Sonoma State Route 12
Shoulder Widening

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 –SON-12 (PM 28.10 – PM 31.67)
04-4Q830/0419000485

Initial Study with Proposed Negative Declaration

Prepared by the
State of California, Department of Transportation

June 2026

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Draft Initial Study with Proposed Negative Declaration. Throughout this document, the term "Project" will be used to refer to the Shoulder Widening project on Sonoma State Route 12. This document examines the potential environmental impacts of the build and the no build alternative for the proposed Project in Sonoma County, California. Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This document tells you why the Project is being proposed; what alternatives have been considered for the Project; how the existing environment could be affected by the Project; the potential impacts of each of the alternatives; and the proposed avoidance and minimization measures that will be taken to protect resources.

What you should do:

- Please read this document.
    - Additional copies of this document are available for review at: Sonoma Valley Regional Library at 755 West Napa Street, Sonoma, CA 95476, and Sonoma County Central Library at 211 E Street, Santa Rosa, CA 94504.

    This document may be downloaded at the District 4 Environmental Documents by County Website: https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs

- We want to hear what you think. If you have any comments about the proposed Project, please visit the following website to submit a comment and/or send your written comments via postal mail or email to Caltrans by the deadline:
    - Please submit your comments via this public project webpage: www.publicinput.com/Sonoma12_4q830env
    - Send comments via postal mail to:

        Caltrans District 4, Office of Environmental Analysis
        Attn: Christopher Pincetich
        P.O. Box 23660, MS-8B Oakland, CA 94623-0660
    - A public information meeting with the Project development team is available on request. To request a meeting, please contact Christopher Pincetich, sonoma12_4q830@publicinput.com, (408) 590-4167.

- Please send your comment by the deadline: July 27, 2026.

What happens next:

After comments are received from both the public and the reviewing agencies, Caltrans may: (1) give environmental approval to the proposed Project, (2) carry out additional environmental studies, or (3) abandon the Project. If the Project is given environmental approval and funding is obtained, Caltrans could design and construct all or part of the Project.

Alternative Formats:

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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 call or write to California Department of Transportation, Attn: Christopher Pincetich, 111 Grand Avenue, Oakland, CA 94612; (408) 590-4167 (Voice), or use the California Relay Service 1 (800) 735-2929 (TTY to Voice), 1 (800) 735-2922 (Voice to TTY), 1 (800) 855-3000 (Spanish TTY to Voice and Voice to TTY), 1-800-854-7784 (Spanish and English Speech-to-Speech), or 711.

04-SON-12 (PM 28.10-31.67)
EA No. 04-4Q830
Project No. 0419000485

Widen shoulders on State Route 12 in Sonoma County from post mile (PM) 28.10 in Glen Ellen to PM 31.67 near Kenwood and install center- and edge-line rumble strips, replace two culverts, and install a drainage ditch.

Draft Initial Study with Proposed Negative Declaration

Submitted Pursuant to: Division 13, California Public Resources Code

THE STATE OF CALIFORNIA
Department of Transportation

Responsible Agencies:

California Department of Fish and Wildlife, California Transportation Commission, Regional Water Quality Control Board

Larry E. Bonner
Office Chief, Office of Environmental Analysis
California Department of Transportation
CEQA Lead Agency

6/23/2026
Date of Approval

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Proposed Negative Declaration

Pursuant to: Division 13, Public Resources Code

Project Description

The Sonoma State Route 12 Shoulder Widening Project is a safety project that proposes to widen shoulders and install both centerline and edge-line rumble strips from post mile (PM) 28.10 to PM 31.67. Additionally, the Project includes replacing two culverts at PM 28.23 and PM 28.34, and installing a drainage ditch in the westbound direction.

DRAFT Determination

This proposed Negative Declaration is included to provide notice to interested agencies and the public that it is Caltrans' intent to adopt a Negative Declaration for this Project. This does not mean that Caltrans' decision regarding the Project is final. This Negative Declaration is subject to change based on comments received by 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 proposed Project would not have a significant impact on the environment for the following reasons:

- The proposed Project has no anticipated effects on agriculture and forest resources, geology and soils, land use and planning, mineral resources, population and housing, public services, recreation, and wildfire.

- In addition, the proposed Project is anticipated to have less-than-significant effects to aesthetics, air quality, biology resources, cultural resources, energy, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation, tribal cultural resources, and utilities and service systems.

_____ _____

Christopher Caputo
Deputy District Director
Division of Environmental Science and Engineering
California Department of Transportation

Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans) is proposing a safety project on Sonoma State Route (SR) 12. Caltrans is the lead agency for the Project under the California Environmental Quality Act (CEQA). The Project takes place in Sonoma County in the community of Glen Ellen on SR 12 between post mile (PM) 28.10 in Glen Ellen to PM 31.67 near Kenwood (Figure 1). The Project proposes to widen shoulders and install both centerline and edge-line rumble strips from PM 28.10 to PM 31.67. Additionally, the Project includes replacing two culverts at PM 28.23 and PM 28.34, and installing a drainage ditch in the westbound direction.

Within the Project limits, SR 12 has two lanes with shoulder widths ranging from 2 to 10 feet. SR 12 is a major highway that crosses eight counties in California, beginning in Sonoma County and ending in Calaveras County at SR 49 in San Andreas. In Sonoma County, SR 12 is a key east-west corridor connecting the City of Sebastopol to the intersection with SR 121 near the unincorporated community of Schellville, south of the City of Sonoma. Within the Project limits, SR 12 is a two-lane conventional highway with some existing centerline rumble strips, but with gaps without centerline rumble strips. The gaps without centerline rumble strips would be filled so that the entire limits have centerline rumble strips. SR 12 is an officially designated State Scenic Highway. The Project area contains undulating hillsides and idyllic scenery, including vineyards, pastoral agriculture, woodland, open grassland, and charming roadside properties that comprise the area's character, economic vitality, and visual resources. This section of the highway is not currently served by public transit services and bicycles, and pedestrians are permitted along the route, but with no dedicated facilities.

1.2 Purpose and Need

1.2.1 Purpose

The purpose of the Project is to reduce cross-centerline collisions and enhance safety conditions along SR 12 in Sonoma County.

1.2.2 Need

The Project is needed because repeated head-on collisions resulting from centerline crossover incidents have occurred within the Project limits. Between 2007 and 2011, there were two fatal cross-centerline collisions within the proposed Project limits. Caltrans' Traffic Accident Surveillance and Analysis System recorded an additional cross-centerline head-on collision in 2015 at PM 28.20. There is a need to widen the shoulders to give vehicles an "escape route" when an oncoming car swerves or enters their lane. Additionally, rumble strips alert drivers departing from their travel lane that they have crossed over to the oncoming traffic lane. Installing rumble strips can reduce centerline crossover incidents and lead to improved driving conditions and increased safety on this segment of SR 12.

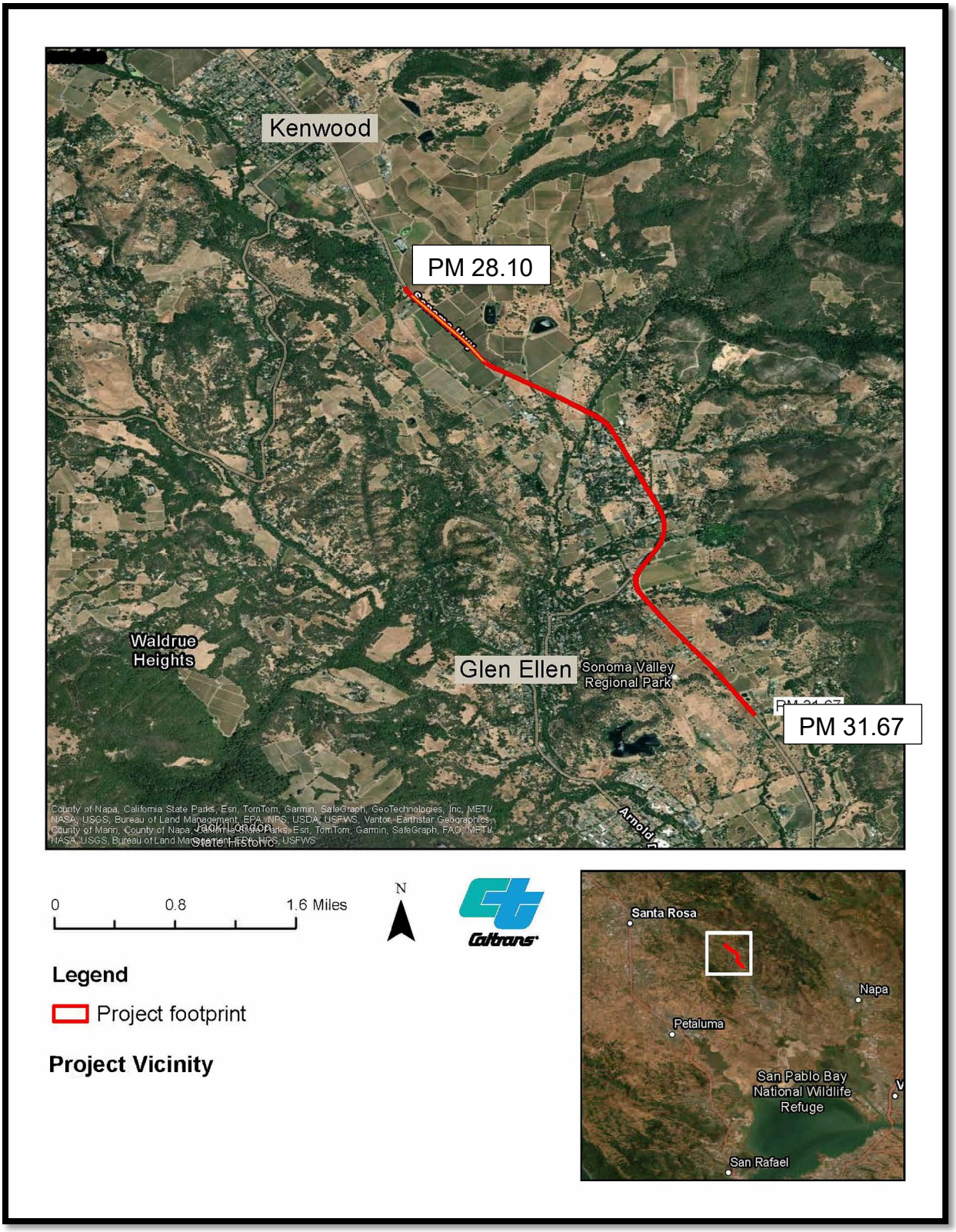

Figure 1 Project Location

1.3 Project Description

This section provides information about the proposed Project alternatives, components, and construction needs. The proposed components could be modified or removed during the detailed design phase due to considerations such as cost and public comment.

1.3.1 Project Alternatives

This section describes the Project that meets the purpose and need while avoiding or minimizing adverse environmental impacts. For this Project, only two alternatives were considered: the Build Alternative and the No Build Alternative.

