Environmental Quality Act (known as CEQA). The Federal Highway Administration's responsibilities for environmental review, consultation, and any other actions required by applicable federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 U.S. Code Section 327 and the Memorandum of Understanding dated December 23, 2016, and executed by the Federal Highway Administration and Caltrans. Caltrans is the lead agency under NEPA and CEQA.

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

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

3.2 CEQA Environmental Checklist

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

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

3.2.1 Aesthetics

CEQA Significance Determinations for Aesthetics

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

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

Less Than Significant Impact—The proposed bridge would have taller bridge and pathway rails, which would minimally affect views of scenic vistas. The bridge deck profile would be raised, which would allow for a higher vantage point of the surrounding landscape. This higher vantage point would cause overhead utility wires to be more directly in the view and would potentially interfere with the quality of scenic vistas. (Visual Impact Assessment, March 15, 2019)

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

No Impact—The project limit is not classified as an Officially Designated State Scenic Highway. The project would remove vegetation and trees during

construction and replace them with native vegetation at the end of construction. (Visual Impact Assessment, March 15, 2019)

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

Less Than Significant Impact—Though the existing Santa Maria River Bridge is a dominant visual element in the immediate project vicinity, it is not a particularly memorable or architecturally unique structure. The existing bridge rail, however, does contribute to the rural visual character of the setting in terms of its age, open appearance, rail-and-picket style, and materials.

Proposed project elements above the bridge deck, such as the barrier and railing would be readily visible from the roadway. By themselves, these types of elements are common and would not be seen as unexpected visual elements in a highway setting. The new barrier and railing would be taller than the existing barrier. When seen with the wider road shoulders and pathway, the new barrier would increase the visual scale and engineered appearance of the structure. These new elements would create a more utilitarian appearance but would add a degree of visual clutter to the setting. As a result, these visual changes would cause a minor reduction of rural character and visual quality to the immediate project area. Though the project would remove existing riparian trees and other plants, any vegetation removed would be replaced and established. As a result, the riverbanks would be fully revegetated and result in a natural-appearing visual condition. Construction access roads and disturbed areas would be restored to natural-appearing landforms to reduce the noticeability of disturbance and engineered changes. (Visual Impact Assessment, March 15, 2019)

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

No Impact—The project would not include new lighting or sources of glare and would not affect daytime or nighttime views. (Visual Impact Assessment, March 15, 2019)

3.2.2 Agriculture and Forest Resources

CEQA Significance Determinations for Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in

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

Would the project:

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

Less Than Significant Impact—Based on maps of Santa Barbara County and San Luis Obispo County that were provided by the California Department of Conservation Farmland Mapping and Monitoring Program, the project is next to Prime Farmland. The project would convert some Prime Farmland to non-agricultural use.

Within Santa Barbara County, the project would require the partial acquisition of about 0.08 acre out of about a 15-acre farmland property, resulting in the loss of about 0.53 percent of farmable land. However, the partial acquisition is not expected to prevent the farmland property from continuing agricultural practice.

Within San Luis Obispo County, the project is expected to require partial property acquisition of about 0.97 acre out of about 590 acres shared between two farmland properties. However, the partial acquisition is not expected to prevent farmland properties from continuing agricultural practice.

Though the project would result in the minor acquisition of farmland, adequate compensation would be provided for property acquisition, including relocation assistance for residents and businesses as required by law. The project is not expected to be required to acquire the entire properties involved. Caltrans right-of-way agents would work with affected property owners to address issues of concern and compensation of their property's fair market value and any temporary loss of production due to the project. Additionally, avoidance and minimization measures (detailed in Section 2.1.1, Farmland) would be implemented to reduce potential impacts to farmland resources. (Farmland Assessment Memo, April 17, 2019)

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

Less Than Significant Impact—The project would convert land currently under a Williamson Act contract. In San Luis Obispo County, farmland surrounding the project area is within the Oso Flaco Agricultural Preserve. According to the California Department of Conservation, farmland within the agricultural preserve is classified as Williamson Act prime and non-prime agricultural land.

Assessor's Parcel Numbers 092-051-020 and 092-051-026 are within the Oso Flaco Agricultural Preserve and are currently under a Williamson Act contract. Because the project meets the necessary criteria allowing for the acquisition of Williamson Act-protected farmland (detailed in Section 2.1.1, Farmland), the project may partially acquire Williamson Act-protected farmland. Also, avoidance and minimization measures (detailed in Section 2.1.1, Farmland) would be implemented to reduce potential impacts to farmland resources. (Farmland Assessment Memo, April 2019)

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

No Impact—Based on San Luis Obispo County and Santa Barbara County zoning and land use maps, the project is not within any land that is zoned or used for forest land or timberland. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland.

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

No Impact—Based on San Luis Obispo County and Santa Barbara County zoning and land use maps, the project is not within any land that is zoned or used for forest land or timberland. Therefore, the project would not result in the loss 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?

Less Than Significant Impact—Though the project would partially acquire farmland that is next to the existing highway, the condition of unaffected farmlands in the project vicinity would not change as a result of the project. Also, no more existing agricultural land would be converted to non-agricultural use outside of the project limits. (Farmland Assessment Memo, April 17, 2019)

3.2.3 Air Quality

CEQA Significance Determinations for Air Quality

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

Would the project:

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

No Impact—The project is consistent with the attainment goals of the San Luis Obispo County Air Pollution Control District, as stated in the State Implementation Plan. (2001 Clean Air Plan and the 2012 CEQA Air Quality handbook amended in 2017)

The project is also consistent with the attainment goals of the Santa Barbara County Air Pollution Control District, as stated in the State Implementation Plan. (2015 Ozone Plan and the Scope and Content of Air Quality Sections in Environmental Documents amended in 2017)

The proposed bridge replacement project would not conflict with or obstruct implementation of an applicable air quality plan. (Air Quality and Greenhouse Gas Memo, April 10, 2018)

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

Less Than Significant Impact—Santa Barbara County is considered to be non-attainment of California Ambient Air Quality Standards for ozone and airborne particulate matter that is less than 10 microns in diameter. Santa Barbara County is in attainment of all National Ambient Air Quality Standards.

San Luis Obispo County is considered to be non-attainment of California Ambient Air Quality Standards for ozone and airborne particulate matter that is less than 10 microns in diameter. San Luis Obispo County is in the attainment of the California Ambient Air Quality Standards for particulate matter that is 2.5 microns in diameter. San Luis Obispo County is in the attainment of National Ambient Air Quality Standards for airborne particulate matter that is less than 10 microns in diameter and 2.5 microns in diameter. The eastern portion of San Luis Obispo County is considered to be non-attainment of the federal ozone standard, due to transient emissions originating mainly from the Bay Area and Central Valley.

The project would temporarily increase air emissions and fugitive dust during construction. However, due to the use of standard construction dust and emission minimization practices and procedures, it is expected that project

emissions of particulate matter (dust) and equipment emissions would be well within the daily thresholds of the Santa Barbara County Air Pollution Control District, and San Luis Obispo County Air Pollution Control District. Therefore, the project would not violate any air quality standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase of any criteria pollutants. (Air Quality and Greenhouse Gas Memo, April 10, 2018)

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact—It is expected that there would be no difference in long-term air emissions with or without the project. The project is in a mostly rural area, but habitable dwellings are found near the project limits within Santa Barbara County. The project would temporarily increase air emissions and fugitive dust during construction, which could affect sensitive receptors. However, due to the use of standard construction dust and emission minimization practices and procedures, it is expected that project emissions of particulate matter (dust) and equipment emissions would be well within the daily thresholds of the Santa Barbara County Air Pollution Control District, and San Luis Obispo County Air Pollution Control District. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations. (Air Quality and Greenhouse Gas Memo, April 10, 2018)

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

Less Than Significant Impact—The project is expected to produce some odors due to construction equipment and activities, but it is not expected to create objectionable odors. Odors resulting from project construction may be noticeable by nearby homes and to members of the public traveling through the project site during construction. Long-term emissions in the region are not expected to change with or without the project. Temporary construction emissions are expected to be well within the daily thresholds of the San Luis Obispo County Air Pollution Control District, and Santa Barbara County Air Pollution Control District.

Also, it is expected that sections of Caltrans' Standard Specifications that pertain to air pollution control, emission reduction, dust control, and dust palliative would be implemented for all construction activities, which would also effectively reduce the potential for objectionable odors.

3.2.4 Biological Resources

CEQA Significance Determinations for Biological Resources

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, or National Oceanic and Atmospheric Administration Fisheries?

Less Than Significant Impact with Mitigation Incorporated—The project is not expected to impact the La Graciosa thistle, a federally protected species. The project would temporarily impact up to 1.63 acres of federally designated La Graciosa thistle critical habitat, which represents less than 0.001 percent of the total designated critical habitat for the species. Temporary disturbances to federally designated critical habitat would be restored, and project-related restoration efforts are expected to improve existing habitat conditions.

Project activities that would occur in the river would only be allowed when the river is dry. The project is expected to avoid impacting steelhead species, which are federally listed as endangered. The project is expected to temporarily impact about 1.20 acres of Southern California steelhead critical habitat. Since the presence of the primary constituent elements of the critical habitat is entirely dependent on rains and whether water is released from the Twitchell Dam, work would only occur in the riverbed and bank when the river is dry. Project-related disturbances on the riverbed and bank would be minimized, and disturbed areas would be restored.

The project is expected to avoid impacting state or federally protected bird species because vegetation and tree removal activities would be conducted outside of the typical bird nesting season. Project construction activities do have the potential to temporarily disturb nesting bird species if they are present in the vicinity of the project area. Potential disturbances to protected bird species would be minimized, and replanting would be conducted to offset vegetation and tree removal.

The project has the potential to impact the California red-legged frog, a state Species of Special Concern and federally listed as threatened. The project would implement measures to avoid and minimize potential impacts to California red-legged frogs. The project is also expected to temporarily disturb potential critical habitats for the California red-legged frog. The project would restore critical habitat areas that have been temporarily disturbed by project activities.

The project would implement a variety of avoidance, minimization, and mitigation measures to reduce the potential impacts to special-status species and their associated habitat, as discussed in Section 2.3 of this document. These measures would include, but would not be limited to: conducting pre-construction surveys, avoiding sensitive areas, adjusting the construction schedule around species that are breeding or migratory seasons, restricting work when water is present in the river, removing non-native species, replanting native plants, monitoring species, restoring sites, enhancing habitats, and preserving habitats. All mitigation is expected to occur within existing project limits. (Natural Environment Study, November 22, 2019)

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

Less Than Significant Impact with Mitigation Incorporated—The project would temporarily impact up to 3.18 acres of Santa Maria River streambed and vegetated streambank. The project would also temporarily impact up to 6.63 acres of the existing riparian habitats within the project limits. Project-related work in the streambed, vegetated streambank and riparian habitats would occur during the dry season when the Santa Maria River is unlikely to be flowing. No wetlands or sensitive natural communities were identified during biological field surveys. Project activities are not expected to impact wetlands or sensitive natural communities.

The project is expected to permanently affect riparian habitats because of the new bridge structure within the channel of the Santa Maria River. However, the permanent footprint of the new bridge structure would be less than the existing bridge structure. The project would reduce human-made elements in the river channel; the project could also improve existing riparian habitat conditions. Though the project is expected to permanently impact riparian habitats, the project would result in a net benefit for riparian habitats. Therefore, mitigation for riparian habitats is not expected.

Streambank and riparian vegetation removed by project activities would be revegetated with a native plant seed mix that consists of the existing natural community. Any trees removed because of the project would be replanted at a 1 to 1 ratio or 3 to 1 ratio, depending on the tree species and size. All construction-related disturbances in the streambed would be regraded to match the conditions of the existing streambed.

The project is not expected to substantially impact streambed, vegetated streambank, or riparian habitats. The project would implement avoidance, minimization, and mitigation measures for potential temporary impacts caused by construction activities. These measures would include, but would not be limited to identifying habitats, avoiding and minimizing construction

activities within the project area, minimizing areas of disturbance, removing non-native species, replanting native plants, restoring sites, enhancing habitats, preserving habitats, and improving landscapes. Project-related mitigations are expected to occur within existing project limits. (Natural Environment Study, November 22, 2019)

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

No Impact—A wetland delineation was performed for the project, and no state or federally protected wetlands were identified within the project limits. Therefore, the project would not affect wetlands.

However, the project is within a river channel, and work would occur around areas identified as riparian. The project would include measures to avoid and minimize disturbances to riparian areas and the river channel. (Natural Environment Study, November 22, 2019)

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

Less Than Significant Impact—Detailed discussions regarding native resident wildlife species are found in Section 2.3 of this document.

The project is not expected to cause additional restrictions to wildlife movement in the project area. The project would realign a roadway segment and build a new bridge that would be similar to existing roadway and bridge conditions. The new roadway segment and bridge structure would still allow for continued wildlife access within the project area.

The project is not expected to increase impediments to existing native resident wildlife, migratory wildlife corridors, or access to native wildlife nursery sites. The new bridge structure would require less structural elements in the river channel, which would reduce potential impediments to wildlife movement in the river channel.

The project has the potential to temporarily disturb established native resident wildlife. It is expected that the following wildlife are potentially using the project area and have the potential to be temporarily disturbed or displaced during project construction: American badger, Coast horned lizard, Northern California legless lizard, pallid bat, western red bat, Townsend’s big-eared bat, and nesting birds. The project would include measures to avoid and minimize potential temporary impacts to wildlife species. Restoring habitat and reducing human-made elements in the Santa Maria River channel have the potential to improve wildlife use of the project area. (Natural Environment Study, November 22, 2019)

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

Less Than Significant Impact—Based on available general plans for San Luis Obispo County and Santa Barbara County, both counties have policies to protect riparian zones. The project would temporarily impact riparian zones; appropriate avoidance and minimization measures would be incorporated as described in Section 2.3.

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

No Impact—Based on available information from San Luis Obispo County and Santa Barbara County mapping data, the project is not within or next to a habitat conservation plan, natural community plan, or other approved local, regional, or state habitat conservation plan.

3.2.5 Cultural Resources

CEQA Significance Determinations for Cultural Resources

Would the project:

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

No Impact—The Santa Maria River Bridge was determined to be a Category 5 Bridge in the Caltrans Statewide Historic Bridge Inventory and is not considered a historic resource for the purposes of CEQA. There are no other historic resources within the project's area of potential effects. Therefore, the project would not cause a substantial adverse change in the significance of a historical resource. (Cultural Resources Review, September 23, 2019)

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

No Impact—The field survey did not detect the presence of any archaeological resources on the surface. The survey also confirmed the substantial level of disturbance the project site has witnessed from past construction activities, suggesting a low probability for intact subsurface archaeological deposits. Therefore, the project would not cause a substantial adverse change in the significance of an archaeological resource. (Cultural Resources Review, September 23, 2019)

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

No Impact—Due to the high level of ground disturbance around the project site, there is a low probability that human remains would be encountered during construction. Therefore, the project is not expected to disturb human remains. If the project encounters human remains, California Health and Safety Code Section 7050.5 states that further disturbances and activities would stop in any area suspected to overlie remains, and the county coroner must be contacted. If the coroner thinks the remains are Native American, he or she would notify the Native American Heritage Commission, which, per Public Resources Code Section 5097.98, would then notify the Most Likely Descendant. The person who discovers the remains would contact the District 5 Environmental Branch staff, so that they may work with the Most Likely Descendant on the respectful treatment and disposition of the remains. (Cultural Resources Review, September 23, 2019)

3.2.6 Energy

CEQA Significance Determinations for Energy

Would the project:

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

Less Than Significant Impact—The project would include Caltrans' standard practices and reasonable measures that would reduce wasteful, inefficient, and unnecessary consumption of energy and non-renewable resources during project construction, such as turning off idling equipment and limiting the transportation of materials. The project is not expected to require wasteful, inefficient, or unnecessary consumption of energy resources during project construction that could potentially result in significant environmental impacts.

When compared with the existing deteriorating bridge structure, the new bridge structure is expected to require less maintenance and less energy to operate. The new bridge is not expected to require excessive consumption of energy resources to operate.

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

No Impact—The project would not conflict with or obstruct state or local energy plans (see Section 3.3, Climate Change).

3.2.7 Geology and Soils

CEQA Significance Determinations for Geology and Soils

Would the project:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the state geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

Less Than Significant Impact—The potential for fault rupture is absent from the project site. According to the Alquist-Priolo Earthquake Fault Zoning Map, there are no known active faults in or near the immediate project area. The project is in an area with a low potential for seismic-related ground failure. The nearest fault is the San Luis Range-Oceano fault, which is about 2.8 miles from the project site. (Structures Preliminary Geotechnical Report, November 7, 2016)

ii) Strong seismic ground shaking?

Less Than Significant Impact—California is subject to earthquakes, and the project area would experience strong seismic ground shaking in a large earthquake. However, the project would be designed according to Caltrans' seismic standards, as provided in the Highway Design Manual, minimizing the risk from strong seismic ground shaking. (Structures Preliminary Geotechnical Report, November 7, 2016)

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact—The project has the potential for liquefaction due to soil composition in the river channel. A detailed analysis of the liquefaction susceptibility would be undertaken as part of the preliminary design work to identify appropriate design measures. The project would be designed to resist the effects of liquefaction by using Caltrans' current seismic design standards. (Structures Preliminary Geotechnical Report, November 7, 2016)

iv) Landslides?