1.3.2 Build Alternative – Proposed Project

The Build Alternative proposes widening the existing shoulders throughout the Project limits, installing rumble strips, and constructing drainage improvements to support these additions. Details on each of the Project's components are described in the following sections.

1.3.2.1 Shoulder Widening

The Project proposes widening the shoulders of SR 12 within the Project limits. Widening the existing shoulders to 5 feet would occur between PM 28.10 and PM 28.71. The existing road surface would be saw-cut and removed within 1 foot of the existing edge of travel way (Figure 2). Any roadside vegetation within 5 feet would then be removed, and the roadside excavated or filled to re-grade the area to be widened for the new shoulders and shoulder backing. The new paved shoulder would be constructed by installing rock and gravel aggregate base and two layers of paving; first a Hot-Mix Asphalt (HMA-Type A), and then Rubberized Hot-Mix Asphalt-Gap Graded (RHMA-G). Shoulder backing, which consists of placing a compacted gravel strip approximately 5 feet wide along the new edge of pavement, would fill any elevation differences or drop-offs at the edge of the pavement shoulder.

Shoulder widening construction would be carried out in segments to reduce impacts to traffic. The proposed shoulder widening would not alter the roadway centerline or the existing grade profile.

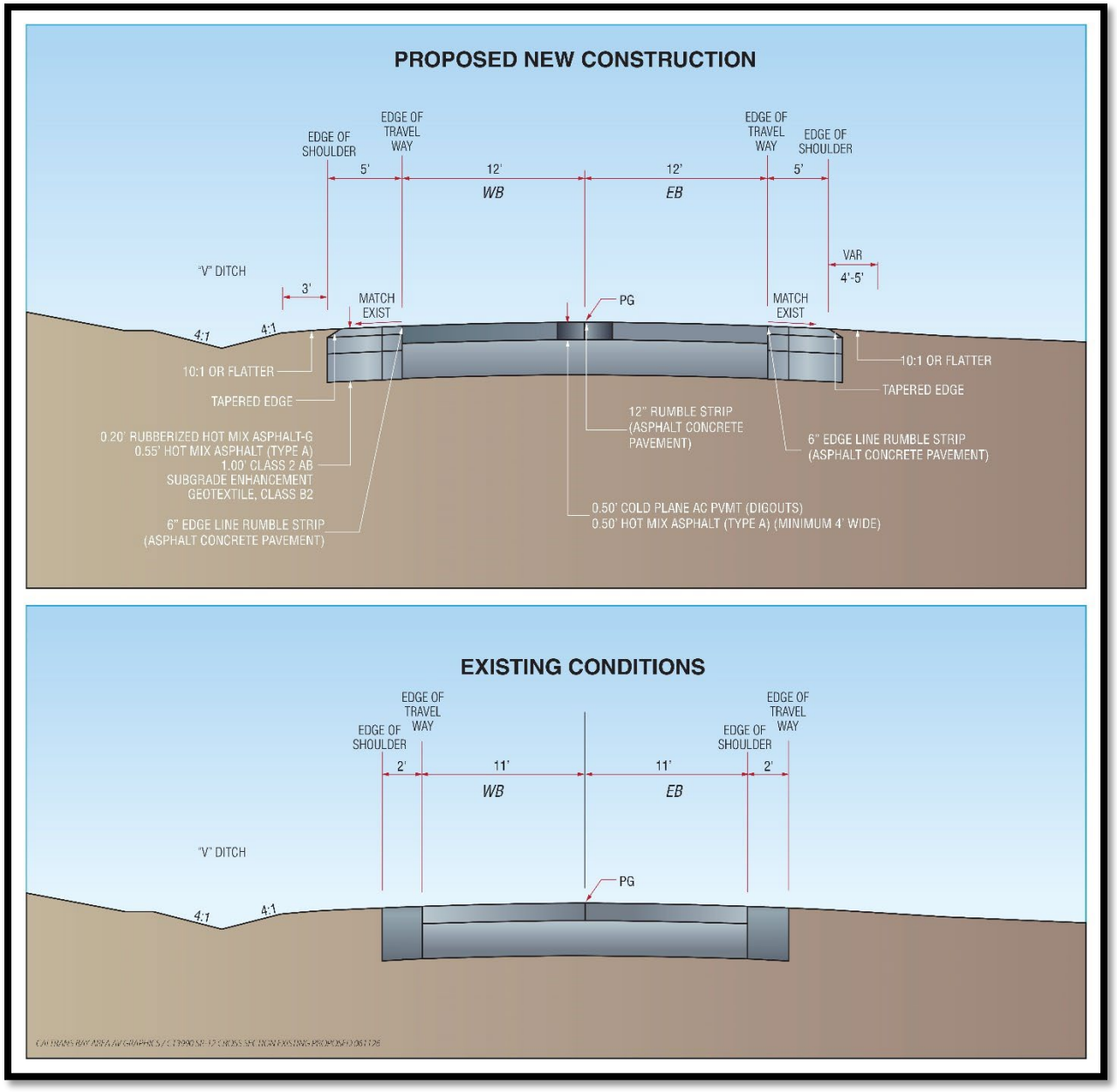

Figure 2 Existing and Proposed Roadway Dimensions

1.3.2.2 Center and Edge Line Rumble Strips

Rumble strips are a series of grooves or parallel depressions on the pavement that create a vibration when a vehicle drives over them. Rumble strips would be installed in the centerline of the highway and at the outside edge of the travel lane at specific locations throughout the Project limits on SR 12. Centerline rumble strips would be installed to fill in existing gaps within the Project limits at these specific locations, so at the completion of the Project there would be continuous centerline rumble strips through the Project limits. Edge-line rumble strips, placed at the outside edge of the travel lane, would be installed on both sides of the highway from PM 28.10 to PM 28.71, and would be designed and constructed to allow at least 5 feet of clear pavement width on the shoulder for cyclists and pedestrians. All rumble strips would have gaps at driveways and intersections to enable cyclists to make turns without crossing the uneven pavement created by the rumble strip. The locations of centerline and edge-line rumble strips proposed in the Project limits are described in Table 1.

Table 1 Rumble Strip Locations

Post Mile Locations	Type of Rumble Strip
28.10 to 28.71	Edge line
28.20 to 28.53	Centerline
28.70 to 29.00	Centerline
29.13 to 29.28	Centerline
31.17 to 31.67	Centerline

1.3.2.3 Culvert and Drainage Upgrades

The Project would make improvements to two existing culverts within the Project limits. One culvert would replace an 18-inch-diameter corrugated steel culvert that crosses perpendicular to the road with a new 18-inch-diameter corrugated steel culvert, and a new headwall would be constructed. The second culvert would replace one 12-inch-diameter reinforced-concrete pipe culvert that is parallel to the road and crosses under a private driveway at PM 28.34 with a larger, 18-inch-diameter reinforced-concrete pipe. The culverts would be replaced using the open-trench method. The open-trench method of culvert construction begins by cutting the existing pavement through the roadway or driveway that sits on top of the culvert, excavating the existing pavement and underlying road base to expose the culvert, and removing the existing culvert. The new culvert would then be placed in the excavated trench. Finally, the new culvert is covered by backfilling with either concrete slurry or engineered rock backfill materials, and then the roadway pavement is overlaid on top.

Culvert construction would be carried out in segments so that one-way traffic control can be implemented to keep travel lanes open as much as possible, and to minimize traffic disruption. Access to the private driveway for a residence and agricultural

business at PM 28.34 will be maintained at all times during the replacement of the driveway culvert.

The Project proposes to construct a new drainage ditch, or V-ditch, in the westbound direction from PM 28.22 to PM 28.71 to direct roadway drainage to existing facilities, and off the roadway.

1.3.2.4 Pre-Construction Site Preparation

Prior to the beginning of ground-disturbing activities, construction area signs, environmentally sensitive area (ESA) fencing, and temporary erosion control and water quality control best management practices (BMP) would be installed.

Vegetation would be cleared as necessary and as defined on the Project plans, and ESA fencing would be installed to protect trees and vegetation adjacent to the work area. Trees and vegetation outside the Project footprint would be designated an ESA on plans to prevent impacts to the existing vegetation that could result from the contractor's operations, equipment, and materials storage.

1.3.2.5 Equipment

The equipment needed for construction of the Project may include, but it is not limited to milling machines, pavers, rollers, graders, dump trucks, rumble strip machines, excavators, backhoes, sweepers, and circular sawcut machines.

1.3.2.6 Construction Schedule

Construction will require 160 working days, and is anticipated to begin in February 2029. Daytime construction work and night work are anticipated. Working days are typically limited to Monday through Friday, but the contractor may also work on weekend days.

1.3.2.7 Staging Areas

Staging for construction would occur on existing paved or compacted gravel surfaces only. No staging areas have been identified, and staging areas may not be needed for this Project. Construction would primarily use one-way, reverse traffic control and use the portions of the closed lane adjacent to work areas for staging materials and equipment.

1.3.2.8 Utilities

Temporary relocation of utilities would be needed, but no utilities would require permanent relocation. There are existing underground utilities within the Project limits. Potholing and utility verification would be required during later phases of the Project. Utilities that are affected would be relocated as needed. The utilities present in the

Project area are listed in Table 2, and some utilities could potentially conflict with the proposed shoulder widening, requiring temporary relocation.

Table 2 Types of Utilities in the Project

Type	Location	Function	Conflict
PG&E	Overhead	Electric Line	No conflict
PG&E	Underground	Gas line	Possible conflict
AT&T	Overhead	Telephone line	No conflict
Sonoma County Water Agency	Underground	Water Line	No conflict
Valley of the Moon Water District	Underground	Water Line	No conflict
Comcast	Overhead	Fiberoptic Cable	No conflict
Frontier	Underground	Fiber communication cable	Possible conflict with proposed shoulder

Notes:

AT&T = American Telephone and Telegraph Company
PG&E = Pacific Gas and Electric Company

1.3.2.9 Right-of-Way

This Project would take place entirely within Caltrans Right-of-Way and no additional acquisition or temporary easements will be needed.

1.3.2.10 Traffic Management

One-way reverse traffic control with portable signalized traffic lights would be required during construction. No traffic detours or full closures of SR 12 are proposed. The one-way traffic control would use traffic cones and temporary railings to protect construction areas while keeping travel lanes open as much as possible to reduce disruption. Caltrans would identify off-peak hours to conduct construction with one-way traffic control, and flaggers would be used to guide traffic. Although there would be short periods of delay associated with construction, access to and across the highway would be available during construction. Portable changeable message signs would be used to notify the public of delays and lane closures during construction, and the California Highway Patrol's Construction Zone Enhanced Enforcement Program would assist with compliance of traffic management and encourage a safe work zone. Both bicyclists and pedestrians would have access through the construction zone.

1.3.2.11 Project Features

This Project contains a number of standardized measures that are used for most projects, herein referred to as Project Features (PF). Caltrans employs these PFs to comply with state and federal laws; they are not developed in response to any specific

environmental impact resulting from the proposed Project. The PFs are separate from avoidance and/or minimization measures (AMM) or mitigation measures, which are developed in response to the impacts resulting from the proposed Project. AMMs are discussed separately in each environmental section of Chapter 3.

Some PFs reference the Caltrans Standard Specifications, which are a comprehensive collection of requirements applicable to all roadway construction contacts, and are available online at: https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications.

A list of PFs is included below in the order of environmental resource area.

PF-AES-1. Prevention of Impacts to Vegetation and Trees. Impacts to existing trees, vegetation, and associated root systems would be avoided. Temporary fencing would be used to protect existing trees abutting or within construction work and staging areas.

PF-AES-2. Replant, Reseed, and Restore Disturbed Areas. Caltrans would restore temporarily disturbed areas to the maximum extent practicable. Exposed slopes and bare ground would be reseeded with native grasses and shrubs to stabilize and prevent erosion. Where disturbance includes the removal of trees and woody shrubs, native species would be replanted, based on the local species composition.

PF-AQ-1. Contractor Air Quality Compliance. The contractor would adhere to Caltrans Standard Specifications for Construction, Sections 14.9-02 and 7-1.02c, which require contractor compliance with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

PF-AQ-2. Control Measures for Construction Emissions of Fugitive Dust. Dust control measures would be implemented to minimize airborne dust and soil particles generated from graded areas. For disturbed soil areas, the use of an organic tackifier to control dust emissions would be included in the construction contract. Watering guidelines would be established by the contractor and approved by the Caltrans Resident Engineer (RE). Any material stockpiled during construction shall be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

PF-AQ-3. Construction Vehicles and Equipment. All internal combustion engines would be maintained properly to minimize energy use and noise generation. Internal combustion engine driven equipment must be equipped with manufacturer-recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

PF-AQ-4. Minimize Idling. Idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes.

PF-BIO-1. Seasonal Avoidance. To the extent practicable, work would not occur during the wet season. Except for limited vegetation clearing (necessary to minimize impacts to nesting birds), work off paved or bare gravel areas would be limited to the

period from May 15 to November 15, unless specified in state or federal permits. Work on the roadway may occur all year, in coordination with the Project Biologist.

PF-BIO-2. Stormwater Best Management Practices. In accordance with Regional Water Quality Control Board (RWQCB) requirements, a Stormwater Pollution Prevention Plan (SWPPP) would be developed and erosion control BMPs implemented to avoid wind- or water-related erosion. The Caltrans Construction Site BMP Manual (Caltrans 2024a) provides guidance for the inclusion of provisions in all construction contracts to protect sensitive areas and prevent and minimize stormwater and non-stormwater discharges. At a minimum, protective measures would include the following:

a. Prohibiting discharge of pollutants from vehicle and equipment cleaning into storm drains or watercourses.

b. Maintaining equipment to prevent the leakage of vehicle fluids, such as gasoline, oils, or solvents. Hazardous materials such as fuels, oils, solvents, etc. would be stored in manufacturer-approved containers in a designated location that is at least 50 feet from aquatic habitats.

c. Servicing vehicles and construction equipment, including fueling, cleaning, and maintenance at least 50 feet from aquatic habitat, unless separated by topographic or engineered drainage barrier.

d. Collecting and disposing of concrete waste and water from curing operations in appropriate washouts at least 50 feet from watercourses.

e. Maintaining spill containment kits on site at all times during construction operations and/or staging or fueling of equipment.

f. Using water trucks and dust palliatives to control dust in unvegetated areas and covering temporary stockpiles when weather conditions require.

g. Protecting graded and designated staging areas from erosion using an appropriate combination of approved erosion control items or methods, in accordance with the SWPPP, as indicated in the RWQCB permit, and as stated in the contract plans and special provisions.

PF-BIO-3. Construction Site Management Practices. The following site restrictions will be implemented to avoid potential effects on listed species and their habitats:

a. Enforcing a speed limit of 15 miles per hour in the Project footprint in unpaved and paved areas to reduce dust and excessive soil disturbance.

b. Locating construction access, staging, storage, and parking areas within the Project footprint outside any designated ESA. Access routes, staging and storage areas, and contractor parking would be limited to the minimum necessary to construct the proposed Project. Routes and boundaries of roadwork would be clearly marked before initiating construction or grading.

c. Certifying, to the maximum extent practicable, borrow material is nontoxic and weed free.

d. Enclosing food and food-related trash items in sealed trash containers and removing them from the site at the end of each day.

e. Prohibiting pets from entering the Project footprint area during construction.

f. Prohibiting firearms in the Project site, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

g. Maintaining equipment to prevent the leakage of vehicle fluids such as gasoline, oils, or solvents, and developing a Spill Response Plan. Hazardous materials such as fuels, oils, and solvents would be stored in industry- or manufactured-approved containers in a designated location that is at least 50 feet from aquatic habitats.

PF-BIO-4. Vegetation Removal Strategies. Vegetation that is within the cut-and-fill line or growing where permanent facilities would be placed would be cleared. Vegetation would be cleared only where necessary, and would be cut above soil level, except in areas that would be permanently impacted or excavated. This would allow plants that reproduce vegetatively to resprout after construction. Clearing and grubbing of woody vegetation would occur by hand or using construction equipment such as mowers, backhoes, and excavators. Cleared vegetation would be chipped and left on site if appropriate, or removed from the Project footprint if it could be used as nesting habitat.

PF-BIO-5. Reduce Spread of Invasive Species. To reduce the spread of invasive, nonnative plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans would comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control to minimize the economic, ecological, and human health effects. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor would be required to contain the plant material associated with these noxious weeds and dispose of it in a manner that would not promote the spread of the species. The contractor would be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance would be replanted with fast-growing native grasses or a native erosion control seed mixture. Where seeding is not practical, the target areas in the Project area would be covered to the extent practicable with heavy black plastic solarization material until the end of the Project.

PF-CUL-1. Unanticipated Discovery. In the event that archaeological resources (sites, features, or artifacts) or Tribal Cultural Resources (TCR) (as defined by the Federated Indians of Graton Rancheria) are exposed during construction activities, all construction work occurring within 60 feet of the find shall immediately stop until a qualified archaeologist that meets the Secretary of the Interior Professional Qualifications for

Archaeology can evaluate the significance of the find in consultation with the Tribe to determine whether or not additional study is warranted. Additional archaeological surveys would be needed if Project limits are extended beyond the current survey limits. Contact the Lead Caltrans Archaeologist in the Office of Cultural Resource Studies. If any TCRs are found during construction, a Professionally Qualified Staff archaeologist shall assess the find. The Office of Cultural Resource Studies would notify local consulting Tribes if the resource is determined to be a TCR, and consult with the contractor and the Tribe to determine whether the resources can be avoided by the Project. If the TCR cannot be avoided, then further consultation efforts with the Tribes would be necessary to determine its treatment.

PF-CUL-2. Discovery of Human Remains. If Caltrans Professionally Qualified Staff determines that cultural materials contain human remains, State 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. Caltrans' Office of Cultural Resources Studies would contact the County Coroner. Pursuant to California Public Resources Code (PRC) Section 5097.98, if the remains are thought by the coroner to be Native American, the coroner would notify the Native American Heritage Commission (NAHC), which would then notify the Most Likely Descendent. Caltrans, District 4, Office of Cultural Resources Studies would work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

PF-CUL-3. Environmentally Sensitive Area for Cultural Resources. The Caltrans Archaeologist would collaborate with all responsible parties to ensure Cultural Resources ESAs are accurately represented in the plans, specifications, and estimates, and the ESA Action Plan would be included in the RE Pending File. During the preconstruction meeting, a qualified archaeologist and Tribal representative would discuss the ESAs with construction personnel, emphasizing that no construction activity, including material storage, is permitted in these areas and that workers must remain outside of them. The RE would notify the Caltrans Archaeologist at least two weeks prior to construction, who would then inform the Tribe. Prior to construction, the Caltrans Project Archaeologist would mark ESA locations in the field with the contractor using temporary high-visibility fencing (THVF). Regular inspections and site visits would be conducted by the Caltrans Archaeologist and the Tribe to ensure the integrity of the ESAs.

PF-GEO-1. Unforeseen Paleontological Discoveries. Should any grading or excavation of native soil or rock take place, then Section 14-7 of the Standard Specifications shall apply to handle unforeseen paleontological discoveries.

PF-GHG-1. Recycle material to reduce energy consumption. If feasible, recycle non-hazardous waste and excess material. If recycling is not practicable, dispose of material.

PF-GHG-2. Reduce the use of non-renewable energy. Use solar-powered signal boards, if feasible.

PF-HAZ-1. Caltrans Standard Specifications and Hazardous Waste Regulations. The current Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment and from storage of fuels, paints, cleaners, solvents, and lubricants. Handling and management of hazardous materials would comply with the current Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines handling, storing, and disposing of hazardous waste.

PF-HAZ-2: Preliminary Site Investigations. A preliminary site investigation (PSI) for aerially deposited lead, agricultural chemicals, and potential hazardous materials concerns related to soil and groundwater would be conducted during the Project design phase to investigate soil within Project limits proposed to be excavated, encountered, or disturbed and managed. The findings of the PSI would be used to evaluate soil and groundwater handling practices, construction worker health and safety concerns, and soil and groundwater reuse and disposal options. If hazardous materials are identified during the PSI, additional investigation could be required. The results of the PSI would determine the special provisions to be used in the final design package. The site investigation report would be included as part of the information handout made available as a part of the final design package.

PF-HAZ-3: **Removal of Yellow Traffic Stripe and Pavement Marking with Hazardous Waste Residue.** Specifications for removing, handling, and disposing of yellow thermoplastic and yellow traffic stripe and pavement marking would be developed.

PF-TRANS-1: Traffic Management Plan. A Traffic Management Plan (TMP) would be developed by Caltrans during the design phase. The TMP outlines temporary traffic control practices and strategies during construction. It may include public information, motorist information, incident management, traffic operations, single-lane closures, flaggers and phasing, and portable changeable message signs. The TMP would include notices to emergency services providers and the public, in advance.

PF-WQ-1. Stormwater Pollution Prevention Plan. Caltrans would review and approve an SWPPP that meets standards and guidelines of the Construction General Permit to comply with Standard Specifications 13-3 containing BMPs for stormwater pollution control. The contractor must prepare the SWPPP, and it must be approved by the Caltrans RE prior to the start of construction. The SWPPP would include a Construction Site Monitoring Program that outlines procedures for visual monitoring, and for sampling and analysis related to non-visible pollutants, sediment, turbidity, and pH. Projects subject to the Construction General Permit must undergo a risk-level determination to establish required monitoring, sampling, and reporting measures based on sediment and receiving-water risk factors.