Less Than Significant Impact—Based on a topographic map of the project area, the project site is in a flat area and away from any steep slopes. Also, the project would not involve large cuts or fills with steep slopes that could potentially cause landslides.

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

Less Than Significant Impact—Ground-disturbing earthwork associated with construction could increase soil erosion rates and the loss of topsoil. The potential for erosion is minimal because of the types of soil present in the project area. The Best Management Practices described in Section 2.2.1, Water Quality and Stormwater Runoff, would further minimize erosion and 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 onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact—The project is not expected to be on unstable soils, and the project would not result in onsite or offsite landslide, lateral spreading, subsidence, or collapse. The project does have the potential for liquefaction, which could create unstable soils. However, a detailed analysis of the liquefaction susceptibility would be undertaken as part of the preliminary design work. Also, the bridge, including the foundation, would be designed to minimize impacts from liquefaction and unstable soils. (Structures Preliminary Geotechnical Report, November 7, 2016)

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

Less Than Significant Impact—Expansive soils are not expected to be found within the project site. Preliminary Geotechnical investigations have not indicated the presence of expansive soils within the project area. (Structures Preliminary Geotechnical Report, August 19, 2016)

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

No Impact—The project does not involve the construction or installation of septic tanks or alternative wastewater disposal systems.

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

No Impact—The project would not directly or indirectly destroy paleontological resources because none are expected within the project site. There are also no unique geologic features within the project limits. (Paleontology Review, July 26, 2018)

3.2.8 Greenhouse Gas Emissions

CEQA Significance Determinations for Greenhouse Gas Emissions

Would the project:

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

Less Than Significant Impact—The project would not add travel lanes or change vehicle miles traveled and would not change existing greenhouse gas emissions. The project is considered to be a roadway improvement project and would not increase operational greenhouse gas emissions.

Construction activities would generate temporary greenhouse gas emissions. Construction equipment emissions would be generated at different levels during the construction phase. Construction equipment emissions would stop at the end of project construction and are not expected to significantly impact the environment.

All construction activities would include Caltrans' Standard Specifications and Standard Special Provisions to comply with all district rules, regulations, ordinances, and statutes of the California Air Resources Board to reduce construction greenhouse gas emissions (i.e., restrictions on idling equipment, properly maintained equipment, and appropriate materials source point, etc.).

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

Less Than Significant Impact—The project would not conflict with existing plans, policies, or regulations adopted for the purpose of reducing the emissions of greenhouse gases.

All construction activities would include Caltrans' Standard Specifications and Standard Special Provisions to comply with all district rules, regulations, ordinances, and statutes of the California Air Resources Board to reduce construction greenhouse gas emissions (i.e., restrictions on idling equipment, properly maintained equipment, and appropriate materials source point, etc.).

3.2.9 Hazards and Hazardous Materials

CEQA Significance Determinations for Hazards and Hazardous Materials

Would the project:

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

Less Than Significant Impact—During project construction, the project may use and/or encounter potentially hazardous substances (i.e., petroleum-derived products, industrial chemicals, compounds, and materials, etc.) These materials would be transported into and out of the project site as needed.

Any potentially hazardous substance used and/or encountered during construction would be regulated and controlled to ensure that its potential for affecting the public or the environment would be avoided and/or minimized as required under Caltrans' Standard Specifications and to comply with state and federal requirements.

If project construction encounters an unknown substance, appropriate testing would be conducted. If the substance is hazardous, it would be treated and handled appropriately, as required under Caltrans' Standard Specifications, and to comply with state and federal requirements.

The project is not expected to cause significant hazards to the public or the environment. (Hazardous Waste Initial Site Assessment Memo, March 9, 2018)

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

Less Than Significant Impact—Project construction activities could spill and/or release potentially hazardous substances. The project would incorporate Caltrans' Standard Specifications to prevent and manage spills and releases to reduce hazardous substances' potential of significantly affecting the public or 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?

Less Than Significant Impact—Based on available online mapping for the city of Guadalupe, the project is about 0.25 mile northeast from Mary Buren Elementary School. Operation equipment would produce emissions and air pollutants, but the concentrations of emissions and air pollutants are not expected to reach levels considered to be hazardous (see Section 3.2.8). The

project would also incorporate Caltrans' Standard Specifications to minimize and reduce potential emissions and air pollutants generated from equipment operations.

During construction, the project may use and/or encounter potentially hazardous substances (i.e., petroleum-derived products, industrial chemicals, compounds, and materials, etc.). Any potentially hazardous substance used and/or encountered during construction would be regulated and controlled to ensure that its potential for affecting the public or the environment would be avoided and/or minimized, as required under Caltrans' Standard Specifications, and to comply with state and federal requirements.

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

No Impact—A search of databases compiled per Government Code Section 65962.5 did not identify any known hazardous waste sites within the project limits. (Hazardous Waste Initial Site Assessment Memo, March 9, 2018)

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

No Impact—Based on planning department maps of San Luis Obispo County and Santa Barbara County, the project is not within an airport land use plan, and it is not within 2 miles of a public airport, public-use airport, or a private airstrip.

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

No Impact—The project would keep State Route 1 open during construction by maintaining two lanes in either direction for traffic and emergency service use. The project would include Caltrans' Standard Specifications and Standard Special Provisions to ensure that construction activities would not impair emergency services or emergency plans in the area. Caltrans' resident engineer would maintain communications with local emergency service providers and planners during project construction to minimize potential delays to emergency responses or evacuations.

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

No Impact—Based on available Fire Hazard Severity Zone Maps for San Luis Obispo County and Santa Barbara County, the project site is not within

wildlands or in an area that is at considerable risk for wildland fires. The project site is surrounded mostly by agricultural and residential land uses.

3.2.10 Hydrology and Water Quality

CEQA Significance Determinations for Hydrology and Water Quality

Would the project:

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

Less Than Significant Impact—During project construction, a variety of activities would occur next to, above, and within the Santa Maria River channel. Construction-related activities could result in temporary and intermittent impacts on water quality because fugitive dust and other materials may enter the river channel.

Though the Santa Maria River is dry for most of the year, the project plans to conduct all work in the river during the dry season, when there is a very low chance for water to be in the river. If water is present during the dry season, appropriate temporary avoidance and minimization measures may be used to ensure construction activities would not significantly affect the river or water quality.

The project would incorporate appropriate permanent and temporary Best Management Practices to prevent and reduce impacts to water quality caused by project activities. Also, the project would include Caltrans' Standard Specifications and Standard Special Provisions to avoid and minimize impacts to water quality caused by project activities.

The project would not discharge wastewater. Portable toilets would be placed in the project site at a considerable distance away from the river channel. Any liquid waste generated from project-related activities would be collected, contained, and disposed of in a manner that is appropriate for the substance. (Water Quality Assessment Memo, July 25, 2018).

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

No Impact—The project would not involve activities that would require excessive volumes of water that would substantially decrease local groundwater supplies. The project would not involve activities that would interfere with groundwater recharge or impede sustainable groundwater management of the local basin.

The project would replant as part of measures for biological resources. Caltrans complies with water conservation requirements set by an executive order issued during Governor Jerry Brown's term and maintains a goal of reducing water consumption by 50 percent compared to 2013 baseline usage. Caltrans often plants California native plant species and designs temporary irrigation systems to minimize water consumption.

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

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

Less Than Significant Impact—The project would involve earthwork and excavations as part of the bridge demolition and construction process. Construction of the new abutments would require additional fill and grading. However, the project would incorporate the appropriate erosion control measures during construction, along with implementing permanent and temporary Best Management Practices to reduce the potential for erosion or siltation onsite or offsite. (Water Quality Assessment, July 25, 2018)

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

Less Than Significant Impact—The project would increase the total of impervious surface area within the project limits. However, the project is not expected to change the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation onsite or offsite. The project also would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding onsite or offsite. (Location Hydraulic Study, January 10, 2019)

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

Less Than Significant Impact—Though the new bridge structure would increase the total impervious surface area within the project limits, the additional amount of runoff water associated with the new bridge is not expected to exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional resources of polluted runoff. Also, the project would incorporate permanent Best Management Practices to control potential runoff water associated with the new bridge structure. (Water Quality Assessment Memo, July 25, 2018)

iv) Impede or redirect flood flows?

No Impact—The project would involve replacing an existing bridge in the Santa Maria River channel and is not expected to impede or redirect flood flows in the area. The project is in a flood zone where the base flood elevation is not determined. The new bridge structure would reduce the number of piers in the river channel, which would potentially improve water flow in the river channel during a flood event.

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

No Impact—The project is not within a designated flood hazard zone or the reach of a tsunami. (Location Hydraulic Study, January 10, 2019)

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

No Impact—The project region is regulated by the Central Coast Regional Water Quality Control Board and the Central Coast Basin Plan. The project would comply with applicable regulations and policies that pertain to the protection of water resources in the region.

The project would coordinate with and would be required to comply with, but would not be limited to California Fish and Game Code Section 5650, California Department of Fish and Wildlife Section 1601, U.S. Army Corps of Engineers Section 404 permit, and Regional Water Quality Control Board 401 Certification. (Water Quality Assessment Memo, July 25, 2018)

3.2.11 Land Use and Planning

CEQA Significance Determinations for Land Use and Planning

Would the project:

a) Physically divide an established community?

No Impact—The project would replace the existing deteriorating Santa Maria River Bridge to ensure the continued operation of State Route 1 and would not divide an established community.

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

No Impact—Most project activities would occur within the existing state right-of-way. The project would require temporary construction easements and new rights-of-way for roadway adjustments. However, temporary construction easements and new rights-of-way associated with the project are not

expected to conflict with any existing land use plan, policy, or regulation adopted for the purpose of mitigating an environmental effect.

3.2.12 Mineral Resources

CEQA Significance Determinations for Mineral Resources

Would the project:

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

No Impact—Based on mapping provided by the California Department of Conservation, there are no mineral resources that would be of value to the region and the residents of the state within the project area.

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

No Impact—Based on the general plan for the city of Guadalupe and the Santa Barbara County Comprehensive Plan, there are no existing or planned resource recovery sites in the project area.

3.2.13 Noise

CEQA Significance Determinations for Noise

Would the project result in:

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

Less Than Significant Impact—The project is not expected to permanently change existing noise levels in the area or cause permanent noise impacts to nearby receptors.

Noise generated during project construction, which would vary with the activity and proximity to nearby receptors, would be temporary and intermittent and is not expected to generate adverse noise impacts in the project area.

The project would include Caltrans' Standard Specifications and Standard Special Provisions that pertain to noise control and minimization measures to reduce the project's potential to generate noise impacts. The project would comply with all applicable state sound control and noise level rules, regulations, and ordinances. (Noise Study Report, October 18, 2018)

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

Less Than Significant Impact—The project would require the installation of piles as part of the new bridge construction. Piles may be driven, drilled, or vibrated in place, all of which have the potential to generate temporary groundborne vibrations within the project area. The project would require pavement removal during construction, which may involve the use of jackhammers and grinders, both of which would generate temporary groundborne vibrations. Pile installations and pavement removal would occur in segments during project construction, each lasting a few days; they are not expected to result in excessive groundborne vibrations or noise levels. The project would include Caltrans' Standard Specifications and Standard Special Provisions that pertain to noise and vibration control. (Noise Study Report, October 18, 2018)

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact—Based on the available online mapping of the city of Guadalupe, the project is not within an airport land use plan and is not within 2 miles of a public airport, public-use airport, or private airstrip.

3.2.14 Population and Housing

CEQA Significance Determinations for Population and Housing

Would the project:

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

No Impact—The project would build a new bridge structure on a new alignment without changing the current highway capacity. It would not change accessibility or influence growth. No direct or indirect impacts on growth would occur.

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

Less Than Significant Impact—The project would build a new bridge structure on a new alignment and would require adjustments to the roadway. The project would require partial property acquisition for additional rights-of-way. However, the amount of partial property acquisition required for the

project is not expected to result in the displacement of existing homes or businesses.

3.2.15 Public Services

CEQA Significance Determinations for Public Services

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

Fire protection?

No Impact—The project would replace an existing bridge with a new bridge structure on a new alignment. The project would not require the alteration or creation of facilities related to fire protection.

Police protection?

No Impact—The project would replace an existing bridge with a new bridge structure on a new alignment. The project would not require the alteration or creation of facilities related to police protection.

Schools?

No Impact—The project would replace an existing bridge with a new bridge structure on a new alignment. The project would not require the alteration or creation of facilities related to schools.

Parks?

No Impact—The project would replace an existing bridge with a new bridge structure on a new alignment. The project would not require the alteration or creation of facilities related to parks.

Other public facilities?

No Impact—The project would replace an existing bridge with a new bridge structure on a new alignment. The project would not require the alteration or creation of facilities related to other public facilities.

3.2.16 Recreation

CEQA Significance Determinations for Recreation

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

No Impact—The project would replace the existing bridge with a new bridge structure on a new alignment. The project would not increase the use of existing neighborhood parks or regional parks.

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

No Impact—The project would replace the existing bridge with a new bridge structure on a new alignment. It would not include the construction of a new recreational facility or expansion of existing facilities.

3.2.17 Transportation

CEQA Significance Determinations for Transportation

Would the project:

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

Less Than Significant Impact—Construction activities could result in delays for vehicle drivers, cyclists, and pedestrians during construction. However, traffic control would be used to ensure that State Route 1 remains open to vehicles, cyclists, and pedestrians during the construction of the replacement bridge, which would minimize delays. The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. This takes 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, and pedestrian and bicycle paths. The project would ensure the new bridge is structurally sound and would maintain the safe operation of the highway system and provide a new pathway for multimodal use.

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

Less Than Significant Impact—The project is in an existing high transit corridor (State Route 1) and is not expected to significantly change vehicle

miles traveled. The project may result in temporary traffic delays during construction.

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

No Impact—The project would comply with the current Highway Design Manual standards. The design and operation of the new bridge structure would not include hazardous design features or result in incompatible uses.

d) Result in inadequate emergency access?

Less Than Significant Impact—Construction staging and construction activities could result in temporary minor delays for emergency service providers that use State Route 1. However, traffic control would be used to ensure that State Route 1 remains open to emergency vehicles during the construction of the replacement bridge, which would minimize delays. The need for any temporary lane closures would be communicated to the appropriate fire, law enforcement, and other emergency service agencies to ensure the continuation of adequate service. A Transportation Management Plan would be implemented and would assist emergency services during project construction to minimize response time delays.

3.2.18 Tribal Cultural Resources

CEQA Significance Determinations for Tribal Cultural Resources

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

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

No Impact—No tribal cultural resources have been identified or are expected to be found in the project area. (Cultural Resources Review, September 23, 2019)

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

No Impact—Consultation with the Native American Heritage Commission and various Native American tribes was conducted for the project. As part of the consultation, letters describing the project and a request for comment and information on Native American concerns were sent on December 19, 2018.

No responses have been received to date. Also, no tribal cultural resources have been identified in the project area, and none are expected to be found. (Cultural Resources Review, September 23, 2019)

3.2.19 Utilities and Service Systems

CEQA Significance Determinations for Utilities and Service Systems

Would the project:

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

Less Than Significant Impact—The project would not relocate or build water, wastewater, stormwater, or natural gas facilities. The project would not relocate telecommunication lines.

Temporary and permanent utility relocations are expected for electrical power lines within the project limits. Utilities would be relocated to ensure their avoidance during project construction. It is expected that temporary and permanent utility relocations would not result in significant environmental impacts. The Caltrans Right-of-Way Manual provides guidance on managing and processing utility relocations to minimize potential impacts to the environment. The project would also have to comply with the Federal Utility Relocation and Accommodation on Federal-Aid Highway Projects Program Guide. Also, disturbances associated with utility relocation would be minimized because the project would restore disturbed areas at the end of project construction.

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

Less Than Significant Impact—The project would use minimal water during construction operations, and water would not need to be supplied for bridge operations.

The project would include replanting as part of measures for biological resources. Caltrans often uses plants that are California native species and are not expected to require excessive water to establish. During replanting, temporary irrigation systems may be required and would be designed to minimize water use.

Caltrans complies with water conservation requirements set by State Executive Orders issued during Governor Jerry Brown's term and maintains a goal of reducing water consumption by 50 percent compared to 2013 baseline usage.

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

No Impact—The project would replace an existing bridge over the Santa Maria River on State Route 1 and would not generate wastewater. Portable restrooms would be used during project construction.

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

No Impact—The project would not generate substantial amounts of solid waste. Project waste would be disposed of at appropriate waste disposal sites that are able to accommodate the waste materials. The project would not generate solid waste during operation.

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

No Impact—The project would comply with federal, state, and local statutes and regulations related to solid waste. Also, the project would not generate substantial amounts of solid waste during construction and would not generate any solid waste during the long-term operation of the bridge.

3.2.20 Wildfire

CEQA Significance Determinations for Wildfire

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

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

Less Than Significant Impact—During construction, any emergency response or evacuation plan requiring access to the project site may encounter delays. Construction staging and construction activities could result in temporary or minor delays to emergency responses or emergency evacuations in the project area. However, traffic control would be implemented to ensure that State Route 1 remains open to emergency vehicles during bridge construction to minimize potential delays. During project construction, the need for any temporary lane closures would be communicated to the appropriate emergency responders and other emergency service agencies to ensure appropriate planning is in place. A Transportation Management Plan would be implemented to help minimize emergency services or emergency evacuation actions. At project completion, any existing emergency response plans or emergency evacuation plans are not expected to change.