PF-WQ-2. Design Pollution Prevention Best Management Practices. Permanent erosion control measures would be applied to any disturbed unpaved areas. Existing unpaved areas outside construction activities would not be disturbed to minimize the potential of erosion and sediment.

1.3.3 No Build (No-Action) Alternative

The No Build Alternative does not meet the purpose and need of the Project. Under the No Build Alternative, no road improvements would be made to SR 12 that are needed to make safety improvements on this two-lane highway.

1.4 Permits and Approvals Needed

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

Table 3 Permits and Approvals

Agency	Certification	Status
United States Fish and Wildlife Service	Formal Section 7 consultation for threatened and endangered species is anticipated (Biological Opinion).	Technical assistance with USFWS occurred on October 17, 2025. The Biological Opinion is anticipated in August 2026.

Chapter 2 CEQA Evaluation

2.1 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the Project. Potential impact determinations include No Impact, Less-than-Significant Impact, Less-than-Significant Impact with Mitigation Incorporated, and Significant and Unavoidable Impact. In many cases, technical studies performed in connection with the Project indicate that there are no impacts to a particular resource. A "No Impact" answer in the last column reflects this determination. The terms "significant" and "significance" used throughout the checklist are related to CEQA only. The questions in this form are intended to encourage the thoughtful assessment of impacts, and do not represent thresholds of significance. The possible impact determinations are described below.

No Impact: Indicates no physical environmental change from existing conditions.

Less-than-Significant Impact: Indicates the potential for an environmental impact that is not significant with or without the implementation of AMMs.

Less-than-Significant Impact with Mitigation Incorporated: Indicates the potential for a significant impact that would be mitigated with the implementation of a mitigation measure to a level of less than significant.

Significant and Unavoidable Impact: Indicates the potential for a significant and unavoidable environmental impact.

The PFs described in Section 1.2.2.11 are integral to the Project and can include both design elements and standardized measures that are applied to all Caltrans projects such as BMPs and measures included in the Standard Plans and Specifications. The PFs are considered as an integral part of the Project description, and have been considered prior to any significance determinations documented in the following sections.

2.1.1 Aesthetics

Except as provided in PRC Section 21099, would the Project:

Question	CEQA Determination
a) Have a substantial adverse effect on a scenic vista?	Less-than-Significant Impact
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Less-than-Significant Impact
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
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less-than-Significant Impact

CEQA Significance Determinations for Aesthetics

A Visual Impact Assessment was completed by the Caltrans Office of Landscape Architecture, North Counties District 4, for the proposed Project (Caltrans 2025a). The findings from this assessment are presented below.

The Project is within the boundaries of SR 12. The Federal Highway Administration (FHWA) determined that SR 12 is an Officially Designated State Scenic Highway, which requires protection and special conservation treatment for scenic and natural features. Undulating hillsides and idyllic scenery, including vineyards, pastoral agriculture, woodland, open grassland, and charming roadside properties, comprise the area's visual resources.

The preliminary assessment consisted of a questionnaire used for all capital and maintenance projects scored to determine potential visual impacts to the Project’s Area of Visual Effect (AVE). The AVE is defined as the land that is visible from, adjacent to, and outside the highway right-of-way (ROW). It is determined by topography, vegetation, and viewing distance. The main tools used to establish the AVE boundaries included topographic imagery, land use and vegetation mapping, and digital terrain models. The AVE for the Project consists of the scenic corridor on SR 12.

a, b) Less-than-Significant Impact

The Project would implement AMM-AES-1, which includes blending construction elements with the landscape by applying aesthetic treatments and camouflaging any visible drainage features with earth-tone coating or stains. To minimize the effects to the visual appearance of the scenic vista during the construction phase of the Project, all staging areas would be on paved or unvegetated surfaces, and temporary fencing or another screening material would be installed to minimize the appearance of construction equipment. The Project would prevent impacts to scenic resources on the state highway, including vegetation and trees, through the implementation of PF-AES-1 and PF-AES-2. Temporary fencing would be used to protect existing trees abutting or within construction work and staging areas. With the implementation of AMM-AES-1, and AMM-AES-2, the Project would have a less-than-significant effect on aesthetic resources.

The Project would not remove any trees, or impact the adjacent stone walls, would not construct any new facilities that would obstruct views, but would have temporary impacts on the scenic vistas during construction. Therefore, the impact of this Project on the scenic vista and scenic resources is less than significant.

c, d) Less-than-Significant Impact

The visual character or quality of public views of the site and its surroundings would not be permanently impacted. Temporary impacts are expected from the construction of the Project. All proposed elements are below eye-level, and adjacent to existing roadway features. The Project builds on existing elements in the roadway and does not include any features that detract from the visual resources of the AVE. The Project would be of low scale and dominance in comparison to the open views of expansive hills and fields. The Project would leave visual and scenic resources intact, and there would be a low potential that the changes to the views would be noticeable. Only ruderal vegetation alongside the roadway would be removed for shoulder widening. Caltrans would implement AMM-AES-4 to restore vegetation disturbed by construction activities, and with this implementation, the impact would be less than significant.

The Project would not produce new sources of lighting. The Project is not introducing significant light or glare that would harm day or nighttime views in the area permanently, but lighting used for night work would introduce glare that would temporarily impact views. Therefore, the impacts would be less than significant.

Avoidance and Minimization **Measures for Aesthetics**

The following AMMs would be implemented:

AMM-AES-1: Install temporary fencing. Use temporary fencing to protect existing trees abutting or within construction work and staging areas. Avoid impacts to existing trees, vegetation, and associated root systems.

AMM-AES-2: Minimize impact on scenic resource. Locate staging areas on paved or unvegetated surfaces and away from root systems to preserve scenic resource trees. Minimize appearance of construction equipment by screening with temporary fencing or other appropriate screening material.

AMM-AES-3: Replace all fences to original condition. If any fencing is impacted or removed, provide replacement in a similar design to its original condition.

AMM-AES-4: Blend construction elements with environment. Apply aesthetic treatment and camouflage any visible drainage features, such as culvert pipes, headwalls, drainage rock, etc., by coloring with earth-tone coating or stains.

AMM-AES-5: Restore vegetation. Revegetate areas disturbed by construction activities, including staging areas, with climate-appropriate, native erosion control seeding and associated permanent erosion control measures.

2.1.2 Agricultural and Forestry Resources

Would the project:

Question	CEQA Determination
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	No Impact
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact
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
d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	No Impact

CEQA Significance Determinations for Agriculture and Forestry Resources

a, b, c, d, e) No Impact

The Project would occur entirely within Caltrans ROW, and no agriculture lands listed as categories featured on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency would be converted to non-agricultural use (Caltrans n.d.). There would be no impact to parcels of land listed under the Williamson Act (Caltrans 2025b). Because no agricultural land would be converted to non-agricultural uses, and there would be no impact to land protected under a Williamson contract, no impact to agricultural resources would occur.

There are no known forest resources within the Project, including no known timber harvesting plans or proposed harvest plans (CalFire 2025), existing zoning for forest land (as defined in PRC section 12220(g)), timberland (as defined by PRC section 4526), or timberland zoned production (as defined by Government Code section 51104(g)) within the Project. Therefore, the Project would not impact forest land, and no loss of forest land or conversion of land to non-forest use would occur.

There would be no other changes in the existing environment that could result in conversion of farmland to non-agricultural use, or the conversion of forest land to non-forest use (CPAD 2025); therefore, the Project has no impact to these resources.

2.1.3 Air Quality

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

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	No Impact
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Less-than-Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations? (check for schools, elderly homes, hospitals nearby)	Less-than-Significant Impact
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	Less-than-Significant Impact

CEQA Significance Determinations for Air Quality

The Office of Environmental Engineering prepared a technical memo (Caltrans 2025c) to assess conformity and/or compliance with air quality regulations. This Project is exempt from the requirement to determine air quality conformity in accordance with Title 40 Table 2, Safety-Guardrails, median barriers, and crash cushions. The Project is also included in the short-term federal transportation improvement program under VAR170007: Safety Projects focused on median barriers, crash cushions and guardrails. This Project does not require an air quality study, and it is exempt from the requirement for an air quality conformity determination.

The Project is in southern Sonoma County, which is in the San Francisco Bay Area Basin, and within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) which covers all nine counties, including Alameda, Contra Costa, Marin, Napa, San Franscisco, San Matero, Santa Clara, and portions of Solano and Sonoma (BAAQMD 2022).

The Project area is designated as non-attainment for federal 8-hour ozone and particulate matter with aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5)}$. The Project does not have sensitive receptors, because residential units are scattered throughout the Project limits. The proposed Project would not result in other emissions besides temporary greenhouse gases (GHG) from construction and materials processing by onsite construction equipment, workers commuting to and from the Project site, and traffic delays due to construction. The contractor would adhere to Caltrans Standard Specifications and comply with air pollution control rules, regulations, ordinances, and statutes that apply to construction activities.

No Impact

No long-term impacts to air quality in the Project vicinity would result from the Project because the Project would not increase capacity on SR 12 or alter vehicle operations on the roadway once construction is complete. The Project would generate temporary construction emissions, but construction-related activities would comply with all federal and state regulations and policies to avoid temporary air quality impacts. Additionally, the air quality Project features discussed in Section 2.2.4.12 would reduce temporary construction emissions. The Project would not conflict with or obstruct implementation of an adaptable air quality plan, and there would be no impact.

b, c, d) Less-than-Significant Impact

The Project is required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air pollution control rules, regulations, ordinances, and statutes that apply to work performed under the construction contract. Construction activities are anticipated to produce emissions that could contain pollutants that reach nearby receptors and could result in additional other air pollution. Construction activities would be temporary; therefore, Project-related air pollutants resulting from construction would be minimal. Potential impacts to air quality, including emissions of pollutants, odor affecting nearby sensitive receptors, and exposure of sensitive receptors, would be less than significant based on the temporary nature of the Project construction-related activities.

2.1.4 Biological Resources

Would the project:

Question	CEQA Determination
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 NOAA Fisheries?	Less-than-Significant Impact
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	No Impact
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact
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

CEQA Significance Determinations for Biological Resources

Caltrans Office of Biological Sciences and Permits prepared a Natural Environment Study (NES) to determine potential impacts of this Project on biological resources, including sensitive plant and wildlife species (Caltrans 2026a).

The Biological Study Area (BSA) consists of the entire Project footprint, including areas that would be permanently and temporarily impacted by all activities of the Project. The BSA is composed of the Project footprint and 50-foot buffer on Project sections where shoulder widening, culvert upgrades, or rumble strip work is proposed. The BSA measures approximately 28.2 acres.

Databases and Geographic Information System (GIS) layer datasets were used to evaluate potential impacts that could occur to sensitive wildlife and plant species and their habitat resources as a result of the proposed Project (Appendix E). Database sources used in the NES included the U.S. Fish and Wildlife Service (USFWS), California Native Plant Society (CNPS), California Natural Diversity Database (CNDDB), National Marine Fisheries Service (NMFS), and National Wetlands Inventory (NWI), Natural Resources Conservation Service (NRCS), and iNaturalist.

In addition to database queries, field studies were conducted at select locations in the BSA to assess existing natural resources. Field studies used in the preparation of the NES included habitat evaluations during field reviews, tree surveys, and visual surveys of visible areas of the BSA outside Caltrans ROW.

The land cover in the BSA (28.2 acres) was determined through GIS analysis to be primarily developed lands (16.4 acres, which includes the paved surface of SR 12 and compacted gravel shoulder backing) followed by natural vegetation (10.08 acres) and then agriculture (1.72 acres). The most common vegetation types in the BSA are fragments of herbaceous grasslands along the road, hardwood forest, and nonnative forest.

Of these habitat types, the Project is anticipated to result in temporary impacts to 0.28 acre of herbaceous grasslands along the road, 0.01 acre of nonnative forest, and 0.56 acre of developed lands, for a total of 0.85 acre. Temporary impacts would result from construction access and other ground-disturbing activities during construction that would subsequently be restored through revegetation. Additionally, the Project is anticipated to result in permanent impacts to 0.03 acre of herbaceous grasslands along the road, less than 0.01 acre of nonnative forest, and 0.79 acre of developed lands, for a total of 0.83 acre, due to new pavement applied for shoulder widening. Field verification surveys in impacted areas included tree surveys, and although the GIS analysis indicated impacts to nonnative forest, the accurate tree surveys determined existing trees could be avoided and would not need to be trimmed or removed to construct the Project.

a) Less-than-Significant Impact

Special-status species potentially present within or adjacent to the BSA are discussed in the following subsections.

Special-Status Plant Species

Based on the literature and database review, Caltrans biologists determined that four special-status plant species could be present in the BSA (Table F-1 in Appendix F). However, none of those species were observed during field surveys, and none were determined to have potential to occur in the Project area based on the habitat conditions present during field surveys. These species are listed below with common name, scientific name, and California rare plant ranking:

- Napa false indigo (*Amorpha californica* var. *Napensis*; 1B.2)
- Calistoga ceanothus (*Ceanothus divergens,* 1B.2)
- Sonoma ceanothus (*Ceanothus sonomensis,* 1B.2)
- Jepson's leptosiphon (*Leptosiphon jepsonii,* 1B.2*)*

Two field surveys were conducted, including an initial resource assessment in December 2024, and a vegetation survey during the blooming period of these species, in May 2025. In each survey, areas within Caltrans ROW and public streets and paths were carefully surveyed, and no special-status plant species were found. It was noted that the absence of these four plant species in the Project area is likely due to a lack of suitable resources, regional extirpations, or fragmentation of suitable habitat and suitable resources.

Based on the absence of special-status plants observed in the BSA, combined with low-quality habitat along SR 12 within the Project footprint, no impact to special-status plants species would occur.

Special-Status Wildlife Species

These wildlife species are identified in the NES as having a very low to low potential to occur in the BSA: Cooper's Hawk (COHA; *Astur cooperii*), Burrowing owl (BUOW; *Athene cunicularia*), Northern Spotted Owl (NSO; *Strix occidentalis caurina*), Northwestern pond turtle (NWPT; *Actinemys marmota*), California giant salamander (CGS; *Dicamptodon ensatus*), Foothill yellow-legged frog (FYLF) north coast Distinct Population Segment (DPS; *Rana boylii* pop. 1), Steelhead central California coast DPS (*Oncorhynchus mykiss irideus* pop. 8), California red-legged frog *(*CRLF; *Rana draytonii*), and pallid bat (*Antrozous pallidus*) (Table F-2 in Appendix F). However, Caltrans Biologists did not identify suitable habitat for COHA, BUOW, NSO, or pallid bat in the BSA. COHA mainly uses woodlands for foraging and riparian trees for nesting; neither are habitats present in the BSA. BUOW requires low vegetation and burrows created by other animals, and these were not identified in the BSA. NSO relies on old-growth forests, and this habitat was not found in the BSA. Pallid bats use structures such as bridges for roosting, and these are not found in the BSA. Therefore COHA, BUOW, NSO, and pallid bats have a very low to low potential to occur, and Caltrans has determined the Project would have no effect on these species. Roadside vegetation on SR 12 is composed of ruderal non-native and invasive species, annual grasslands, and fragmented shrubs and trees. No suitable aquatic habitat would be impacted, and no suitable and accessible habitat between creeks and the roadway would be impacted for NWPT, CGS, and FYLF in the BSA; therefore, these species also have a very low potential to occur in the Project footprint during construction. Caltrans has determined the Project would not have any direct harm, or take, of these species.

California Red-Legged Frog

One special-status wildlife species that may be impacted by the Project is the CRLF. The CRLF is federally listed as threatened, and is listed as a California Species of Special Concern. This species is native to California from the coast to the Sierra

Nevada Mountains, with a range that expands as far south as Baja California, Mexico. The CRLF lives in water or moist areas near lowlands and foothills featuring dense, shrubby, or emerging riparian vegetation. Their lifecycles depend on water, and roadside ditches could potentially be used as a resource by this species as they disperse between breeding ponds and upland areas to forage for food. The USFWS database recorded that a CRLF was found around 0.7 mile north of the Project footprint. During field surveys of roadside ditches and drainages, no aquatic breeding resources were identified for this species.

The BSA intersects Calabazas and Stuart Creeks, where aquatic habitat could be suitable for adult CRLF individuals as dispersal corridors and foraging areas, but not for reproduction due to the lack of pools. Roadside areas are likely to be dry outside of the wet season, but these upland areas near aquatic habitat dispersal corridors provide vegetation cover or refugia for CRLF. Existing fragmentation of their habitat caused by the presence of the roadway may limit the connectivity of their resources, and limit the ability of this species to be present along SR 12.

The assessment conducted by Caltrans Biologists determined that the Project may result in temporary direct impacts to the CRLF. However, no permanent impacts to CRLF suitable or protected habitats are anticipated, and no wetland habitats would be impacted. The Project would use several AMMs to avoid and minimize impacts to CRLF, including preconstruction surveys (AMM-BIO-1), a biological monitor with specific qualifications to detect CRLF (AMM-BIO-2), training of all construction workers to be aware of and identify a CRLF (AMM-BIO-3), and a protocol for stopping construction work if their presence is observed (AMM-BIO-4). Caltrans has determined the Project may affect, and is likely to adversely affect, this species. With the implementation of these AMMS, the impacts to CRLF would be less than significant.

Migratory and Nesting Birds

The Project would not include any tree removal, and no temporary or permanent impact is expected for native or ornamental trees adjacent to the Project footprint. In total, 22 bird species listed by the United States Fish and Wildlife Service (USFWS) are protected under the Migratory Bird Treaty Act (1918) and may occur in the BSA. To account for the potential that any trees, shrubs, vegetation patches, and other areas found in the BSA could provide potential nesting sites for migratory birds, preconstruction bird nesting surveys would be conducted and active nests avoided. Before starting construction, ESAs would be established to prevent construction equipment or personnel from entering sensitive habitat areas. Vegetation clearing would only be conducted when necessary, and if it occurs during the nesting season, defined as February 1 to September 30, a pre-disturbance survey for nesting birds would be conducted. If migratory birds are observed nesting adjacent to Project construction, work activities would be managed to avoid disturbing the active nest, and work may resume after nesting activity is complete. No impacts to migratory birds would occur from the Project.

With the implementation of Project AMMs, impacts to special-status wildlife species would be less than significant.

b, c) No Impact

Sensitive natural communities in the BSA include Calabazas and Stuart Creeks. These communities are recognized by the RWQCB and United States Army Corp of Engineers (USACE) as waters of the U.S. and state. However, all work proposed by the Project takes place on paved surfaces or on the upland areas adjacent to paved surfaces, and no work would occur in the channel or riparian area of either Calabazas or Stuart Creeks. Two culverts are being replaced, and the habitat impacted by this work was assessed, and did not meet the definition of wetlands under USACE jurisdiction. The RWQCB was consulted, and determined the habitat impacted for the two culvert replacements are not jurisdictional waters of the state. The Project footprint does not include designated critical habitat for any federally listed species. No impacts are anticipated for the two creeks that intersect the Project limits, or waters or wetlands within the limits, because they are not present in the shoulder expansion and centerline work; therefore, no riparian areas or wetlands would be impacted.

d) No Impact

The two culverts in the BSA have no connection to habitat for migratory fish species, and therefore no effects on fish passage. No barriers to terrestrial wildlife connectivity would be constructed by the Project, and culverts that cross under the roadway and may be used by wildlife would not be impacted by the Project. The Project would not impact fish or wildlife movement or access to nursery sites.

e) No Impact

Twenty-one trees/shrubs were mapped in the BSA during field surveys for the Project. The Project does not include tree removal, and there would be no temporary or permanent impacts on native or ornamental trees in the Project footprint. The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation ordinance.

f) No Impact

The Project would result in approximately 0.03 acre of roadside habitat loss within the Caltrans ROW, and then would restore all temporarily disturbed herbaceous grassland habitat along the road. The Project would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Avoidance and Minimization Measures for Biological Resources

The following AMMs would be implemented:

AMM-BIO-1: Preconstruction California Red-Legged Frog (CRLF) Surveys. Preconstruction surveys for CRLF will be conducted by a USFWS approved biologist(s) no more than 24 hours prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. These efforts will consist of walking surveys of the Project footprint focusing on mesic areas, and if possible, on accessible adjacent areas of upland habitat within at least 50 feet of the Project footprint. The biologist(s) will investigate potential cover sites when it is feasible and safe to do so. This includes a thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the Project footprint will be documented and relocated to an adequate cover site in the vicinity. Safety permitting, the biologist(s) will investigate areas of disturbed soil for signs of frogs within 30 minutes following initial disturbance of the given area.

AMM-BIO-2: Biological Monitor. The agency-approved biologist will appoint a biological monitor (e.g., the crew foreman) who will be responsible for ensuring that all crew members comply with permit guidelines.

AMM-BIO-3: Worker Environmental Awareness Training. To aid in compliance with permit guidelines, the biological monitor will conduct Worker Environmental Awareness Training for all personnel. Subsequent environmental training will be conducted for new personnel before they can participate in construction activities. At a minimum, the training will include a description of special-status species with a focus on CRLF, migratory birds, and their habitats; how the species might be encountered within the Project area; an explanation of the status of these species and protection under the federal and state regulations; the measures to be implemented to conserve listed species and their habitats as they relate to the work site; boundaries within which construction may occur; and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of Project maps showing areas where avoidance and minimization measures are to be implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.