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

Less Than Significant Impact—According to the San Luis Obispo County and Santa Barbara County Fire Hazard Severity Zone Map, the project is not within an area identified as a high fire hazard severity zone because the surrounding area is identified as mostly agricultural. The project could expose workers to fire risk and hazards during construction. Construction of the project could create an unintended fire. However, during the construction phase, standard precautions to prevent fire incidents would be used in accordance with California Division of Occupational Safety and Health Fire Protection and Prevention guidance.

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

Less Than Significant Impact—The project would require temporary and permanent utility relocations. The utility relocations are not expected to exacerbate fire risk that may result in temporary or ongoing impacts to the environment. Utility relocations would follow the standards in the Caltrans

Right-of-Way Manual and the Federal Utility Relocation and Accommodation on Federal-Aid Highway Projects Program Guide.

During utility relocations, there is the potential for unintended fires. However, adequate safety precautions would be used to prevent fire incidents in accordance with the California Division of Occupational Safety and Health Fire Protection and Prevention guidance.

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

No Impact—Based on available topographic maps, the landscape of the region is flat, with no nearby hills or mountains, so the project would not be exposed to potential landslides. If post-fire conditions are found upstream from the project site, there is low potential for post-fire debris, materials, and runoff to pose a risk to the project site by way of the river. In the event of an emergency, it is expected that the project site would be evacuated as part of the code of safe practices.

3.2.21 Mandatory Findings of Significance

CEQA Significance Determinations for Mandatory Findings of Significance

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

Less Than Significant Impact with Mitigation Incorporated—Detailed discussions regarding the existing environment, species, and habitat that could be affected by the project, and expected project measures, are found in Chapter 2 of this document.

The project would result in a combination of direct and indirect effects on biological resources as a result of temporary and permanent project-related impacts. The project could affect several species that have the potential to be found within the project area. The project could also affect potential species habitat within the project area. However, the project would incorporate avoidance, minimization, and/or mitigation measures that would reduce or offset any potential project-related impacts to biological resources.

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

Less Than Significant Impact—Detailed discussions regarding potential cumulative impacts, as a result of the project, are discussed in Section 2.5.

The project would remove an existing bridge structure and build a new bridge structure on a nearby alignment. The new bridge structure would be similar in design and appearance to the existing bridge. Disturbances to environmental resources caused by the project are expected to be minor.

The project has the potential to contribute to cumulative impacts on biological species and habitat. The project would result in the permanent loss of potential species habitat. Project construction activities could kill individual special-status species. However, due to the marginal quality of existing species habitat and the low potential for special-status species to occur within the project area, the project is not expected to result in substantial negative cumulative impacts on biological species and habitat.

The project would include measures that would remove non-native invasive species and restore disturbed areas with native vegetation. These efforts could cumulatively benefit existing habitats and native species.

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

Less Than Significant Impact—The project would remove an existing bridge structure and build a new bridge structure on a nearby alignment. The new bridge structure would be designed to meet Caltrans' design standards and would be similar in appearance to the existing bridge. The new bridge design is not expected to cause direct or indirect substantial adverse effects on people.

Temporary project construction activities have the potential to directly or indirectly affect people that are in the vicinity of the project. However, avoidance and minimization measures would be implemented during project construction to reduce the potential for direct or indirect impacts on people. Temporary construction-related disturbances are discussed in detail in Section 2.4.

3.3 Climate Change

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

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

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

3.3.1 Regulatory Setting

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

Federal

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

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

The Federal Highway Administration recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to transportation infrastructure and those who depend on it. The Federal

Highway Administration therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices. This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability." Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life.

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

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

The U.S. Environmental Protection Agency in conjunction with the National Highway Traffic Safety Administration is responsible for setting greenhouse gas emissions standards for new cars and light-duty vehicles to significantly increase the fuel economy of all new passenger cars and light trucks sold in the U.S. (U.S. Environmental Protection Agency *Endangerment and Cause or Contribute Findings for Greenhouse Gases under the Section 202(a) of the Clean Air Act)* The current standards require vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. The U.S. Environmental Protection Agency and National Highway Traffic Safety Administration are currently considering appropriate mileage and greenhouse gas emissions standards for 2022-2025 light-duty vehicles for future rulemaking.

The National Highway Traffic Safety Administration and the U.S. Environmental Protection Agency issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save

up to 2 billion barrels of oil and reduce carbon dioxide emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018-2027 vehicles.

State

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

- Executive Order S-3-05 (June 1, 2005): The goal of this order is to reduce California's greenhouse gas emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and Senate Bill 32 in 2016.
- Assembly Bill 32, Chapter 488, 2006, Núñez and Pavley, The Global Warming Solutions Act of 2006:32. This bill codified the 2020 greenhouse gas emissions reduction goals outlined in Executive Order S-3-05, while further mandating that the California Air Resources Board create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The legislature also intended that the statewide greenhouse gas emissions limit continue in existence and be used to maintain and continue reductions in emissions of greenhouse gases beyond 2020 (Health and Safety Code Section 38551(b)). The law requires the California Air Resources Board to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions.
- Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard for California. Under this order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. The California Air Resources Board re-adopted the low carbon fuel standard regulation in September 2015, and the changes went into effect on January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the governor's 2030 and 2050 greenhouse gas reduction goals.
- Senate Bill 375, Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization for each region must then develop a "Sustainable Communities Strategy" that integrates transportation, land use, and housing policies to plan how it will achieve the emissions target for its region.
- Senate Bill 391, Chapter 585, 2009, California Transportation Plan: This bill requires the state's long-range transportation plan to identify strategies to address California's climate change goals under Assembly Bill 32.

- Executive Order B-16-12 (March 2012): This order directed state entities under the direction of the governor, including the California Air Resources Board, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.
- Executive Order B-30-15 (April 2015): This order established an interim statewide greenhouse gas emissions reduction target of 40 percent below 1990 levels by 2030 to ensure California meets its target of reducing greenhouse gas emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of greenhouse gas emissions to implement measures, pursuant to statutory authority, to achieve reductions of greenhouse gas emissions to meet the 2030 and 2050 greenhouse gas emissions reduction targets. It also directs the California Air Resources Board to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalents. Finally, it requires the Natural Resources Agency to update the state's climate adaptation strategy, *Safeguarding California*, every 3 years, and to ensure that its provisions are fully implemented.
- Senate Bill 32, Chapter 249, 2016: This bill codifies the greenhouse gas reduction targets established in Executive Order B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.
- Senate Bill 1386, Chapter 545, 2016. This bill declared "it to be the policy of the state that the protection and management of natural and working lands is an important strategy in meeting the state's greenhouse gas reduction goals, and would require all state agencies, departments, boards, and commissions to consider this policy when revising, adopting, or establishing policies, regulations, expenditures, or grant criteria relating to the protection and management of natural and working lands."
- Assembly Bill 134, Chapter 254, 2017: This bill allocates Greenhouse Gas Reduction Funds and other sources to various clean vehicle programs, demonstration/pilot projects, clean vehicle rebates and projects, and other emissions-reduction programs statewide.
- Senate Bill 743, Chapter 386 (September 2013): This bill changes the metric of consideration for transportation impacts pursuant to CEQA from a focus on automobile delay to alternative methods focused on vehicle miles traveled, to promote the state's goals of reducing greenhouse gas emissions and traffic related air pollution and promoting multimodal transportation while balancing the needs of congestion management and safety.
- Senate Bill 150, Chapter 150, 2017, Regional Transportation Plans: This bill requires the California Air Resources Board to prepare a report that assesses progress made by each Metropolitan Planning Organization in

meeting their established regional greenhouse gas emissions reduction targets.

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

3.3.2 Environmental Setting

The project sits on the boundary of southern San Luis Obispo County and northern Santa Barbara County, just north of the city of Guadalupe. State Route 1 runs north-south through the city of Guadalupe and is a major road that serves the surrounding vicinity. The area surrounding the project location is mostly rural, but includes residential, commercial, and farming uses.

The city of Guadalupe is on a growth trend and is increasing its urban presence in the area. The Santa Barbara County Association of Governments' Regional Transportation Plan and the San Luis Obispo Council of Governments' Regional Transportation Plan guide transportation development in the area. The city of Guadalupe's 2040 Draft General Plan guides developments within the city limits.

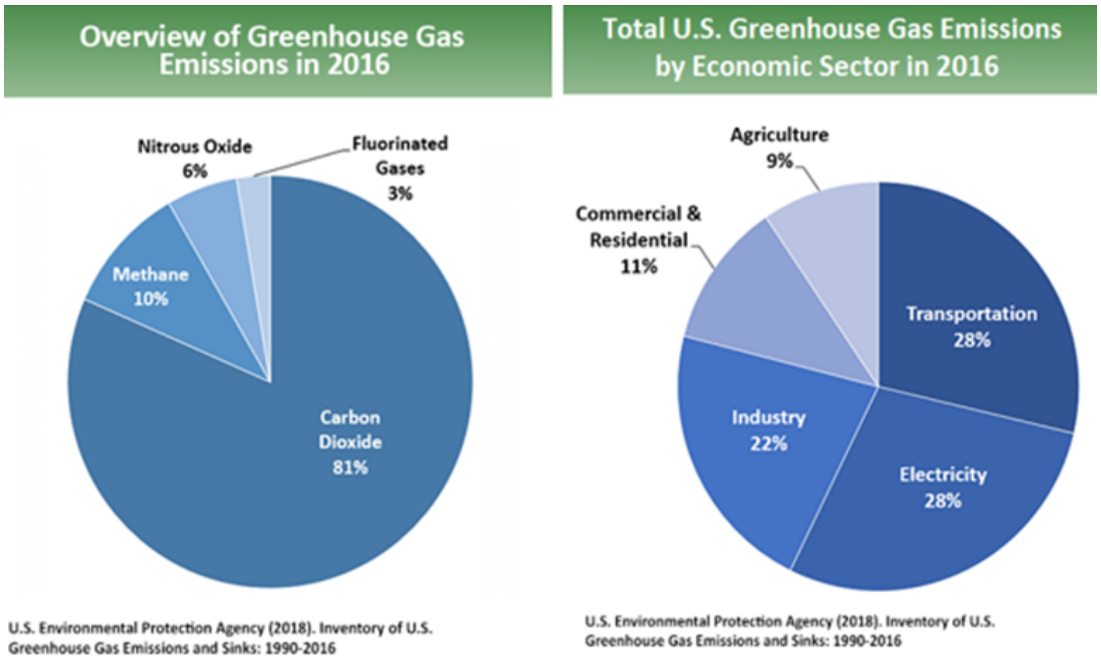
A greenhouse gas emissions inventory estimates the amount of greenhouse gases discharged into the atmosphere by specific sources over a period of time, such as a calendar year. Tracking annual greenhouse gas emissions allows countries, states, and smaller jurisdictions to understand how emissions are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

National Greenhouse Gas Inventory

The U.S. Environmental Protection Agency prepares a national greenhouse gas inventory every year and submits it to the United Nations in accordance with the Framework Convention on Climate Change. The inventory provides a comprehensive accounting of all human-produced sources of greenhouse gases in the U.S., reporting emissions of carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. It also accounts for emissions of carbon dioxide that are removed from the atmosphere by "sinks" such as forests, vegetation, and soils that uptake and store carbon dioxide (carbon sequestration). The 1990-2016 inventory found that of 6,511 million metric tons of carbon dioxide equivalent greenhouse gas emissions in 2016, 81 percent consists of carbon dioxide, 10 percent are methane, and 6 percent are nitrous oxide; the balance consists of fluorinated gases. In 2016, greenhouse gas emissions from the transportation

sector accounted for nearly 28.5 percent of U.S. greenhouse gas emissions (see Figure 3-1).

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



State Greenhouse Gas Inventory

The California Air Resources Board collects greenhouse gas emissions data for transportation, electricity, commercial/residential, industrial, agricultural, and waste management sectors each year (see Figure 3-2).

It then summarizes and highlights major annual changes and trends to demonstrate the state's progress in meeting its greenhouse gas reduction goals (see Figure 3-3).

Figure 3-2 California 2017 Greenhouse Gas Emissions

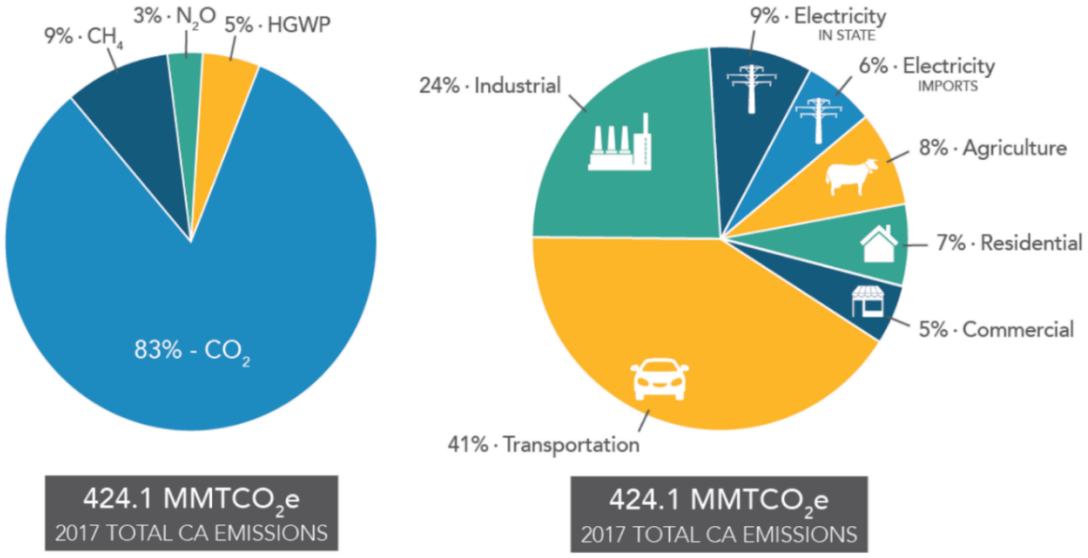
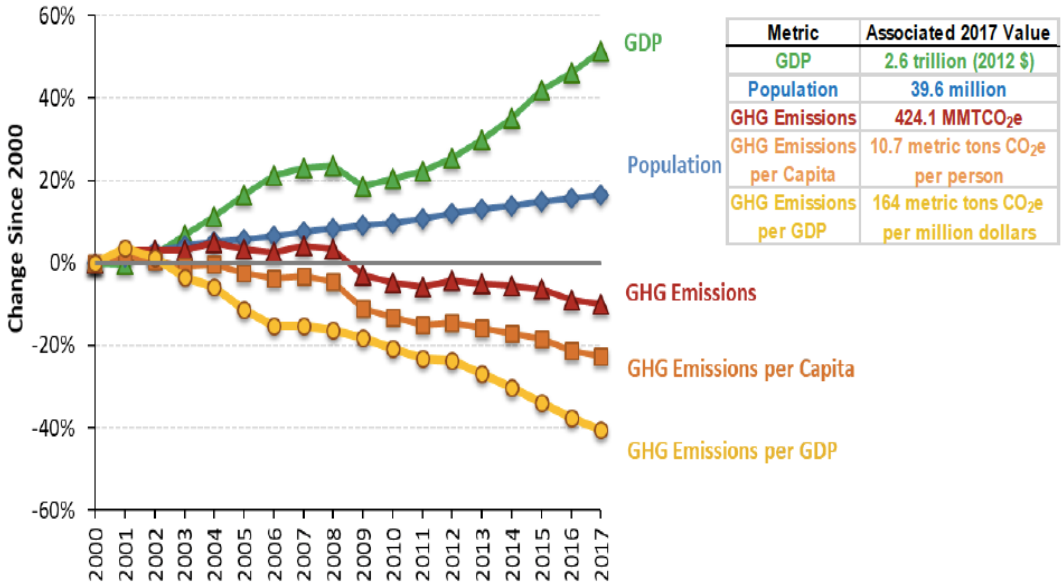


Figure 3-3 Change in California Gross Domestic Product, Population, and Greenhouse Gas Emissions Since 2000



Source: California Air Resources Board 2019

The 2019 edition of the greenhouse gas emissions inventory found total California emissions of 424.1 million metric tons of carbon dioxide equivalents for 2017, with the transportation sector responsible for 41 percent of total greenhouse gases. It also found that overall statewide greenhouse gas emissions declined from 2000 to 2017 despite growth in population and state economic output.

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

Regional Plans

The California Air Resources Board sets regional targets for California's 18 Metropolitan Planning Organizations to use in their Regional Transportation Plan/Sustainable Communities Strategies to plan future projects that will cumulatively achieve greenhouse gas reduction goals. Targets are set at a percent reduction of passenger vehicle greenhouse gas emissions per person from 2005 levels.

The proposed project is included in the San Luis Obispo Council of Governments' approved 2019 Federal Transportation Improvement Program, under the current project EA number. The project was included in the Santa Barbara County Association of Governments' approved 2040 Regional Transportation Plan (2017), within the Lump Sum - Local Agency - Highway Bridge Program and Seismic Project.