AMM-BIO-4: Protocol for Species Reporting. If a CRLF is encountered in the immediate work area, the following procedures will be followed:

a) If a CRLF is discovered during surveys or proposed work activities, the RE and USFWS-approved biologist(s) will be immediately informed. If a CRLF gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves on its own or is removed from the construction zone, based on language in the USFWS agreement.

b) The USFWS-approved biologist(s) will have the authority to halt work through coordination with the resident engineer if a CRLF is discovered within the Project

footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist(s) has determined that a potential take of the CRLF could occur. Work will resume once the animal leaves the site voluntarily, is removed from the construction zone following agreements in the USFWS Biological Opinion, or it is determined that the CRLF is not being harassed by construction activities.

c) Caltrans will submit post-construction compliance reports prepared by the biologist to USFWS within 60 calendar days following completion of Project activities, or within 60 calendar days of any break in construction activity lasting more than 60 calendar days. This report will detail (1) dates that relevant Project activities occurred; (2) pertinent information concerning the success of the Project in implementing avoidance and minimization measures for listed species; (3) an explanation of failure to meet such measures, if any; (4) known Project effects on the CRLF, if any; (5) documentation of employee environmental education; and (6) other pertinent information.

AMM-BIO-5: Nighttime Restrictions/Lighting. Night work would be limited wherever possible. If night work must be performed, lighting will be directed towards the roadway to the greatest extent practicable to avoid exposing nocturnal wildlife and their habitats to excessive glare.

AMM-BIO-6: Avoidance of Entrapment. To prevent inadvertent entrapment of animals during construction, excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day using plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the BSA overnight will be inspected before they are subsequently moved, capped, or buried.

AMM-BIO-7: Pre-construction Nesting Bird Surveys and Nest Avoidance. During the nesting season (February 1 through September 30), pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to avoid and minimize disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/ type of potential disturbance. To avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the Project footprint. Additional bird nesting surveys will be required if work must occur during the nesting season.

AMM-BIO-8: Environmentally Sensitive Area Fencing. Before starting construction, ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) will be clearly delineated as needed using high-visibility orange fencing. The ESA fencing will remain in place at

each location until work at that location is complete, and will prevent construction equipment or personnel from entering sensitive habitat areas. The ESA fencing also serves to delineate the Project footprint in which all construction activity is to occur. The final Project plans will depict the locations where ESA fencing will be installed, and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. The ESA fencing will be removed following completion of construction activities

AMM-BIO-9: Wildlife Exclusion Fencing. Before starting construction, at the discretion of the Caltrans biologist, wildlife exclusion fencing (WEF) may be installed along the Project footprint perimeter in the areas where wildlife could enter the Project site. The final Project plans will depict the locations where WEF will be installed, if needed, and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF fencing material and proper WEF installation and maintenance. The WEF will remain in place at each location until work at that location is complete, and will be regularly inspected for stranded animals and fully maintained daily. The WEF will be removed following completion of construction activities.

2.1.5 Cultural Resources

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to in §15064.5?	No Impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Less-than-Significant Impact
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	Less-than-Significant Impact

CEQA Significance Determinations for Cultural Resources

The Office of Cultural Resources Studies (OCRS) with Caltrans District 4 prepared a Summary Memo for the proposed Project (Caltrans 2026b). The Summary Memo outlines completed cultural resource technical reports to identify potential resources in the Area of Potential Effect (APE) for the Project.

The review for the Project conducted by OCRS was carried out in accordance with the Programmatic Agreement (PA) Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer (SHPO), the United States Army Corps of Engineers' Sacramento District, San Francisco District, and Los Angeles District, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California (2024), and Memorandum of Understanding (MOU) between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with Public Resources Code Section 5024 and Governor's Executive Order W-26-92 (2024).

An Archaeological Survey Report (ASR), an Extended Phase I Report (XPI), a Historical Resources Evaluation Report (HRER), and a Historic Properties Survey Report were completed for the Project. Results of the ASR and XPI indicated that there are two archaeological resources within the APE. The HRER identified and evaluated one built resource, a rock wall, within the APE. Caltrans determined that the built resource was not eligible for the National Register of Historic Places (NRHP), and received concurrence from the SHPO on March 30, 2026.

Caltrans contacted the NAHC on June 23, 2025, with a request for a Sacred Lands File (SLF) search. On June 24, 2025, the NAHC responded that no information regarding sites in the APE was found in the SLF search. Caltrans was provided with contact information to communicate with Native American Tribes. Caltrans reached out via email to the Federated Indians of Graton Rancheria (FIGR), the Guidiville Rancheria of California, the Mishewal Wappo, the Lytton Rancheria, and the Pinoleville Pomo Nation.

Lytton Rancheria responded and requested that all existing resources be protected with ESAs, but did not request ongoing consultation. FIGR responded to Caltrans outreach on July 24, 2025, requesting consultation under Section 106 and Assembly Bill (AB) 52. Representatives from Caltrans and FIGR had a meeting on January 29, 2026, to discuss the Project details and technical studies. Caltrans is actively consulting with FIGR, and would remain in consultation throughout the life of the Project, both under Section 106 PA and pursuant to AB 52 and CEQA. The remaining Tribes did not request consultation or provide comments.

a) No Impact

Caltrans OCRS staff conducted architectural history field surveys in October and December 2025. One built environment property was recorded within the APE and evaluated for its significance; this resource was determined to be ineligible for the NRHP. Given that no resources are eligible for the NRHP, there would be no substantial adverse changes in the significance of a historical resource pursuant to §15064.5.

b) Less-than-Significant Impact

Pursuant to the Section 106 PA, Caltrans, with the participation of a Tribal representative from FIGR, conducted an extensive archaeological pedestrian survey and XPI testing throughout the APE. Two previously recorded archaeological resources were identified within the APE by a record search. Both archeological sites were previously determined eligible for the NRHP, and are within the Project APE. One site is partially in the footprint of shoulder widening, and was investigated through a combination of surface survey and XPI testing, while the other is only subject to rumble strip installation within site limits, and was only surveyed. Archaeological survey and XPI testing resulted in the relocation of one of the sites, with no findings at the other. Impacts to the sites would be minimized and avoided through implementation of ESAs and environmental monitoring by an archaeologist and Tribal representative. It is anticipated that the resources would be protected through the implementation of Caltrans AMM-CUL-1 through AMM-CUL-3. The Office of Cultural Resources is anticipating a Finding of No Adverse Effects without Standard Conditions pursuant to PA Stipulation X.B.2. Therefore, impacts to archaeological resources are less than significant.

c) Less-than-Significant Impact

No reported human remains, including those interred outside of dedicated cemeteries, have been found within the Project area. If human remains associated with cultural resources are identified, the provisions and procedures for treatment of human remains contained in California Health and Safety Code Sections 7050.5 and 7052, and California PRC Section 5097 would be followed. Implementation of PF-CULT-2, AMM-CULT-1, AMM-CULT-2, and AMM-CULT-3 would reduce, avoid, and/or minimize the impact to less than significant.

Avoidance and Minimization Measures for Cultural Resources

The following AMMs would be implemented:

AMM-CUL-1: Environmentally Sensitive Area. The Caltrans Archaeologist will collaborate with all responsible parties to ensure ESAs are accurately represented in plans, specifications, and estimates, and the ESA Action Plan will be included in the Resident Engineer (RE) Pending File. During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss the ESAs with construction personnel, emphasizing that no construction activity, including material storage, is permitted within these areas and that workers must remain outside of them. The RE will notify the Caltrans Archaeologist at least 2 weeks prior to construction, who will then inform the Tribe. Prior to construction, the Caltrans Project Archaeologist will mark ESA locations in the field with the contractor using THVF. Regular inspections and site visits will be conducted by the Caltrans Archaeologist and the Tribe to ensure the integrity of the ESAs.

AMM-CUL-2: Environmental Monitoring Area. The Caltrans Archaeologist will collaborate with all responsible parties to ensure Environmental Monitoring Area(s) are accurately represented in plans, specifications, and estimates, and the RE Pending File. During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss monitoring areas with construction personnel. It will be emphasized that archaeological monitoring will occur at specific Project areas. The RE will notify the Caltrans Archaeologist at least 2 weeks prior to construction, who will then inform the Tribe. Monitoring will be conducted by a qualified archaeologist and the Tribe.

AMM-CUL-3: Cultural Sensitivity Training. Prior to the initiation of construction for the Project, a qualified archaeologist and Tribal representative from FIGR will conduct an cultural sensitivity training for all construction personnel with a focus on cultural, Tribal, and archaeological resources. At the minimum, the training will include discussion of archaeological and Tribal resources that may be encountered (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants), the procedures when working within Environmental Monitoring Areas or near ESAs, if applicable, and summary of state and federal regulations pertaining to cultural resources, as well as the importance of compliance with Caltrans' conditions.

2.1.6 Energy

Would the project:

Question	CEQA Determination
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less-than-Significant Impact
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	No Impact

CEQA Significance Determinations for Energy

The Office of Environmental Engineering prepared a Greenhouse Gas Technical Assessment Memo for the proposed Project (Caltrans 2025d).

a) Less-than-Significant Impact

Energy is consumed by transportation activities, and they generate byproducts such as GHS. To assess energy consumed by construction activities for the Project, the Caltrans Construction Emission Tool 2001 (CAL-CET 2021), version 1.0.3., was used to quantify carbon dioxide (CO_2) emissions. CO_2 is the dominant GHG from automative sources. The United States Environmental Protection Agency's GHG equivalencies formulas were used to convert CO_2 emissions to fuel volumes. Diesel is the assumed energy source that would be used to power all construction vehicles and equipment, and gasoline and electricity would be used for worker commutes. The estimated fuel consumption of construction vehicles and equipment as well as worker commute vehicles is provided in Table 4. There will be different phases in construction and energy use would be dependent on construction equipment being used per activity of each phase.

Table 4 Construction Equipment and Vehicle Total Energy Consumption

	Diesel (gallons)	Gasoline (gallons)	Electricity (kilowatt-hours)
Total	6,666	1,909	1,680.073

During construction of the Project, there would be a temporary increase in the consumption of energy in the Project area. To reduce wasteful, inefficient, or unnecessary consumption of energy resources during Project construction or operation, Caltrans would implement PF-EA-1 and PF-EA-2.

b) No Impact

The purpose of the Project is to improve safety conditions on SR 12 through construction of roadway improvements. The Project would not conflict or obstruct a state or local plan for renewable energy or efficiency, so there is no impact.

2.1.7 Geology and Soils

Would the project:

Question	CEQA Determination
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	No Impact
ii) Strong seismic ground shaking?	No Impact
iii) Seismic-related ground failure, including liquefaction?	No Impact
iv) Landslides?	No Impact
b) Result in substantial soil erosion or the loss of topsoil?	No Impact
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	No Impact

CEQA Significance Determinations for Geology and Soils

The Office of Geotechnical Design prepared a memorandum to evaluate the geological and soil conditions for the proposed Project (Caltrans 2025e).

a, b, c, d, e, f) No Impact

The Project is not within an Alquist-Priolo Earthquake Fault Zone or within 1,000 feet of any unzoned Holocene fault. Shoulder widening and rumble strip installation would not expose the public to landslides or collapsible soft or erodible soils, nor expansive soils. The Project would not cause direct or indirect substantial adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault.

The soil conditions in the shoulder of the roadway are compacted, and the roadway widening and shoulder backing constructed by the project would also be compacted. Any area of disturbed soil would be revegetated to reduce erosion. The Project would have no impact to erosion or substantial topsoil loss.

The nearest mapped fault is approximately 2,000 to 3,000 feet southwest of the Project. The location of the Project makes any road improvements susceptible to ground shaking during a seismic event; however, these hazards exist, and proposed improvements would not expose the public to additional hazards, including seismic ground shaking, seismic-related groundwater liquefaction, or landslides.

The Project scope does not include the use of septic systems; therefore, there is no need for a specific type of soil or soil features to support septic tanks or alternative wastewater disposal systems. If water is needed for construction of the Project, the contractor would provide water resources. The Project would have no impact to soils supporting wastewater disposal.

In the Project area, the sedimentary and tuffaceous units of the Sonoma Volcanics are known to contain fossils. The Project proposes to widen the existing shoulder, requiring excavation of road base rock and the shoulder down approximately 1 foot deep, and it is not expected to grade or excavate native soil or rock. Caltrans would implement PF-GEO-1 to address unforeseen paleontological discoveries. Due to the limited excavation depth and location of excavation in disturbed areas, the Project would have no impact to unique paleontological resources or unique geologic features.

2.1.8 GHG Emissions

Would the project:

Question	CEQA Determination
a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?	Less-than-Significant Impact
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	No Impact

CEQA Significance Determinations for GHG Emissions

The Caltrans Office of Environmental Engineering prepared a Greenhouse Gas Technical Assessment Memo (Caltrans 2025d). GHG emissions are released to the environment from material processing by onsite construction equipment, workers commuting to and from the Project site, and traffic delays due to construction. The emissions would be produced at different rates throughout the Project depending on the activities involved at various phases of construction. The Project proposes widening shoulders and installing centerline and edge-line rumble strips on a segment of SR 12. The Project would not increase vehicular capacity or provide congestion relief. A GHG analysis focused on GHG emitted from vehicles was prepared that identified CO_2 as the single most important pollutant due to its abundance when compared with other vehicle-emitted GHGs, including methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFC), and black carbon.

a) Less-than-Significant Impact

The Project would generate temporary GHG emissions during the construction period. Projected emissions were calculated using CAL-CET 2021 v1.0.3 developed by Caltrans. As presented in Table 5, CO_2 is projected to be the largest GHG pollutant emitted by construction activities. Construction activities that generate GHG emissions can include material processing by onsite equipment, workers commuting to and from the Project site, and traffic delays due to construction. Caltrans would implement PF-AQ-1, PF-AQ-3, PF-AQ-4, GHG-1, and GHG-2 related to GHG emissions.

Table 5 Construction-Related GHG Emissions

	CO_2 (tons)	CH_4 (tons)	N_2O (tons)	HFC (tons)	Project Total CO_2e[1] (metric tons)
Total Emission	94	0.002	0.005	0.002	95

Notes:

[1] Gases are converted to CO_2e by multiplying by their global warming potential (GWP). Specifically, GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of CO_2.

CO_2e = carbon dioxide equivalent

b) No Impact

The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs managed by BAAQMD. This Project aligns with safety goals for Sonoma County (SCTCA 2026). The Project would not increase vehicular capacity or provide congestion relief, and therefore it would not contribute to long-term GHGs.

2.1.9 Hazards and Hazardous Materials

Would the project:

Question	CEQA Determination
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less-than-Significant Impact
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Less-than-Significant Impact
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
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?	Less-than-Significant Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two nautical miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less-than-Significant Impact
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	No Impact

CEQA Significance Determinations for Hazards and Hazardous Materials

The Office of Environmental Engineering conducted an Initial Site Assessment to identify potential sources of hazardous materials, hazardous waste, or contamination in or near the proposed Project (Caltrans 2025f).

Investigations of hazardous waste for this Project would include soil testing to identify any residual aerially deposited lead (ADL), California Assessment Manual (CAM) 17 metals, hydrocarbons, herbicides, or pesticides resulting from historical agricultural activities. Investigation of these routine potential contaminants is typically conducted during the Project design phase. Standard Special Provisions have been developed for

the proper handling, treatment, and disposal, if needed, of such routine hazardous materials and waste during construction to protect the health of workers, the public, and the environment. Typical contaminants included in the preliminary study include ADL, CAM 17 metals, hydrocarbons, and naturally occurring asbestos. There are no geothermal wells within 500 feet of the Project limits on the CalGEM database.

Federal and state laws govern the generation, treatment, storage, and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases to the air, water quality, human health, and land use.

The following laws are applicable for handling and treating hazardous waste for this Project:

- California Health and Safety Code
- Porter-Cologne Water Quality Control Act 13000 et seq.
- Code of Federal Regulations (CFR) Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Tittle 23 Waters, and Title 27 Environmental Protection.

a, b, c) Less-than-Significant Impact

The Project exists in an environment featuring medium-density farmland with industrial wine production in the vicinity, which presents a medium risk for encountering hazardous waste. Soil disturbance activities during construction may encounter residual hydrocarbons, arsenic, herbicides, or pesticides resulting from historical agricultural activities. The routine transport, use, and disposal of hazardous materials (if necessary) would not create a significant hazard to the public with the implementation of PF-HAZ-1, PF-HAZ-2, and PF-HAZ-3. The Office of Environmental Engineering would conduct investigations of routine hazardous waste materials and review or design plans to handle hazardous or acutely hazardous materials, substances, or waste. The implementation of PF-HAZ-1, PF-HAZ-2, and PF-HAZ-3 would prevent foreseeable upset and accident conditions that involve the release of hazardous materials into the environment. With the implementation of PF-HAZ-1, PF-HAZ-2, and PF-HAZ-3, the Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed public school. Dumbar Elementary School is within 0.3 mile of the Project limits. The impacts from the Project would be less than significant.

d) Less-than-Significant Impact

A review of the Hazardous Waste and Substances Sites List, “Cortese List,” pursuant to Government Code Section 65962.5, was conducted on May 19, 2026. Two sites were identified within the Project limits, and they were closed sites, meaning government regulators have determined the site's environmental cleanup is complete. These sites

represent a very low risk of having hazardous waste present. Therefore, the impacts are less than significant.

e) No Impact

The Project is not within 2 miles of an airport. Therefore, there would be no impact to the public or environment from new hazards or new noise near an airport.

f) Less-than-Significant Impact

Caltrans would develop a TMP that would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. As a key corridor in Sonoma, SR 12 is a route that could be used in the case of an emergency evacuation plan within evacuation zone SON-6A4 (Sonoma County Department of Emergency Management 2022). Caltrans would carry out public information releases, adopt the use of changeable message signs that are portable, and use a Construction Zone Enhancement Enforcement Program (COZEEP). With the implementation of AMM-TRANS-1, law enforcement would be within the Project limits during construction to help guide traffic, and they would be able to adapt traffic management needs in accordance with Sonoma County's emergency response and evacuation plans in the event of an emergency. Under non-emergency conditions, the Project would have lane closures and one-way traffic control; however, no complete closures would occur.

g) No Impact

The Project does not have permanent components that would expose people or structures to risk of loss, injury, or death involving wildland fires, and therefore there would be no impact.

2.1.10 Hydrology and Water Quality

Would the project:

Question	CEQA Determination
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	Less-than-Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less-than-Significant Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: (i) result in substantial erosion or siltation on- or off-site;	Less-than-Significant Impact
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	Less-than-Significant Impact
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	Less-than-Significant Impact
(iv) impede or redirect flood flows?	No Impact
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	No Impact
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	No Impact

CEQA Significance Determinations for Hydrology and Water Quality

The Caltrans District 4 Office of Water Quality and District 6 Office of Hydraulics Engineering prepared studies (Caltrans 2025g, h) to analyze water resources found in the Project area. The San Francisco Bay RWQCB (Region 2) has jurisdiction within the Project limits. The Project area is in a region of Sonoma County that can obtain Municipal Separate Storm Sewer System (MS4) permits. The receiving waterbodies in the Project area include Calabazas Creek and Stuart Creek. Groundwater resources that lie within the Project area include the Napa-Sonoma Valley and the subbasin Napa-Sonoma Valley-Sonoma Valley.

a, b) Less-than-Significant Impact

The scope of the Project consists of shoulder widening and installation of center- and edge-line rumble strips within 5 feet of the existing roadway. This Project does not include any in-water work, and shoulder widening would not occur in areas parallel to intersecting creeks.

The proposed Project is covered by Caltrans' MS4 Permit, National Pollutant Discharge Elimination System No. CAS000003, State Water Resources Control Board Order No. 2022-0033-DWQ (adopted June 22, 2022, and effective January 1, 2023), which regulates stormwater and non-stormwater discharges from Caltrans properties and facilities associated with operation and maintenance of the state highway system. The Project disturbs a total of 3.37 acres of soil area within the Project limits, and it may increase temporary impacts to existing water quality caused by staging and active construction areas, which could result in the release of fluids, construction debris, sediment, and litter beyond the perimeter of the site.

To minimize water quality impacts post-construction, Caltrans would implement AMM-WQ-1. This AMM would require Caltrans to install a biofiltration swale or biofiltration strip to minimize permanent impacts on existing waterbodies. The Project would not use any groundwater supplies during construction activities, and the installation of a biofiltration swale or a biofiltration strip would provide treatment to approximately 0.81 acre (35,300 square feet) of stormwater to minimize any possible impacts to groundwater recharge.

c) (i, ii, iii) Less-than-Significant Impact

The scope of the Project consists of shoulder widening and installation of center- and edge-line rumble strips within 5 feet of the existing roadway. This Project does not include any in-water work, and shoulder widening would not occur in areas parallel to intersecting creeks. The Project would add 0.81 acre of New Impervious Surface (NIS) (Table 6) to the existing roadway within PM 28.10 to PM 31.67 on SR 12. Caltrans would design and implement an SWPPP (PF-WQ-1) during all phases of construction to follow Best BMP for stormwater pollution control. Through the implementation of construction site BMPs (PF-WQ-1) such as the installation of temporary fiber rolls, temporary silt fence, temporary hydraulic mulch, and a temporary drainage inlet protection, the existing drainage pattern of the site or area would not result in substantial erosion or siltation on- or offsite. Additionally, the implementation of PF-WQ-2 would require permanent erosion control measures for any unpaved areas to avoid the potential of erosion and sedimentation. With the implementation of PF-WQ-2, the Project would not increase the rate or amount of surface runoff or result in flooding. Caltrans would also implement post-construction treatment BMPs (AMM-WQ-1) to treat any created or additional sources of polluted runoff water that results from the Project to minimize impacts to the existing capacity or planned stormwater drainage systems in the site and area.