The regional reduction target for the Santa Barbara County Association of Governments is 13 percent by 2020 and 17 percent by 2035. The Santa Barbara County Comprehensive Plan, Energy Element, Goal 8.3, tells the county to implement the Energy and Climate Action Plan to reduce greenhouse gas emissions from community-wide sources by a minimum of 15 percent from 2007 baseline emissions by 2020. The Energy and Climate Action Plan includes greenhouse gas reduction measures such as T4—Enhance alternative and active transportation, T5—Complete an integrated bikeway system, and BE10—Implement Best Management Practices for construction equipment operation.

3.3.3 Project Analysis

Greenhouse gas emissions from transportation projects can be divided into those produced during operation of the state highway system and those

produced during construction. The main greenhouse gases produced by the transportation sector are carbon dioxide, methane, nitrous oxide, and hydrofluorocarbons. Carbon dioxide emissions are a product of the combustion of petroleum-based products, like gasoline, in internal combustion engines. Relatively small amounts of methane and nitrous oxide are emitted during fuel combustion. In addition, a small amount of hydrofluorocarbons emissions is included in the transportation sector.

The CEQA Guidelines generally address greenhouse gas emissions as a cumulative impact due to the global nature of climate change (Public Resources Code, Section 21083(b)(2)). As the California Supreme Court explained, “because of the global scale of climate change, any one project’s contribution is unlikely to be significant by itself.” (Cleveland National Forest Foundation v. San Diego Association of Governments (2017) 3 California 5th 497, 512) In assessing cumulative impacts, it must be determined if a project’s incremental effect is “cumulatively considerable.” (CEQA Guidelines Sections 15064(h)(1) and 15130)

To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. Although climate change is ultimately a cumulative impact, not every individual project that emits greenhouse gas must necessarily be found to contribute to a significant cumulative impact on the environment.

Operational Emissions

The purpose of the project is to address the structural deficiencies of the Santa Maria River Bridge to ensure the function and reliability of State Route 1. The project would not add travel lanes, increase the roadway’s vehicle capacity, or increase vehicle miles traveled. While some greenhouse gas emissions during the construction period would be unavoidable, no increase in operational greenhouse gas emissions is expected.

Construction Emissions

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

In addition, with innovations such as longer pavement lives, an improved Transportation Management Plan, and changes in materials, the greenhouse gas emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

Construction greenhouse gas emissions were estimated using Caltrans’ Construction Emissions Tool and default settings for a bridge replacement

project. The estimated carbon dioxide emissions would be 181 tons per year or a total of 368 tons generated over a period of about 24 months for project construction.

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

CEQA Conclusion

Although the project would result in a slight increase in greenhouse gas emissions during construction, the project would not result in an increase in operational greenhouse gas emissions after project completion.

The project does not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gas. The wider shoulders and dedicated bicycle/pedestrian path proposed by the project would accommodate multimodal use and support regional plans to improve cyclist access. With the implementation of construction greenhouse gas reduction measures, the project impact would be less than significant.

Caltrans is firmly committed to implementing measures to help reduce greenhouse gas emissions. These measures are outlined in the following section.

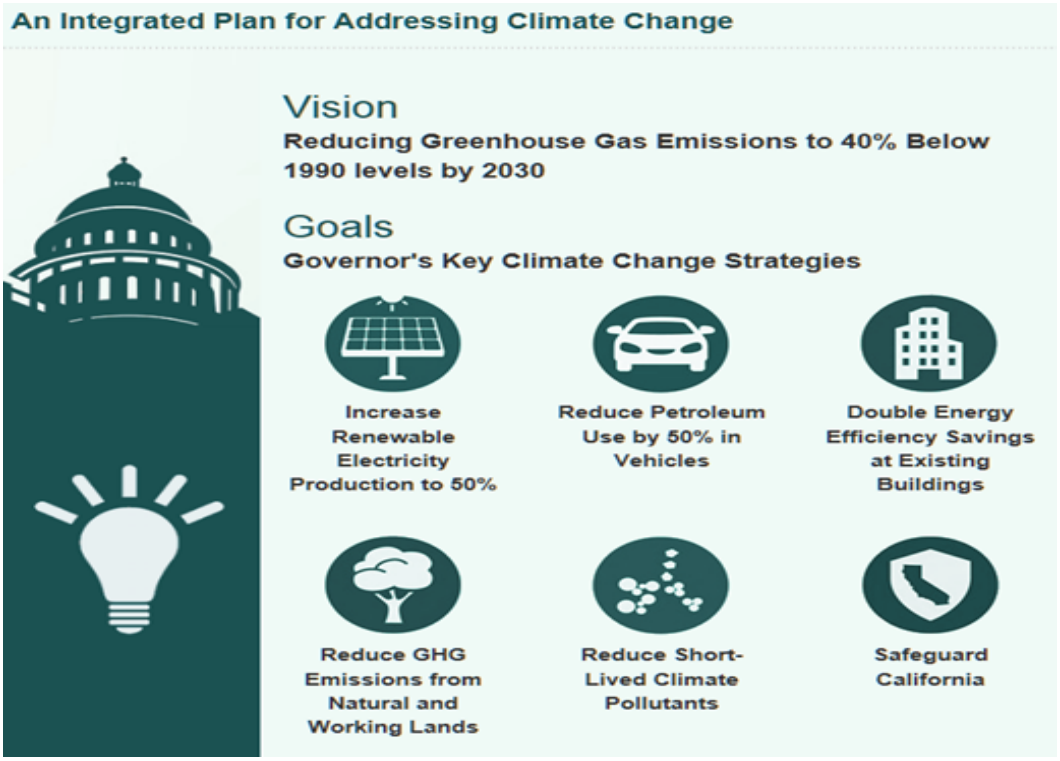
3.3.4 Greenhouse Gas Reduction Strategies

Statewide Efforts

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

Safeguarding California. These greenhouse gas reduction goals are shown in Figure 3-4.

Figure 3-4 California Climate Strategy



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

In addition, Senate Bill 1386 (Wolk 2016) established as state policy the protection and management of natural and working lands and requires state agencies to consider that policy in their own decision making. Trees and vegetation on forests, rangelands, farms, and wetlands remove carbon dioxide from the atmosphere through biological processes and sequester the carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the governor's Climate Action Team as the California Air Resources Board works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in Assembly Bill 32.

Executive Order B-30-15, issued in April 2015, and Senate Bill 32 (2016), set an interim target to cut greenhouse gas emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan 2040 (CTP 2040)

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

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

Caltrans Strategic Management Plan

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

- Increasing the percentage of non-auto mode share
- Reducing vehicle miles traveled
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) greenhouse gas emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce greenhouse gas emissions, Caltrans also administers several sustainable transportation planning grants. These grants encourage local and regional multimodal transportation, housing, and land use planning that furthers the region's Regional Transportation Plan/Sustainable Communities Strategy;

contribute to the state's greenhouse gas reduction targets and advance transportation-related greenhouse gas emissions reduction project types/strategies; and support other climate adaptation goals (e.g., *Safeguarding California*).

Caltrans Policy Directives and Other Initiatives

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

Project-Level Greenhouse Gas Reduction Strategies

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

- The project would include a Transportation Management Plan that would reduce delays and related short-term increases in greenhouse gas emissions from disruptions in traffic flow. Also, in the event that portable changeable message signs are required as part of the Transportation Management Plan, message signs would be solar powered when possible and would not result in greenhouse gas emissions during use.
- Caltrans Standard Specifications Section 14-9, Air Quality, a part of all construction contracts, requires contractors to comply with all federal, state, regional, and local rules, regulations, and ordinances related to air quality. Requirements of the Santa Barbara County Air Pollution Control District will apply to this project. Requirements that reduce vehicle emissions, such as limits on idling time, may help reduce greenhouse gas emissions.
- The project proposes to revegetate previously undisturbed areas, where applicable, following construction completion. Landscaping reduces surface warming and, through photosynthesis, removes carbon dioxide from the atmosphere.
- The project proposes to add a separated bicycle/pedestrian path, which will support the use of active transportation modes.
- The project would reduce the need for transport of earthen materials by balancing cut and fill quantities.
- The project would reduce construction waste and maximize the use of recycled materials.
- The project would use appropriately sized equipment for project activities.

- The project would maintain equipment in proper tune and working condition.
- The project would limit idling to five minutes for delivery and dump trucks and other diesel-powered equipment.
- The project would use compost as part of post-construction restoration efforts where it is deemed appropriate and feasible.

3.3.5 Adaptation

Reducing greenhouse gas emissions is only one part of an approach to addressing climate change. Caltrans must plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and an increase in the frequency and intensity of wildfires. Flooding and erosion can damage or wash out roads. Longer periods of intense heat can buckle pavement and railroad tracks. Storm surges combined with a rising sea level can inundate highways. Wildfire can directly burn facilities and indirectly cause damage when rain falls on denuded slopes that landslide after a fire. Effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. Accordingly, Caltrans must consider these types of climate stressors in how highways are planned, designed, built, operated, and maintained.

Federal Efforts

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

The U.S. Global Change Research Program delivers a report to Congress and the president every 4 years, in accordance with the Global Change Research Act of 1990 (15 U.S. Code Chapter 56A Section 2921 et seq). The *Fourth National Climate Assessment,* published in 2018, presents the foundational science and the "human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways." Chapter 12, "Transportation," presents a key discussion of vulnerability assessments. It notes that "asset owners and operators have increasingly conducted more focused studies of particular assets that consider multiple climate hazards and scenarios in the context of asset-specific information, such as design lifetime."

The U.S. Department of Transportation Policy Statement on Climate Adaptation in June 2011 committed the federal Department of Transportation

to “integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of the Department of Transportation to ensure that taxpayer resources are invested wisely, and that transportation infrastructure, services, and operations remain effective in current and future climate conditions.”

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

State Efforts

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system. *California’s Fourth Climate Change Assessment (2018)* is the state’s effort to “translate the state of climate science into useful information for action” in a variety of sectors at both statewide and local scales. It adopts the following key terms used widely in climate change analysis and policy documents:

- *Adaptation* to climate change refers to adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.
- *Adaptive capacity* is the “combination of the strengths, attributes, and resources available to an individual, community, society, or organization that can be used to prepare for and undertake actions to reduce adverse impacts, moderate harm, or exploit beneficial opportunities.”
- *Exposure* is the presence of people, infrastructure, natural systems, and economic, cultural, and social resources in areas that are subject to harm.
- *Resilience* is the “capacity of any entity—an individual, a community, an organization, or a natural system—to prepare for disruptions, to recover from shocks and stresses, and to adapt and grow from a disruptive experience.” Adaptation actions contribute to increasing resilience, which is a desired outcome or state of being.
- *Sensitivity* is the level to which a species, natural system, or community, government, etc., would be affected by changing climate conditions.
- *Vulnerability* is the “susceptibility to harm from exposure to stresses associated with environmental and social change and from the absence of capacity to adapt.” Vulnerability can increase because of physical (built and environmental), social, political, and/or economic factor(s). These

factors include, but are not limited to: ethnicity, class, sexual orientation and identification, national origin, and income inequality. Vulnerability is often defined as the combination of sensitivity and adaptive capacity as affected by the level of exposure to changing climate.

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

- Executive Order S-13-08, issued by former Governor Arnold Schwarzenegger in November 2008, focused on sea-level rise, and resulted in the *California Climate Adaptation Strategy* (2009), updated in 2014 as *Safeguarding California: Reducing Climate Risk (Safeguarding California Plan).* The *Safeguarding California* Plan offers policy principles and recommendations and continues to be revised and augmented with sector-specific adaptation strategies, ongoing actions, and next steps for agencies.
- Executive Order S-13-08 also led to the publication of a series of sea-level rise assessment reports and associated guidance and policies. These reports formed the foundation of an interim *State of California Sea-Level Rise Interim Guidance Document* in 2010, with instructions for how state agencies could incorporate “sea-level rise projections into planning and decision making for projects in California” in a consistent way across agencies. The guidance was revised and augmented in 2013. *Rising Seas in California - An Update on Sea-Level Rise Science* was published in 2017 and its updated projections of sea-level rise and new understanding of processes and potential impacts in California were incorporated into the *State of California Sea-Level Rise Guidance Update* in 2018.
- Executive Order B-30-15, signed in April 2015, requires state agencies to factor climate change into all planning and investment decisions. This order recognizes that effects of climate change other than sea-level rise also threaten California’s infrastructure. At the direction of Executive Order B-30-15, the Office of Planning and Research published *Planning and Investing for a Resilient California: A Guidebook for State Agencies* in 2017, to encourage a uniform and systematic approach. Representatives of Caltrans participated in the multi-agency, multidisciplinary technical advisory group that developed this guidance on how to integrate climate change into planning and investment.
- Assembly Bill 2800 (Quirk 2016) created the multidisciplinary Climate-Safe Infrastructure Working Group, which in 2018 released its report, *Paying it Forward: The Path Toward Climate-Safe Infrastructure in California.* The report provides guidance to agencies on how to address the challenges of assessing risk in the face of inherent uncertainties still posed by the best available science on climate change. It also examines how state agencies can use infrastructure planning, design, and implementation processes to address the observed and anticipated climate change impacts.

Caltrans Adaptation Efforts

Caltrans Vulnerability Assessment

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

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

The climate change data in the assessments were developed in coordination with climate change scientists and experts at federal, state, and regional organizations at the forefront of climate science. The findings of the vulnerability assessments will guide analysis of at-risk assets and development of adaptation plans to reduce the likelihood of damage to the state highway system, allowing Caltrans to both reduce the costs of storm damage and to provide and maintain transportation that meets the needs of all Californians.

Project Adaptation Analysis

Sea-Level Rise

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

Floodplains Analysis

The project is in or next to Federal Emergency Management Agency Special Flood Hazard Area Zone A (a 100-year floodplain with no base flood elevation established). However, the Santa Maria River does not flow most of the year; in some years, it does not flow at all. Also, a dam upstream controls the river's flow.

The river's maximum recorded discharge does not approach the 100-year flow rate, and no flooding related to the bridge is recorded. In addition, the project proposes to raise the bridge deck elevation to meet current requirements for freeboard (distance above the water surface). Accordingly, the proposed bridge is likely to withstand expected increases in 100-year storm precipitation depth and storm intensity under future climate conditions.

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Chapter 4 Comments and Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process to determine the scope of environmental documentation, the level of analysis required, potential impacts, avoidance, minimization and/or mitigation measures, and related environmental requirements. Agency consultation for this project has been accomplished through a variety of formal and informal methods, including Project Development Team meetings, interagency coordination meetings, and so on. Public participation will be sought through the release and review of this Initial Study with Proposed Mitigated Negative Declaration and Environmental Assessment. This chapter summarizes the results of Caltrans' efforts to identify, address, and resolve project-related issues through early and continuing coordination.

Biological Resource Coordination

- August 29, 2018: A Caltrans biologist obtained an official list of threatened and endangered species from the U.S. Fish and Wildlife Service Information for Planning and Consultation database.
- August 29, 2018: A Caltrans biologist generated an official California Natural Diversity Database report for the project area and a half-mile buffer.
- August 29, 2018: A Caltrans biologist generated a California Native Plant Society inventory of potentially affected rare plants for the project area.
- August 29, 2018: A Caltrans biologist generated an official National Marine Fisheries Service inventory of potentially affected marine species for the project area.
- October 10, 2018: Caltrans Biologist Stephanie Herbert provided a California red-legged frog habitat assessment for the project area to U.S. Fish and Wildlife Service Biologist Dou Yang and explained that Caltrans intends to use the Programmatic Biological Opinion for this project.
- December 4, 2018: Stephanie Herbert contacted National Marine Fisheries Service Biologist Jessica Adams by email to discuss the historical and current use of the Santa Maria River by steelheads. Caltrans proposed that the project was not likely to adversely affect steelheads due to the infrequency of water released from Twitchell Dam, which limits the connectivity from the Pacific Ocean to the upper reaches of the Santa Maria River watershed.
- December 17, 2018: Jessica Adams responded to Stephanie Herbert regarding the Southern California steelhead Distinct Population Segment and associated critical habitat in the Santa Maria River. Jessica Adams confirmed that the Santa Maria River dries up seasonally, but that there

are adequate over-summering habitats in the Sisquoc River and tributaries, therefore they are all designated critical habitat for steelheads. Jessica Adams also sent a survey report (Stoecker 2005) that describes the historic and recent use of the Santa Maria River watershed by steelheads. The report confirmed that the Santa Maria River is heavily influenced by Twitchell Dam, which often does not release enough water to connect the Santa Maria River watershed to the ocean, resulting in a dry season for the Santa Maria River that is long and predictable. The Stoecker report further stated that the Sisquoc River connects to the Pacific Ocean only a few times per decade due to the Twitchell Dam.

- October 22, 2019: Stephanie Herbert reevaluated potential project impacts to La Graciosa thistle critical habitat after discussions with U.S. Fish and Wildlife Service Biologist Dou Yang.

Cultural Resource Coordination

- March 20, 2020: Caltrans Archaeologist Alvin Figueroa-Rosa sent out letters to regional Native American tribal groups as part of Section 106 and Assembly Bill 52 consultation efforts. Invitation for consultation was offered, and no formal consultation was requested by recipients.

Chapter 5 List of Preparers

This chapter lists the Caltrans staff and consultant staff who were mainly responsible for the preparation and/or review of this document and/or supporting technical studies for this project.

Caltrans Staff

Myles Barker, Editorial Specialist. B.A., Mass Communication and Journalism, California State University, Fresno; 5 years of writing and editing experience. Contribution: Technical Editor.

Robert Carr, Associate Landscape Architect. B.S., Landscape Architecture, California Polytechnic State University, San Luis Obispo; more than 25 years of experience preparing Visual Impact Assessments. Contribution: Visual Impact Assessment.

Matt Fowler, Senior Environmental Planner. B.A., Geographic Analysis, San Diego State University; more than 19 years of experience in environmental planning. Contribution: Oversight and review of the Initial Study.

Geramaldi. Associate Environmental Planner (Generalist). B.S., Environmental Geography, California State Polytechnic, University Pomona; 5 years of environmental planning experience. Contribution: Coordinated environmental process, oversight of the Initial Study, Farmland Assessment Memo.

Stephanie Herbert, Associate Environmental Planner. B.S., Ecology, Evolution, and Biodiversity, Minor in Wildlife, Fish, and Conservation Biology; University of California, Davis; more than 5 years of experience in botany, wildlife biology, and restoration ecology. Contribution: Natural Environment Study.

Terry L. Joslin, Associate Environmental Planner (Arch). M.A., Anthropology, University of California, Santa Barbara; B.S., Anthropology/Geography, California Polytechnic State University, San Luis Obispo; more than 20 years of archaeology experience. Contribution: Cultural Resources Review.

Joel Kloth, Engineering Geologist. B.S., Geology, California Lutheran University; more than 30 years of experience in petroleum geology, geotechnical geology, and environmental engineering/geology-hazardous waste. Contribution: Initial Site Assessment.

Isaac Leyva, Engineering Geologist. B.S., Geology, California State University, Bakersfield; A.S., Cuesta College, San Luis Obispo; more than 25 years of experience in petroleum geology, environmental, geotechnical engineering. Contribution: Initial Site Assessment, Paleontology Technical Report, and Water Quality Assessment.

Karl J. Mikel, Senior Transportation Engineer. M.S., Civil/Environmental Engineering, California Polytechnic State University, San Luis Obispo; B.S., Environmental Engineering, California Polytechnic State University, San Luis Obispo; more than 15 years of professional experience in air quality and noise assessment. Contribution: Air Quality, Noise, and Greenhouse Gas Memo.

ICF Staff

Mario Anaya, Senior Environmental Planner. MPA, Urban Planning, California State University, Northridge; B.A., Global Studies, University of California Los Angeles; more than 10 years of experience in environmental planning. Contribution: Preliminary preparation of the Initial Study.

Jennifer Andersen, Senior Environmental Planner. B.A., International Relations, University of Southern California; more than 5 years of experience in environmental planning. Contribution: Preliminary preparation of the Initial Study.

Will Herron, Environmental Planner. B.A., International Relations, University of Southern California; 3 years of experience in environmental planning. Contribution: Preliminary preparation of the Initial Study.

Andrew Johnson, Environmental Planner. M.A., Public Policy, University of Southern California; B.A., Business Administration, Pepperdine University. Contribution: Preliminary preparation of the Initial Study.

Vincent Tong, Environmental Planner. MPA, Urban Planning, University of California, Irvine; B.S., Environmental Engineering, University of California, San Diego; more than 5 years of experience in environmental planning. Contribution: Preliminary preparation of the Initial Study.

Chapter 6 Distribution List

Guadalupe Branch Library - City of Santa Maria
4719 West Main Street
Guadalupe, California 93434

City of Guadalupe Building and Planning Office
918 Obispo Street
Guadalupe, California 93434

Nipomo Library
918 West Tefft Street
Nipomo, California 93444

San Luis Obispo County Department of Planning and Building
976 Osos Street Suite 200
San Luis Obispo, California 93401

Santa Barbara County Planning Office
123 East Anapamu Street, 2nd Floor
Santa Barbara, California 93101

U.S. Fish and Wildlife Service – Ventura Office
2493 Portola Road, Suite B
Ventura, California 93003

U.S. Army Corps of Engineers District, Los Angeles
915 Wilshire Boulevard
Los Angeles, California 90017

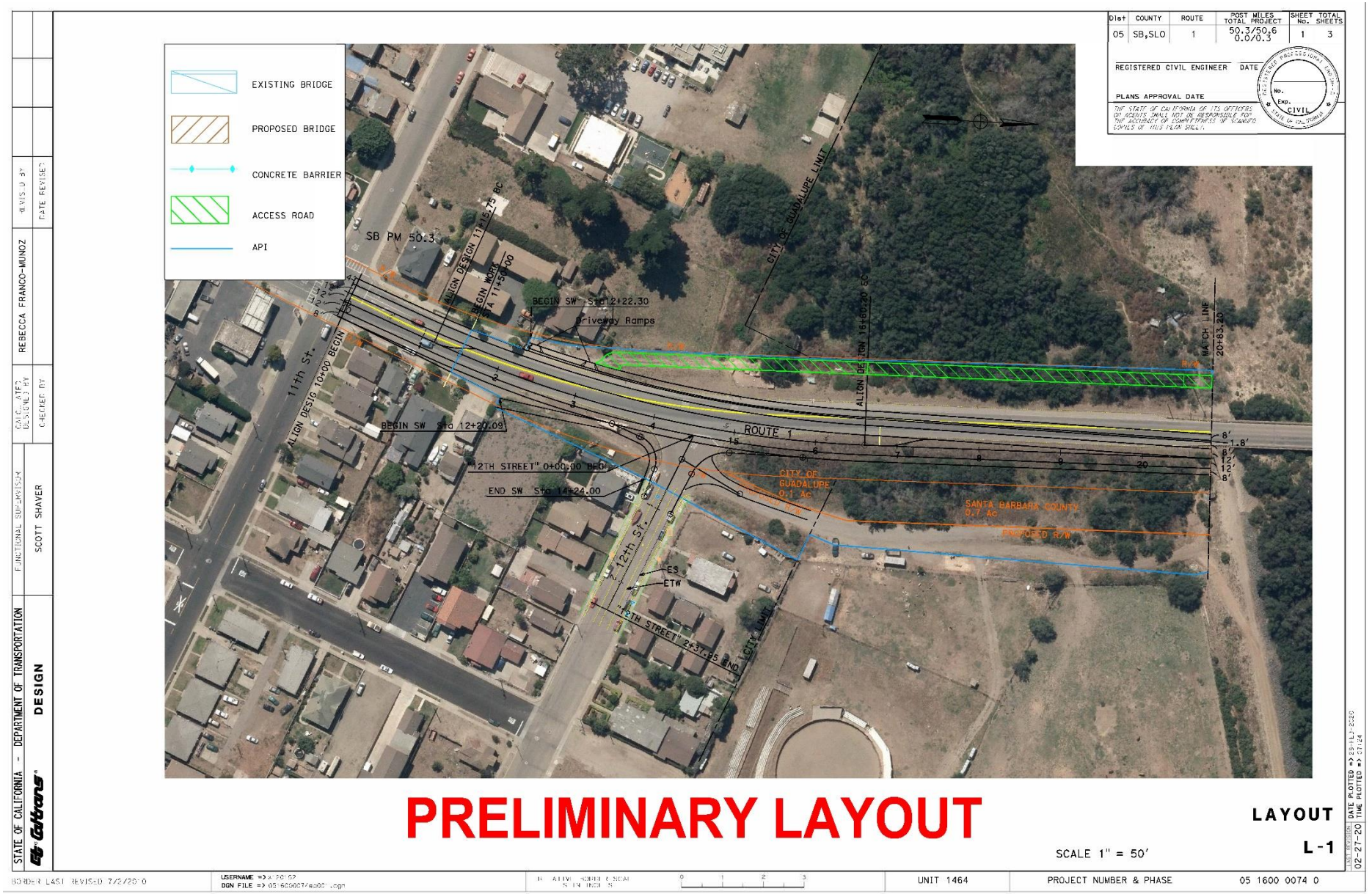
California Department of Fish and Wildlife – South Coast Region
3883 Ruffin Road
San Diego, California 92123

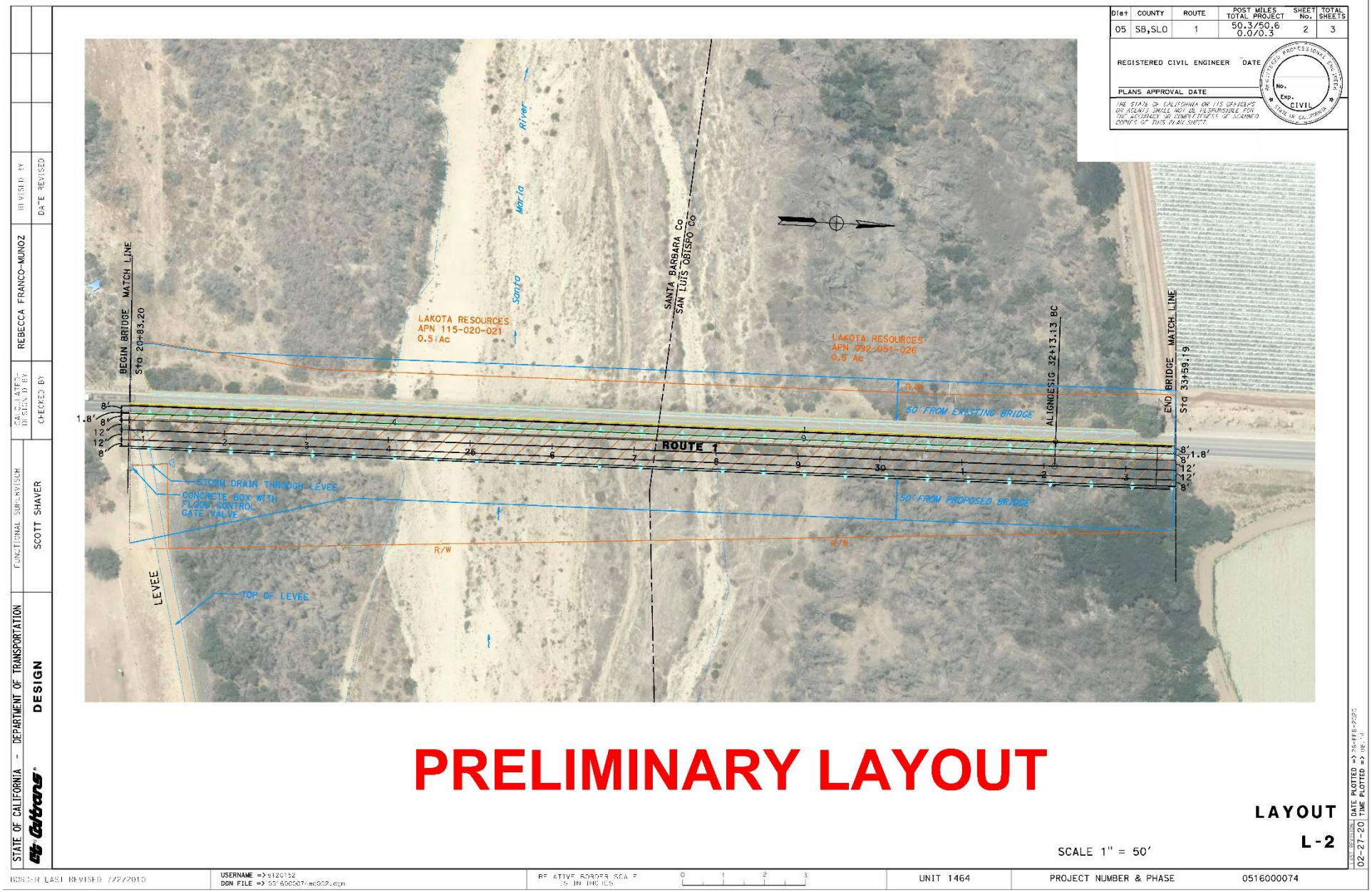
California Department of Fish and Wildlife – Central Region
1234 East Shaw Avenue
Fresno, California 93710

Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 100
San Luis Obispo, California 93401

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Appendix A Preliminary Project Layout Map




Dist
COUNTY
ROUTE
POST MILES TOTAL PROJECT
SHEET No.
TOTAL SHEETS
05
SB,SLO
1
50.3/50.6
0.0/0.3
2
3
REGISTERED CIVIL ENGINEER
DATE
PLANS APPROVAL DATE
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Exp.
CIVIL
STATE OF CALIFORNIA
REGISTERED PROFESSIONAL ENGINEER
REVISED BY
DATE REVISED
REBECCA FRANCO-MUNOZ
DESIGNED BY
CHECKED BY
FUNCTIONAL SUPERVISOR
SCOTT SHAVER
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
Santa Maria River
SANTA BARBARA Co
SAN LUIS OBISPO Co
LAKOTA RESOURCES
APN 115-020-021
0.5±Ac
LAKOTA RESOURCES
APN 092-051-026
0.5 Ac
BEGIN BRIDGE MATCH LINE
Sta 20+83.20
END BRIDGE MATCH LINE
Sta 33+59.19
ALIGNDESIG 32+13.13 BC
ROUTE 1
R/W
50' FROM EXISTING BRIDGE
50' FROM PROPOSED BRIDGE
STORM DRAIN THROUGH LEVEE
CONCRETE BOX WITH FLOOD CONTROL GATE VALVE
TOP OF LEVEE
LEVEE
1.8'
8'
12'
PRELIMINARY LAYOUT
LAYOUT
L-2
SCALE 1" = 50'
DATE PLOTTED => 02-27-20
BORDER LAST REVISED 7/2/2013
USERNAME => s120152
UNIT 1464
PROJECT NUMBER & PHASE
0516000074

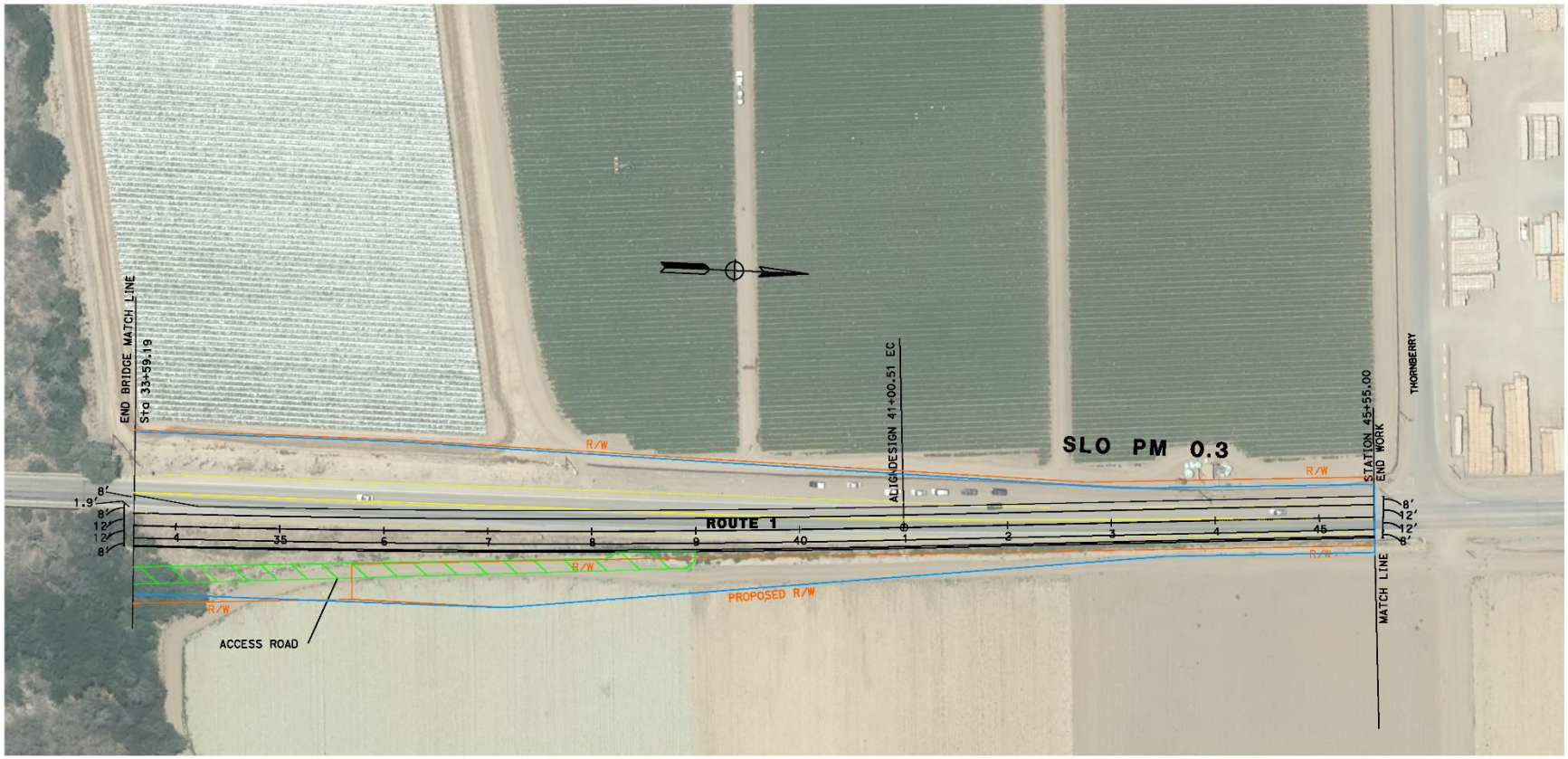
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB,SLO	1	50.3/50.6 0.0/0.3	3	3

REGISTERED CIVIL ENGINEER DATE

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PRELIMINARY LAYOUT

LAYOUT

L-3

SCALE 1" = 50'

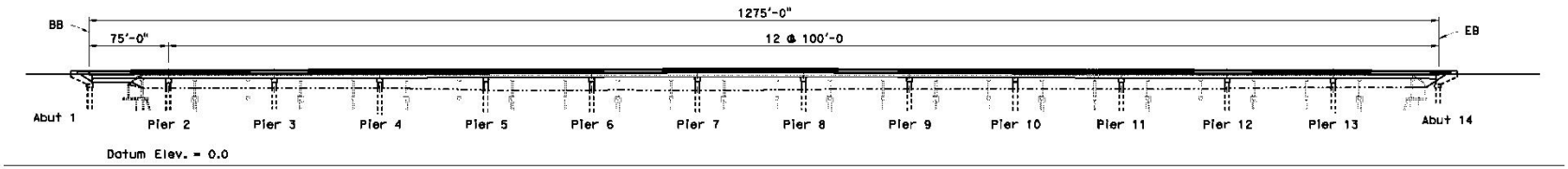
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | FUNCTIONAL SUPERVISOR: SCOTT SHAVER | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

BORDER LAST REVISED 7/2/2010 | USERNAME => s120152 | DGN FILE => 516000074ea003.cgn | RELATIVE BORDER SCALE IS IN INCHES | UNIT 1464 | PROJECT NUMBER & PHASE 0516000074 | LAST REVISION 02-27-20 | DATE PLOTTED => 28-FEB-2020 | TIME PLOTTED => 08:02

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STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
05	SLO	1	-



ELEVATION
1" = 50'

Risks/Assumptions:

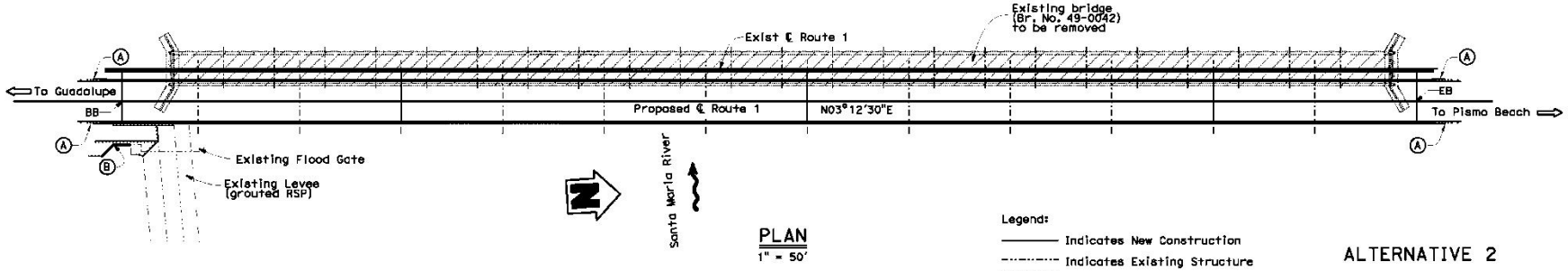
1. Vehicular traffic will pass through construction site.Stage construction will be required.
2. Proposed Route 101 alignment assumed parallel to existing. Profile and stationing not provided.
3. Bottom of existing girder elevation assumed adequate for hydraulic conditions.
4. Beginning of bridge moved south to minimize impacts on existing levee. Final bridge limits to be determined during the design stage. Partial levee removal and construction cost to be determined by District.
5. Existing abutment 1 assumed to be left in-place to minimize levee impacts.
6. Shoring adjacent to traffic will be required during abutment construction.
7. Liquefaction potential is considered high.
8. Cast-in-steel shell (CISS) piles (3' dia @ abuts, 4' dia @ piers) are assumed at each support. Final pile type and length to be determined during the design stage. PA&ED phase geotechnical site work should be anticipated.
8. Bridge deck drainage is anticipated to discharge directly to the channel via scuppers or drop-through inlets.
9. Existing bridge mounted and overhead utility relocation cost to be determined by District.
10. Traffic control cost to be determined by District.
11. RSP cost, if any, at abutment embankments to be determined by District.
12. Access to and work within the river will be required during each stage. A 6-month work window is assumed. No environmental restrictions assumed within the work window.

Notes:

1. For "Typical Section" see sheet 2
2. As-built datum shown

(A) MGS see Roadway Plans
(B) Drainage Inlet Retaining Structure or Culvert Extension. See Roadway Plans

DATE OF ESTIMATE		01-25-2017
BRIDGE REMOVAL	=	$970,000
STRUCTURE DEPTH	=	4'-10"
LENGTH	=	1275'-0"
WIDTH	=	52'-0"
AREA	=	66,300 ft^2
COST/ SF INCLUDING TRO, MOBILIZATION & CONTINGENCY	=	$217
TOTAL COST	=	$15,536,000



PLAN
1" = 50'

Legend:
Indicates New Construction
Indicates Existing Structure
Indicates Bridge Removal

ALTERNATIVE 2

Sheet 1 of 2

INCOMPLETE PLAN FOR DESIGN STUDY PRINTED
DATE: 08-FEB-2017
Office of Structure Design
STATE OF CALIFORNIA

DESIGNED BY	M. Downs	DATE	11/2016
DRAWN BY	M. Downs	DATE	11/2016
CHECKED BY	X	DATE	X
APPROVED	X	DATE	X

STRUCTURE DESIGN BRANCH

PLANNING STUDY
SANTA MARIA RIVER BRIDGE

UNIT: 3585	BRIDGE No. 49-0042
SCALE: As Noted	PROJECT No. & PHASE: 0516000074

CONTRACT No.: 05-1H440K

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REV. 08-09-10)

FILE =: 05-1H440K Concepts.dgn

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
05	SB,SLO	1	50.3/50.6 C.0/C.3	2	XX

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER — No. — EXP. — CIVIL — STATE OF CALIFORNIA

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans — 06-DESIGN

FUNCTIONAL SUPERVISOR: SCOTT SHAVER

CALCULATED-DESIGNED BY: REBECCA MUNOZ

CHECKED BY: SCOTT SHAVER

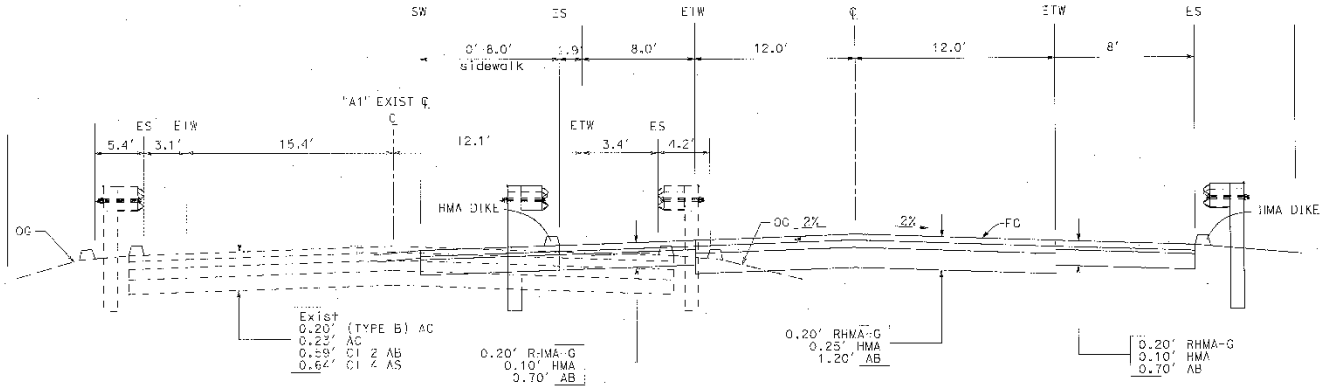
REVISED BY: DATE REVISED:

DESIGN DESIGNATION

ADT 2014	5,900	DHV 2014	615	D	64%
ADT 2017	6,129	DHV 2017	655	T	7%
ADT 2027	6,497	DHV 2027	766	V	65 mph/35 mph

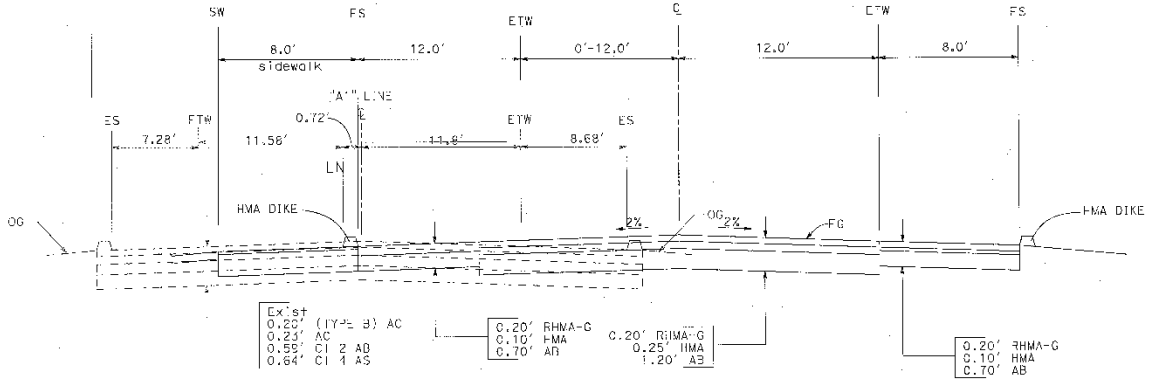
PAVEMENT CLIMATE REGION:

CENTRAL COAST



Sta 33+59.19 to Sta 45+52.83

ROUTE 1



Sta 11+25.21 TO Sta 20+83.20

ROUTE 1

TYPICAL CROSS SECTIONS

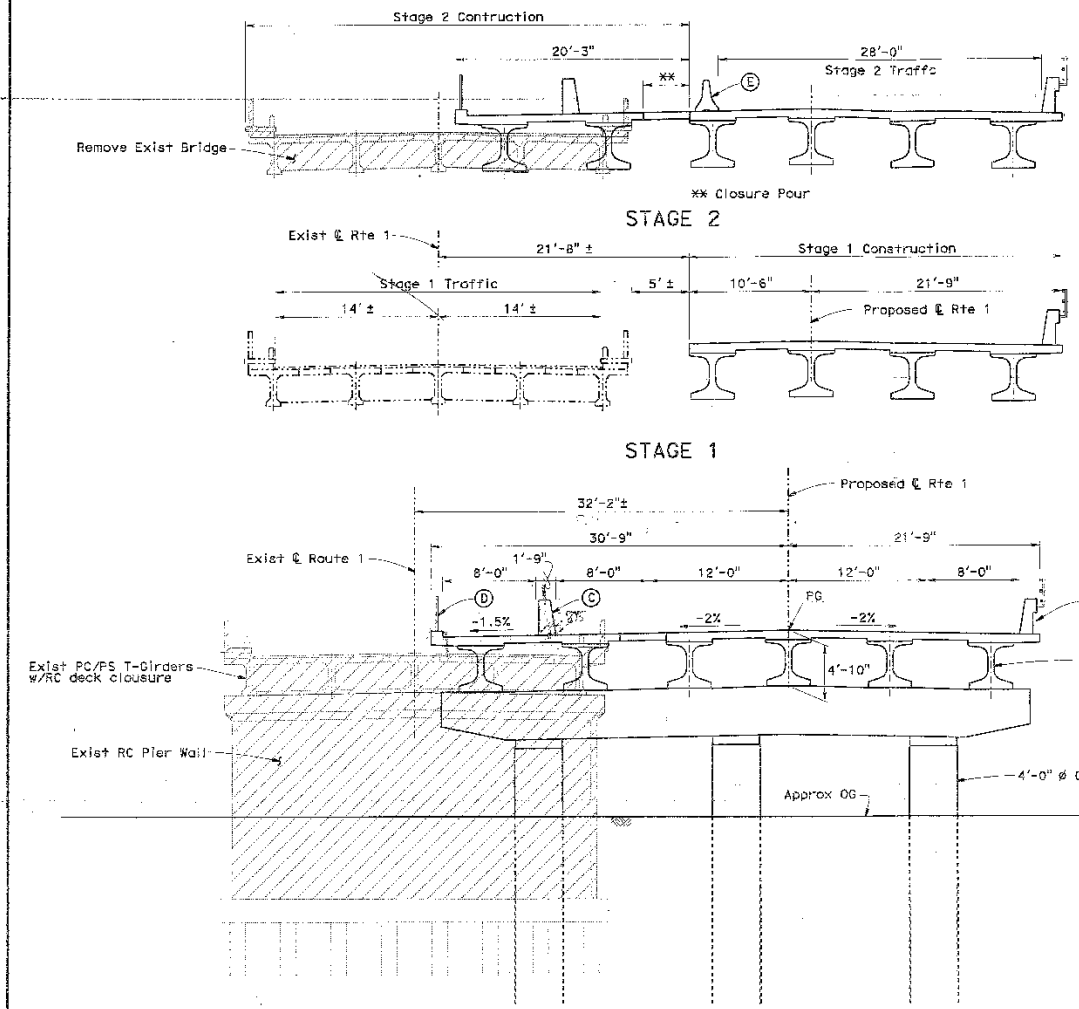
NO SCALE

X-1

LAST REVISION

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF STRUCTURES

DIST	COUNTY	ROUTE	POST MILE
05	SLO	1	-



Notes:

(B) Concrete Barrier Type 736 w/Bicycle Railing
(C) Concrete Barrier Type 736 (mod)
(D) Pedestrian Railing
(E) Temporary Railing (Type K) see Roadway Plans

Legend:

Indicates New Construction
Indicates Existing Structure
Indicates Bridge Removal

Typical Cross Sections

X - 2

TYPICAL SECTION
1" = 5'

Sta 20+83.20 to Sta 33+59.19

INCOMPLETE PLAN FOR DESIGN STUDY PRINTED
DATE: 08-FEB-2017
Office of Structure Design
STATE OF CALIFORNIA

DESIGNED BY	M. Downs	DATE	11/2016
DRAWN BY	M. Downs	DATE	11/2016
CHECKED BY	X	DATE	X
APPROVED	X	DATE	X

STRUCTURE DESIGN BRANCH

PLANNING STUDY
SANTA MARIA RIVER BRIDGE

UNIT: 3585	BRIDGE No. 49-0042
SCALE: As Noted	PROJECT No. & PHASE: 0516000074

CONTRACT No.: 05-1H440K

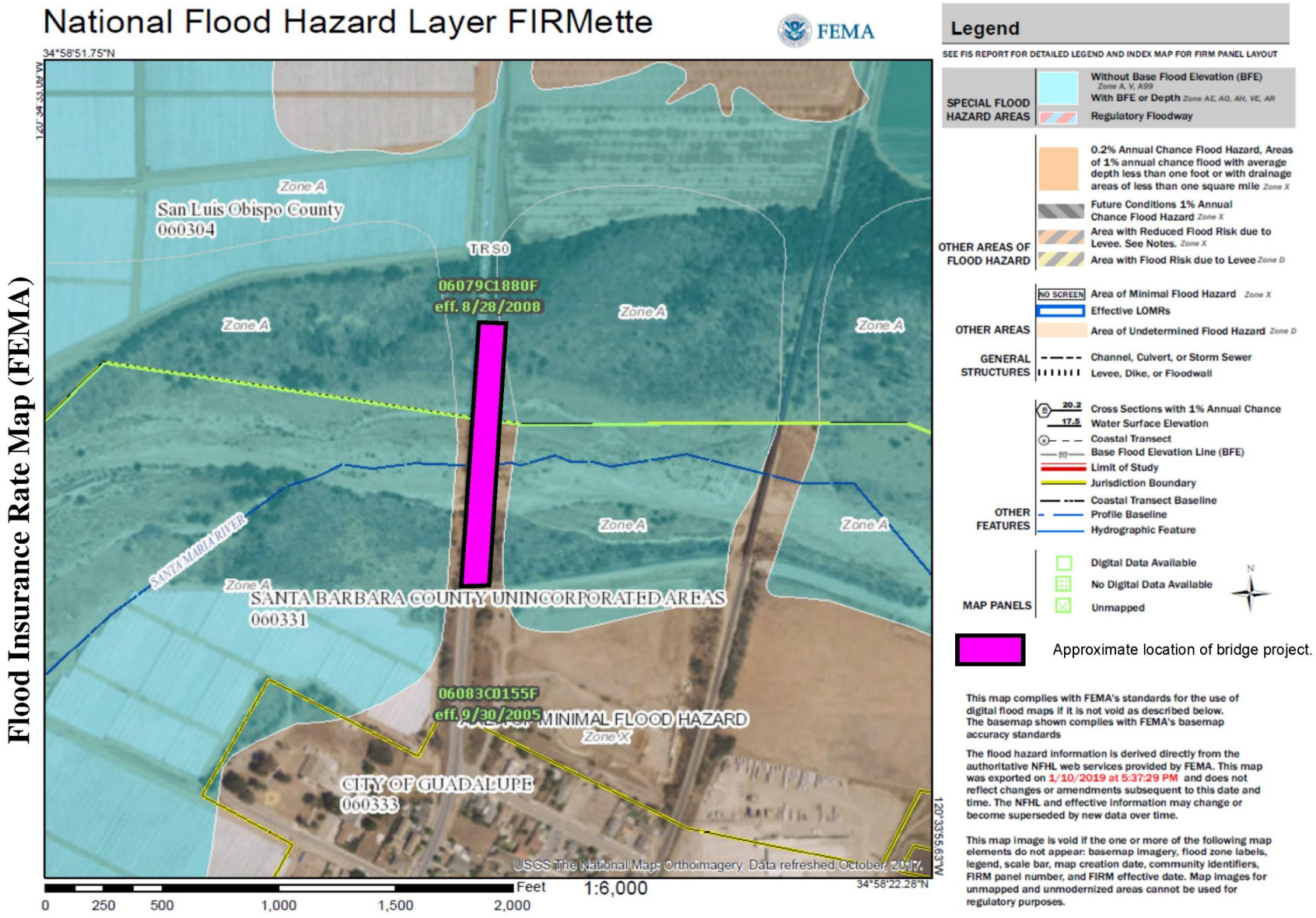
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DATE PLOTTED => 08-FEB-2017 15:42

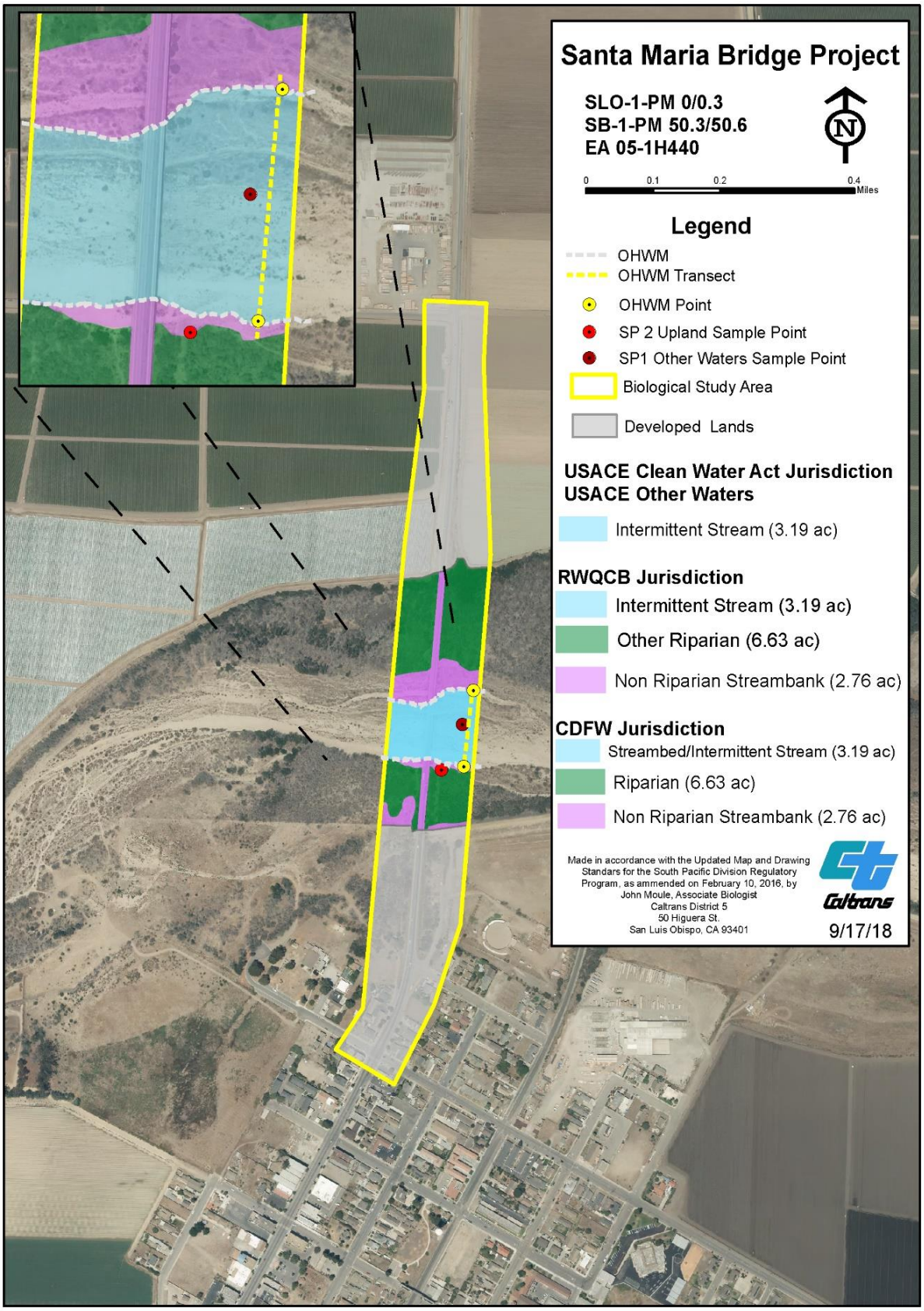
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Appendix C FEMA Flood Insurance Rate Map (FIRM)



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Appendix D Jurisdictional Area Map



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Appendix E Title VI Policy Statement

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

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

Making Conservation a California Way of Life.

November 2019

NON-DISCRIMINATION POLICY STATEMENT

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

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

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

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

Toks Omishakin
Director

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

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Appendix F Avoidance, Minimization and/or Mitigation Summary

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

Farmland (Section 2.1.1)

The following avoidance and minimization measures would be implemented to address potential impacts on farmland resources:

1) The project would limit the amount of right-of-way that is acquired from nearby farmland properties; it would only acquire right-of-way that is necessary for project completion.
2) To the extent possible, construction-related storage, staging, and access would avoid properties that are currently involved in agricultural activities or properties that are identified as prime farmland.
3) Infill materials that would be used in the project would not be obtained from borrow sites that are made up of prime farmland.
4) Areas next to farmland properties that are disturbed during construction would be re-stabilized using native vegetation and soils that are clear of invasive plant species at the end of construction. Soil amendments, if used, must comply with the requirements of the California Food and Agricultural Code. Soil amendments must not contain paint, petroleum products, pesticides, or any other chemical residues that are harmful to animal life or plant growth.
5) The construction contract would include provisions to protect against the spread of invasive species.
6) When selecting sites for other project-related mitigations (e.g., wetland restoration, replanting, etc.), the project would avoid prime farmland to the extent possible.

7) Construction activities would be coordinated with local farmland operators to ensure that access to nearby farmland properties is maintained during project construction.
8) Appropriate measures pertaining to dust control would be implemented during project construction.

Utilities and Emergency Services (Section 2.1.2)

The following avoidance and minimization measures have been incorporated into the project to address the potential temporary adverse effects of project construction on utility services and emergency services:

Utilities

1) Temporarily relocated utilities would remain in operation during project construction.
2) Before starting utility relocation activities, coordination with utility users would be required to inform them about the date and timing of potential service disruptions.
3) The Caltrans Right-of-Way Manual and the Federal Utility Relocation and Accommodation on Federal-Aid Highway Projects Program Guide would be used to process utility relocations.

Emergency Services

4) The Caltrans resident engineer that is assigned to the project would regularly coordinate with local emergency responders on project activities that could potentially affect emergency response times.
5) A Transportation Management Plan would be adopted and would allow emergency service vehicles to access the project site during construction to minimize response delays.

Traffic and Transportation/Pedestrian and Bicycle Facilities (Section 2.1.3)

The following avoidance and minimization measures would be implemented for the project:

1) Traffic control would be used to ensure that the public can continue to access State Route 1 during project construction.
2) The project would include Caltrans' Standard Specifications and Caltrans' Standard Special Provisions to address potential traffic issues that would result from project construction, and to provide potential traffic management strategies during construction.

Visual/Aesthetics (Section 2.1.4)

The project would implement the following avoidance and minimization measures to ensure that it is consistent with the aesthetic and visual resource protection goals along State Route 1:

1) The type and appearance of all new bridge rails, bicycle railing, and pedestrian railing would be determined in consultation with the city of Guadalupe. Open-type bridge railing and pathway railing would be considered as well.
2) All existing overhead utilities that are next to the new bridge would either be placed in the bridge structure, attached to the bridge in the least visible way, and/or placed underground.
3) All wing walls, retaining walls, and slope paving, if required, would be treated with a rough texture such as “rip-out” or something similar to discourage graffiti.
4) Preserve as much existing vegetation as possible. Prescriptive clearing, grubbing, and grading techniques that would save the most existing vegetation should be used.
5) Revegetate all areas disturbed by the project with appropriate native plant species.
6) Following construction, re-grade and recontour all new construction access roads, demolition areas, staging areas, and other temporary uses as necessary to match the surrounding pre-project topography.

Cultural Resources (Section 2.1.5)

The project would include the following Caltrans standard provisions that deal with the chance discovery of previously unknown cultural materials or human remains during project construction:

1) If cultural materials are discovered during construction, all earth-moving activities within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find.
2) If human remains are discovered during construction, California Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the county coroner should be contacted. If the coroner thinks the remains are Native American, he or she would notify the Native American Heritage Commission, who, per California Public Resources Code Section 5097.98, would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact the District 5 Environmental Branch so that staff may work with the Most Likely Descendent on the respectful treatment and disposition of the

remains. Additional provisions of California Public Resources Code Section 5097.98 must be followed as applicable.

Water Quality and Stormwater Runoff (Section 2.2.1)

The project would comply with water pollution protection provisions in Caltrans' Standard Specifications, and the National Pollutant Discharge Elimination System permit for Caltrans, as well as Section 20-3, Erosion Control, of Caltrans' Standard Specifications.

The following measures would be implemented to minimize impacts on water quality and stormwater runoff for this project.

1) The project would implement appropriate Best Management Practices and construction practices to minimize and avoid potential impacts to the river channel as a result of construction activities.
2) Work in the river would be performed during the dry season, which is typically from June to October, and only if there is no water flow. When work is near streams, erosion and sediment controls would be implemented to keep sediment out of the stream channel.
3) A Stormwater Pollution Prevention Plan would be prepared before ground disturbance activities and would be implemented during construction as required per Caltrans' standard practices.
4) The project would isolate equipment staging and spoil/material storage areas away from the river channel using appropriate stormwater control barriers.
5) When in-channel work is required, the project would stabilize access routes to the river to reduce tracking mud and dirt in and out of the river channel.
6) The project would preserve existing vegetation outside of the active work area.
7) At minimum, the following Best Management Practices would be implemented:

    a) Install appropriate fencing to control sediment. Fencing should be installed only where sediment-laden water can pond to allow the sediment to settle out.
    b) Install fiber rolls along the slope contour above the high-water level to intercept runoff, reduce flow velocity, release the runoff as sheet flow, and remove sediment from the runoff. In a stream environment, fiber rolls should be used with other sediment control methods.
    c) Use a gravel bag berm or barrier to intercept and slow the flow of sediment-laden sheet flow runoff. In a stream environment, gravel bag barriers can allow sediment to settle from runoff before water leaves

the construction site and can be used to isolate the work area from the stream. Gravel bag barriers are not recommended as a perimeter sediment control practice around streams.

Geology, Soils, Seismicity and Topography (Section 2.2.2)

The following avoidance and minimization measures would be implemented for the project:

1) The project would design the new structure according to Caltrans' seismic design standards, as provided in the Highway Design Manual, to reduce the potential of failure due to an earthquake, liquefaction, erosion, or other geological hazards.

Natural Communities (Section 2.3.1)

The proposed measures would be implemented to avoid and minimize potential project impacts to natural communities.

Also, measures described in Section 2.3.2, Wetlands and Other Waters are expected to avoid and minimize potential impacts on natural communities caused by project activities.

1) Temporary environmental sensitive area fencing and/or flagging would be installed on the perimeter of the project area to prevent potential impacts on natural communities outside of the project area.
2) At the end of project construction, all areas temporarily impacted by project activities would be revegetated through erosion control seedings along the roadside and replacement tree plantings in the riparian zone.
3) All areas temporarily impacted by project activities would be returned to their original grade and contour after construction.

Wetland and Other Waters (Section 2.3.2)

The following measures would be implemented to avoid and minimize the project's potential impacts on jurisdictional areas:

1) Before any ground-disturbing activities, temporary environmentally sensitive area fencing and/or flagging would be installed around wetland resources within the project limits to ensure that these areas are not impacted by project activities. The location of environmentally sensitive area fencing and/or flagging would be included on design plans and delineated in the field before construction starts.
2) During construction, all project-related hazardous material spills within the project site would be cleaned up immediately. The contractor would keep spill prevention and cleanup materials readily accessible onsite at all times during construction.

3) During construction, cleaning and refueling equipment and vehicles would occur only within a designated staging area. This area would either be a minimum of 100 feet from jurisdictional areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas would conform to Caltrans' Construction Site Best Management Practices.
4) Each season after construction has been completed in jurisdictional areas, contours would be restored as close as possible to their original condition.
5) All trees removed would be replaced at a 1 to 1 ratio or 3 to 1 ratio depending on their species and size.
6) Vegetated streambanks disturbed by project activities would be revegetated with a native seed mix that consists of the existing natural community type. However, they would not be monitored for success because river flows could potentially disturb the streambanks as part of the natural geomorphic process that is typical of this type of river system.

Animal Species (Section 2.3.4)

The following avoidance and minimization measure would be implemented to protect animal species from project-related impacts:

1) Before starting stream dewatering, Caltrans staff would conduct a worker environmental training program, which would describe special-status species, their legal/protected status, their proximity to the project site, and avoidance/minimization measures to be implemented during the project.

Bats

The following measures apply to all bats that are protected by the California Department of Fish and Wildlife or under the California Environmental Quality Act and are intended to avoid impacts on night-roosting bats that may use the Santa Maria River Bridge:

2) No night work would occur during construction to avoid impacting or harming bats that may use the new or existing Santa Maria River Bridge.
3) Specific day and night artificial bat roosting habitat and/or structures would be added to the new bridge structure. Day roosting habitat such as wedges and small crevices that are just big enough for roosting bats would be provided on the new bridge. Also, wooden bat boxes would be installed underneath the northern span of the new bridge. These bat boxes would provide a windbreak and thermal buffer for bats roosting at night.

American Badger

The following measures are intended to avoid impacts on the American badger:

4) A pre-construction survey would be conducted for the American badger no less than 14 days and no more than 30 days before starting construction or project-related activities that are likely to impact the species. The survey would identify American badger habitat features on the project site, evaluate use by American badgers and, if possible, assess the potential impacts on the American badger by proposed activities. The status of all dens should be determined and mapped. Known dens, if found occurring within the footprint of the activity, would be monitored for three days to determine the current use. If no American badger activity is seen during this period, the dens would be destroyed immediately to prevent future use. If American badger activity is seen at the dens during this period, the dens would be monitored for at least five consecutive days from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the dens are determined to be unoccupied would they be excavated under the direction of a biologist.
5) If the pre-construction survey reveals an active den or new information regarding American badger presence within the area of potential impact, Caltrans would notify the California Department of Fish and Wildlife.
6) Before groundbreaking, a qualified biologist would conduct an environmental education and training session for all construction personnel. Before, during, and after the site-disturbance and/or construction phase, use of pesticides or herbicides should be in compliance with all federal, state, and local regulations. No rodent control pesticides would be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and difenacoum. This is necessary to minimize the possibility of primary or secondary poisoning of American badgers or other special-status species.
7) Project employees would be directed to exercise caution when driving within the project area. A 20-mile-per-hour speed limit would be strongly encouraged within the project site. Construction activity would be restricted within the project site.
8) A litter control program would be established at each project site. No canine or feline pets or firearms—except for those associated with law enforcement officers and security personnel—would be allowed on construction sites to avoid harassing, killing, or injuring American badgers.
9) Maintenance and construction excavations that are more than 2 feet deep would be covered (e.g., with plywood, sturdy plastic, steel plates, or equivalent), filled in at the end of each working day, or have escape ramps no greater than 200 feet apart to prevent trapping American badgers.

Coast Horned Lizard and Northern California Legless Lizard

The following measures are intended to avoid impacts on the Coast horned lizard and Northern California legless lizard:

10) A Caltrans biologist would monitor initial excavation and vegetation removal.

11) Coast horned lizards, Northern California legless lizards, or any species (excluding state or federally listed species) that are discovered during monitoring would be captured by a Caltrans biologist and relocated to suitable habitat that is outside of the area of potential impact. Observations of Species of Special Concern or other special-status species would be documented on California Natural Diversity Database forms and submitted to the California Department of Fish and Wildlife upon project completion.

12) Pre-construction surveys would be conducted within 14 days of construction. Caltrans biologists would place plywood boards around the bridge to attract Northern California legless lizards. If Northern California legless lizards are found during these checks, they would be relocated outside the construction area.

Nesting Birds

Avoidance and minimization measures listed for jurisdictional areas would also apply to all bird nesting habitat impacted by the project. The following additional measures would also apply to all birds that are protected by the Migratory Bird Treaty Act and California Fish and Game Code Section 3503:

13) To avoid potential impacts on nesting birds, vegetation removal for the project would be scheduled to occur outside of the nesting bird season, which is typically from September 1 to January 31.

14) If vegetation removal or other construction activities are proposed to occur during the nesting bird season (February 1 to August 31), a Caltrans biologist would conduct a nesting bird survey no more than three days before construction.

15) During construction, active bird nests would not be disturbed, and eggs or young birds of native migratory birds that are covered would not be killed, destroyed, injured, or harassed at any time. Environmentally sensitive area designations would be in place where nests must be avoided. A qualified biologist would establish environmentally sensitive areas. Depending on the sensitivity of the species in question, work in environmentally sensitive area zones would occur only under the supervision of a biological monitor until young birds have fledged (permanently left the nest) or a qualified biologist has determined that nesting activity has otherwise stopped.

16) Trees that must be removed would be noted on design plans. Before starting any ground-disturbing activities, high visibility fencing, or flagging would be installed around the dripline of trees within the project limits.

17) No rodent control pesticides would be used, including anticoagulant rodenticides such as brodifacoum, bromadiolone, difethialone, and difenacoum. This is a necessary precaution to avoid secondary poisoning to raptors that hunt and feed on rodents and other small animals.

Threatened and Endangered Species (Section 2.3.5)

The following measures will be implemented to protect threatened and endangered species.

The following avoidance, minimization, and/or mitigation measures would be implemented to protect special-status species from project-related impacts:

La Graciosa Thistle Federally Designated Critical Habitat

The avoidance and minimization measures discussed in Section 2.3.2, Wetlands and Other Waters are also applicable to federally designated critical habitat for the La Graciosa thistle. Additionally, the following measures are proposed to further mitigate potential impacts on critical habitat:

1) To preserve as much seed bank as feasible, the first 6 inches of topsoil would be stockpiled and preserved before construction and would be returned to the Santa Maria River and the associated riparian zone after construction work is complete.
2) The Biological Study Area would be seeded with an appropriate native seed mix to enhance and restore La Graciosa thistle critical habitat.

Southern California Steelhead Critical Habitat

The following measures would be implemented to avoid and minimize potential adverse impacts on Southern California steelhead critical habitat:

3) Before construction starts, a qualified biologist would conduct a worker environmental training program that would include a description of protected species and habitats, their 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 other relevant permit conditions.
4) During construction, in-stream work would be limited from June 15 through October 31, when the creek is dry. Deviations from this work window would be made only with concurrence from regulatory resource agencies.
5) In-stream construction work would be performed only in a dry work environment. Dewatering and clear water diversions are not expected, but if they are required, they would be performed according to Caltrans' Construction Site Best Management Practices (2017). The upstream and

downstream passage of adult and juvenile fish would be maintained at all times, according to current National Marine Fisheries Service guidelines and criteria.

6) Before construction, the contractor would prepare and sign a Water Pollution Control Plan or a Stormwater Pollution Prevention Plan that complies with the Caltrans Stormwater Quality Handbook (Caltrans 2017). Provisions of this plan would be implemented during and after construction to avoid and minimize erosion and stormwater pollution in and near the work area.
7) During construction, all project-related hazardous material spills within the project site would be cleaned up immediately. The contractor would keep spill prevention and cleanup materials readily accessible onsite at all times during construction.
8) Erosion control measures would be implemented during construction. Silt fencing, fiber rolls, and barriers would be installed at the project site, jurisdictional waters, and riparian habitat.
9) During construction, cleaning and refueling equipment and vehicles would occur only within a designated staging area. This area would either be a minimum of 100 feet from aquatic areas or, if the area is less than 100 feet from aquatic areas, the area must be surrounded by barriers (e.g., fiber rolls or equivalent). The staging areas would conform to Caltrans' Construction Site Best Management Practices applicable to attaining zero discharge of stormwater runoff.
10) Immediately upon completing in-channel work, all in-channel structures would be removed in a manner that minimizes disturbance to downstream flows and water quality.
11) All temporary excavations and fills within the project limits would be removed, and the affected areas would be returned to pre-construction elevations.

Southern and South-Central Coast California Steelhead

Avoidance and minimization measures for Southern California Coast and South-Central Coast California steelhead critical habitat apply to steelhead species as well. In addition, the following measure would be implemented to avoid and minimize potential adverse impacts on Southern California Coast and South-Central Coast California steelhead resulting from the project:

12) During construction, no work would occur during the wet season. No work would occur in the river channel while there are surface flows.

Southwestern Willow Flycatcher, Least Bell's Vireo, and Swainson's Hawk

Avoidance and minimization measures discussed in Section 2.3.4, Animal Species would also apply to these bird species. In addition, the following measure would be implemented specifically for these three species:

13) If an active nest for the southwestern willow flycatcher or Least Bell's vireo is found within 100 feet of the Biological Study Area, or if a Swainson's hawk nest is found 500 feet from the Biological Study Area, all project activities would immediately stop while Caltrans coordinates with applicable regulatory agencies to determine if additional measures are necessary.

California Red-Legged Frog

Avoidance and minimization measures discussed in Section 2.3.2, Wetlands and Other Waters would also avoid and minimize temporary and long-term impacts on the California red-legged frog and its habitat.

14) Only U.S. Fish and Wildlife Service-approved biologists would participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.

15) Ground disturbance activities would not start until written approval is received from the U.S. Fish and Wildlife Service stating that the biologist is qualified to conduct the work.

16) A U.S. Fish and Wildlife Service-approved biologist would survey the project area for no more than 48 hours before work activities start. If any California red-legged frogs are found and are likely to be injured or killed by work activities, the approved biologist would be allowed enough time to move them from the site before work starts. The U.S. Fish and Wildlife Service-approved biologist would relocate the California red-legged frogs to a nearby location that contains suitable habitat that would not be affected by project activities. The relocation site would be in the same drainage to the extent practicable. Caltrans would coordinate with the U.S. Fish and Wildlife Service on the relocation site before the capture of any California red-legged frogs.

17) Before project activities start, a U.S. Fish and Wildlife Service-approved biologist would conduct a training session for all construction personnel. At a minimum, the training would include a description of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog for the current project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

18) A U.S. Fish and Wildlife Service-approved biologist would be present at the worksite until all California red-legged frogs have been removed, workers have been instructed, and disturbance of the habitat has been completed. After this time, Caltrans would designate a person to monitor onsite compliance with all minimization measures. The U.S. Fish and Wildlife Service-approved biologist would ensure that this monitor receives training in identifying California red-legged frogs. If the monitor or the U.S. Fish and Wildlife Service-approved biologist recommend that work be

stopped because California red-legged frogs would be affected in a manner that was not expected by Caltrans and the U.S. Fish and Wildlife Service during a review of the proposed action, they would notify the resident engineer immediately. The resident engineer would resolve the situation by requiring all actions that are causing these effects to be stopped. When work is stopped, the U.S. Fish and Wildlife Service would be notified as soon as possible.

19) During project activities, all trash that may attract predators or scavengers would be properly contained, removed from the worksite, and disposed of regularly. Following construction, all trash and construction debris would be removed from work areas.

20) Without the U.S. Fish and Wildlife Service's permission, all refueling, maintenance, and staging of equipment and vehicles would occur at least 60 feet from riparian habitat or water bodies and not in a location where a spill would drain directly toward aquatic habitat. The monitor would ensure that habitat is not contaminated during such operations. Before work starts, Caltrans would ensure that a plan is in place for a prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and the appropriate measures to take should a spill occur.

21) Habitat contours would be returned to a natural configuration at the end of project activities. This measure would be implemented in all areas that are disturbed by project activities, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible, or if changing the original contours would benefit the California red-legged frog.

22) The number of access routes, size of staging areas, and the total area of activity would be limited to the minimum necessary to complete the project. Environmentally sensitive areas would be established to confine access routes and construction areas to the minimum area necessary to complete construction and to minimize the impact on California red-legged frog habitat. This goal includes locating access routes and construction areas outside of wetlands and riparian areas to the maximum extent practicable.

23) Caltrans would attempt to schedule work when impacts on the California red-legged frog would be minimal. For example, work that would affect large pools, which may support breeding would be avoided to the maximum degree practicable during the breeding season (November through May). Isolated pools that are important to maintaining California red-legged frogs throughout the driest portions of the year would be avoided to the maximum degree practicable during the late summer and early fall. During project planning, habitat assessments, surveys, and technical assistance between Caltrans and the U.S. Fish and Wildlife Service would be used to assist in scheduling work activities to avoid sensitive habitats during key times of the year.

24) To control sedimentation during and after project completion, Caltrans would implement Best Management Practices issued under the authority of the Clean Water Act. If Best Management Practices are ineffective, Caltrans would attempt to fix the situation immediately with the U.S. Fish and Wildlife Service.

25) If a worksite must be temporarily dewatered by pumping, intakes would be screened with wire mesh with openings no larger than 0.2 inch to prevent California red-legged frogs from entering the pump system. Water would be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. After construction activities are completed, any diversions or barriers to flow would be removed in a manner that would allow flow to resume with the least disturbance to the substrate. Changing the streambed would be minimized to the maximum extent possible. Any imported material would be removed from the streambed after the project is completed.

26) Unless approved by the U.S. Fish and Wildlife Service, water would not be impounded in a manner that may attract California red-legged frogs.

27) A U.S. Fish and Wildlife Service-approved biologist would permanently remove any individuals of exotic species, such as the American bullfrog *(Rana catesbeiana),* signal crayfish *(Pacifastacus leniusculus),* red swamp crayfish *(Procambarus clarkii),* and centrarchid fishes from the project area to the maximum extent possible. The U.S. Fish and Wildlife Service-approved biologist would be responsible for ensuring that his or her activities are in compliance with the California Fish and Game Code.

28) If Caltrans demonstrates that disturbed areas have been restored to conditions that allow them to function as habitat for the California red-legged frog, these areas would not be included in the amount of total habitat permanently disturbed.

29) To ensure that diseases are not transported between worksites by the U.S. Fish and Wildlife Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Task Force would be followed at all times.

30) Project sites would be revegetated with an assemblage of native riparian, wetland, and upland vegetation suitable for the area. Locally collected plant materials would be used to the extent practicable. Invasive and exotic plants would be controlled to the maximum extent practicable. This measure would be implemented in all areas that are disturbed by project activities, unless the U.S. Fish and Wildlife Service and Caltrans determine that it is not feasible or practical.

31) Caltrans would not use herbicides as the main method for controlling invasive and exotic plants. However, if it is determined that using herbicides is the only feasible method for controlling invasive plants at a

specific project site, Caltrans would implement the following additional protective measures for the California red-legged frog:

a. Caltrans would not use herbicides during the breeding season for the California red-legged frog.

b. Caltrans would conduct surveys for the California red-legged frog immediately before herbicides are used. If California red-legged frogs are found, they would be relocated to suitable habitat that is far enough from the project area that no direct contact with herbicides would occur.

c. Giant reed and other invasive plants would be cut, hauled out by hand, and painted with glyphosate-based products, such as AquaMaster or Rodeo.

d. Licensed and experienced Caltrans staff or a licensed and experienced contractor would use a hand-held sprayer for foliar application of AquaMaster or Rodeo where large monoculture stands occur at an individual project site.

e. All precautions would be taken to ensure that no herbicide is used on native vegetation.

f. Herbicides would not be used on or near open water surfaces—no closer than 60 feet from open water.

g. Foliar applications of herbicides would not occur when wind speeds are more than 3 miles per hour.

h. No herbicides would be used within 24 hours of forecasted rain.

i. Qualified Caltrans staff members or contractors would apply all herbicides to minimize overspray and to ensure that all applications are made in accordance with the label recommendations and required and reasonable safety measures. A safe dye would be added to the mixture to visually indicate treated sites. Using herbicides would be consistent with the U.S. Environmental Protection Agency's Office of Pesticide Programs' Endangered Species Protection Program county bulletins.

j. All herbicides, fuels, lubricants, and equipment would be stored, poured, or refilled at least 60 feet from riparian habitat or water bodies in a location where a spill would not drain directly toward aquatic habitat. Before work starts, Caltrans would ensure that a plan is in place for a prompt and effective response to accidental spills. All workers would be informed of the importance of preventing spills and the appropriate measures to take should a spill occur.

Invasive Species (Section 2.3.6)

To ensure that the project does not promote the introduction or spread of invasive plant species into the Biological Study Area, Caltrans' Standard Specifications, appropriate Best Management Practices, along with measures from Wetland and Other Waters (Section 2.3.2), and measures from Threatened and Endangered Species (Section 2.3.5) would be implemented.

Construction Impacts (Section 2.4)

The following avoidance and minimization measures would be implemented to reduce potential impacts caused by project construction activities.

Parks and Recreational Facilities

1) The avoidance and minimization measures that are required to address temporary construction-related impacts on air quality and noise would also be applicable to minimizing potential construction-related impacts on parks and recreational facilities.

Air Quality

2) The Caltrans Standard Specifications section that pertains to dust control and dust palliative application is required for all construction contracts and would effectively reduce and control construction-emission impacts.
3) The provisions of Caltrans Standard Specifications Section 10-5 Dust Control, and Section 14-9 Air Pollution Control, require the contractor to comply with all rules, ordinances, and regulations of the California Air Resources Board and San Luis Obispo County Air Pollution Control District.
4) The project-level Stormwater Pollution Prevention Plan would address water pollution control measures that cross-correlate with standard dust emission minimization measures, such as covering soil stockpiles, watering haul roads, dewatering excavated areas, and grading areas.
5) A Debris Containment and Collection Plan would be included in the project's standard special provisions to effectively capture and collect all demolition debris and waste materials to prevent any materials from entering the creek channel or migrating offsite during windy conditions. All stockpiled construction debris should at least be covered daily or be hauled off as soon as possible.
6) If inspections during construction determine that lead paint or asbestos is present, the project may need to implement Work Area Monitoring of the ambient air and soil in and around the work area to verify the effectiveness of any containment system.

Noise

7) Project construction would be conducted in accordance with Caltrans' Standard Specifications Section 14.8-02.

8) The following measures would be included to minimize temporary project related noise impacts:

   a. Each internal combustion engine that is used on the job would be equipped with a muffler that is recommended by the manufacturer. No internal combustion engine would be operated without an appropriate muffler.

   b. Notify surrounding homes in advance of the construction schedule when unavoidable construction noise and upcoming construction activities that are likely to produce an adverse noise environment are expected. This notice would be given two weeks in advance. The notice would include the dates and duration of proposed construction activities and would be published in local news media. The District 5 Public Information Office would post notices of the proposed construction and potential community impacts after receiving them from the resident engineer.

   c. Limit all phases of construction to acceptable hours, Monday through Friday. Night work would not be conducted unless it is necessary for project completion.

   d. Shield especially loud pieces of stationary construction equipment.

   e. Locate portable generators, air compressors, etc., away from sensitive noise receptors.

   f. Limit grouping major pieces of operating equipment in one area to the greatest extent feasible.

   g. Place heavily trafficked areas (such as the maintenance yard) and construction-oriented operations in locations that would be the least disruptive to surrounding sensitive noise receptors.

   h. Ensure that all equipment items, such as mufflers, engine covers, and engine vibration isolators, have the manufacturers' recommended noise abatement measures intact and operational. Internal combustion engines used for the job would be equipped with a muffler or baffle that is recommended by the manufacturer.

   i. Consult Caltrans' district noise staff if complaints are received during the construction process.

Emergency Services

9) During project construction, Caltrans' resident engineer would contact and inform local emergency service providers of construction activities that could potentially affect emergency access or emergency response times. Caltrans' resident engineer would coordinate with emergency responders to avoid potential conflicts with established emergency response plans.

10) The project would use temporary traffic control and temporary traffic management during construction to ensure that emergency access through the project site and on State Route 1 is maintained.

Traffic and Transportation

11) Traffic access on State Route 1 would be maintained during project construction. The project would use temporary traffic control and temporary traffic management to allow traffic to access the project limits.

Community Character

12) The project would incorporate aesthetic treatments and/or design features that may be required as part of any planned community identifiers.

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List of Technical Studies

- Structures Preliminary Geotechnical Report (November 7, 2016)
- Air Quality and Greenhouse Gas Memo (April 10, 2018)
- Water Quality Assessment Memorandum (July 25, 2018)
- Paleontology Review Memorandum (July 26, 2018)
- Noise Study Report (October 18, 2018)
- Location Hydraulic Study (January 10, 2019)
- Hazardous Waste Initial Site Assessment Memorandum (March 9, 2018)
- Visual Impact Assessment (March 15, 2019)
- Farmland Assessment Memo (April 17, 2019)
- Cultural Resources Review (September 23, 2019)
- Natural Environment Study (November 22, 2019)

To obtain a copy of one or more of these technical studies/reports/memos or the Initial Study/Environmental Assessment, please send your request to the following email address: Info-d5@dot.ca.gov

Please indicate the project name and project identifying code (under the project name on the cover of this document) and specify the technical report or document you would like a copy of. Provide your name and email address or U.S. postal service mailing address (street address, city, state and zip code).

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