Table 6 Disturbed Soil Area and Impervious Areas

Disturbed Soil Area	Net New Impervious Surface Area	Replaced Impervious Surface Area	New Impervious Surface (NNI plus RIS) Area
3.37 acres	0.65 acre	0.16 acre	0.81 acre

Notes:
NNI = net new impervious
RIS = replaced impervious surface

c) (iv) No Impact

The proposed design elements of the Project would not impede or redirect flood flows.

d) No Impact

One portion of the Project corridor is within the 100-year floodplain as defined by the Federal Emergency Management Agency (FEMA) Flood Hazard Map (Caltrans 2025h). The Project area crosses Zone A where Calabazas Creek meets the state highway at PM 29.42, and this area is subject to inundation by the 1 percent annual chance flood. The Project area is adjacent to Zone X, an area that is determined to be outside of the 0.2 percent annual chance flood. The FEMA Flood Insurance Rate Map Community Map 06097C0770E, dated December 2, 2008, delineates these floodplain types within the Project area. There is a minute chance that during construction, contractor equipment could release relatively small amounts of pollutants if the work area were suddenly inundated during a flood. However, the proposed Project does not constitute a longitudinal or significant encroachment on the base floodplain, and no impact is expected.

Avoidance and Minimization Measures for Hydrology and Water Quality

The following AMM will be implemented:

AMM-WQ-1. Post-Construction Treatment Best Management Practices. Either a biofiltration swale or a biofiltration strip will be designed and constructed to treat the stormwater from the increase in NIS resulting from shoulder widening. Stormwater treatment BMPs treat approximately 0.81 acre feet (35,300 cubic feet) within the Project limits. Post-construction treatment BMPs technology will follow the Caltrans Project Planning and Design Guide.

2.1.11 Land Use and Planning

Would the project:

Question	CEQA Determination
a) Physically divide an established community?	No Impact
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	No Impact

CEQA Significance Determinations for Land Use and Planning

A Community Impact Assessment memo was prepared for this proposed Project by the Office of Environmental Analysis (Caltrans 2026c).

a, b) No Impact

The proposed Project on SR 12 would not divide an established community. The proposed Project would widen the existing roadway shoulders up to 5 feet and install edge-line and centerline rumble strips and drainage improvements. This Project would not require the acquisition of additional ROW for Project construction, and all work would take place within Caltran's ROW. The proposed Project is in accordance with the State Highway Operation and Protection Program (SHOPP), which is a 4-year program of projects that collectively improve the condition, operation, and sustainability of the State Highway System and associated transportation infrastructure. The Project would not conflict with any plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, so the Project has no impact on land use and planning.

2.1.12 Mineral Resources

Would the project:

Question	CEQA Determination
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	No Impact
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	No Impact

CEQA Significance Determinations for Mineral Resources

The 2013 California Geological Survey Mineral Land Classification Map for the North San Francisco Bay region covering the following counties: Marin, Napa, Sonoma, and Southwestern Solano Counties in California, prepared by Russel V. Miller (PG 3331) and Lawrence L. Busch (PG 6440), is the reference for the analysis below (Miller and Lawrence 2013).

a, b) No Impact

The 2013 California Geological Survey Mineral Land Classification Map for the North San Francisco Bay region identifies the Project as located within MRZ-1 (Class II Base), with little likelihood for the presence of significant mineral resources. The Project would not result in the loss of or the availability of any locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan, because there are no known mineral resources within the boundaries of the Project. The Project has no impact to mineral resources.

2.1.13 Noise

Would the project result in:

Question	CEQA Determination
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
b) Generation of excessive groundborne vibration or groundborne noise levels?	Less-than-Significant Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two nautical 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

CEQA Significance Determinations for Noise

The Office of Environmental Engineering prepared a construction-related noise analysis (Caltrans 2025i).

a) Less-than-Significant Impact

The proposed Project is in a mostly semi-rural area featuring scattered residences throughout the Project limits. There are 12 residences that are considered sensitive noise receptors due to their proximity to the Project. The scope of the Project consists of shoulder widening and installation of center- and edge-line rumble strips within 5 feet of the existing roadway. Because this Project is not a Type 1 or Type 2 project per CFR 772, noise abatement need not be considered, and a detailed noise study report is not required.

Table 7 features representative receptors in the Project area; aerial images of their locations are presented in Figure 3 through Figure 8. During the construction phase of the Project, it is expected that construction activities would generate temporary noise impacts in the Project area, with different levels of noise being generated depending on the construction activity.

Figure 3 Location of Noise Receptor 1

Figure 4 Location of Noise Receptors 2 and 3

Figure 5 Location of Noise Receptor 4

Figure 6 Location of Noise Receptor 5

Figure 7 Location of Noise Receptors 6 through 10

Figure 8 Location of Noise Receptors 11 and 12

The Roadway Construction Noise Model (RCNM), the FHWA's national model, was used to estimate noise levels during construction of the Project. RCNM includes representative sound levels for the most common types of construction equipment and the estimated usage factor of each. The usage factor represents the percentage of time that the equipment would be operating at full power. Vehicles and equipment likely to be used during each phase of construction were input into RCNM to estimate the maximum (L_{max}) and the average hourly noise levels (L_{eq}) at various distances.

Table 7 displays summary construction noise results for hypothetical locations and sensitive receptors in the Project area. Analysis for the build alternative indicates construction noise levels caused by the removal of pavement (R5 and R12), paving (R5 and R12), and rumble strip installation (R5 and R12) exceed this standard, affecting residential receptors (Table 7). Both R5 and R12 have the closest proximity to the edge of pavement of SR 12, and their exposure to noise levels due to all possible construction activities is projected (Figure 6 and Figure 8).

Project construction would result in elevated noise levels and in temporary adverse impacts, primarily during daytime work hours. Some residents and businesses may experience a maximum of 93.7 A-weighted decibels (dBA) during the day, when the loudest construction activities occur. These noise levels would be temporary. Residents or businesses that are 50 feet or more away from the construction activities are not expected to experience noise levels above 89.5 dBA.

Table 7 Summary of Construction Noise Results for Sensitive Noise Residential Receptors and Hypothetical Distance

Receptor No.	Address in Glen Ellen, CA 95422	Receptor Distance (feet)	Removing Pavement	Paving		Rumble Strip		
			L_{max} (dBA)	L_{eq} (dBA)	L_{max} (dBA)	L_{eq} (dBA)	L_{max} (dBA)	L_{eq} (dBA)
HP 50	—	50	**89.5**	**86.4**	**85**	**85.2**	**89.5**	**85.3**
HP 100	—	100	83.5	80.4	79	79.2	83.5	80.4
HP 200	—	200	77.5	74.3	73	73.2	77.5	74.3
HP 500	—	500	69.5	66.4	65	65.2	69.5	66.4
R1	10750 SR 12	183	78.2	75.1	77.5	77.7	78.2	75.1
R2	12030 SR 12	179	78.4	75.3	83.7	83.9	78.4	75.3
R3	12050 SR 12	108	82.8	79.7	84	84.2	82.8	79.7
R4	100 SYLVIA Dr	172	78.8	75.6	79.2	79.4	78.8	75.6
R5	85 W TRINITY Rd	31	**93.7**	**90.5**	**73.9**	**74.1**	**93.7**	**90.5**
R6	188 TRINITY Rd	172	78.8	75.6	69.7	69.9	78.8	75.6
R7	100 W TRINITY Rd	148	80.1	76.9	87.6	87.8	80.1	76.9
R8	12710 SR 12	167	79	75.9	86.9	87.1	79	75.9
R9	13200 SR 12	176	78.6	75.4	79.6	79.8	78.6	75.4
R10	13200 SR 12	130	81.2	78.1	80.1	80.3	81.2	78.1
R11	13450 SR 12	132	81.1	77.9	81.7	81.9	81.1	77.9
R12	13650 SR 12	71	**86.5**	**83.3**	**79.4**	**79.6**	**86.5**	**83.3**

Notes:

dBA = A-weighted decibel
Leq = noise level equivalent
Lmax = maximum noise level
SR = State Route

There would also be some nighttime construction necessary for this Project. The specific timing, duration, and locations of the nighttime construction activities would be determined during the detailed design and preconstruction phases. Caltrans's standard for temporary construction noise impacts is to not exceed an L_{max} of 86 dBA at 50 feet from the construction site during night work from 9:00 p.m. to 6:00 a.m. The Project would implement AMM-NOI-1, requiring the contractor to develop a plan that is approved by Caltrans to ensure construction noise impacts are minimized during the daytime and not exceeded during the night, and this noise control plan would be reinforced with required noise monitoring. With the implementation of AMM-NOI-1, the increase in ambient noise resulting from the proposed Project would be reduced to less than significant.

b) Less-than-Significant Impact

Ground-borne vibration and ground-borne noise levels would occur during construction activities, but they would be temporary, with the noise levels varying depending on the type of construction activity. Noise level models measure geometric spreading, which is the decrease in noise levels as distance increases from the location of a specific construction activity or equipment source. However, the model projections of noise levels does not account for other factors, including ground absorption or shielding along the path where buildings are present. Through AMM-NOI-1, the Project would minimize impacts to sensitive receptors (Table 7, Figure 6, and Figure 8).

c) No Impact

There are no private airstrips or an airport land use plan in the Project vicinity. No public use airport was identified in the Project vicinity.

Avoidance and Minimization Measures for Noise

The following AMMs would be implemented:

AMM-NOI-1: Construction Noise Control and Noise Monitoring. Noise control and noise monitoring will be required during construction to avoid and minimize construction noise. The contractor will be required to submit a Noise Control Plan to Caltrans for approval to demonstrate compliance with construction noise limits, which require the contractor to limit construction noise levels to 86 dBA L_{max} from 9:00 p.m. to 6:00 a.m.

- Public outreach will be required throughout the Project construction to update nearby residents, businesses, and other Project stakeholders on upcoming construction activities and any changes to the Project construction timeline.

- Noisy activities will be scheduled within the same time-frame. The total noise level will not be significantly greater than the level produced if operations are performed separately.

- Unnecessary idling of internal combustion engines will be avoided within 100 feet of sensitive receptors.

- All stationary noise-generating construction equipment will be located as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction Project area.

- All internal combustion engine driven equipment will be equipped with manufacturer-recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- No construction equipment will be delivered and dropped off before 6:00 a.m.

2.1.14 Population and Housing

Would the project:

Question	CEQA Determination
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	No Impact
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	No Impact

CEQA Significance Determinations for Population and Housing

A First-cut Screening following the Guidance for Preparers of Growth-related, Indirect Impact Analyses was prepared for the Project (Caltrans 2026d).

a, b) No Impact

The Project would not increase vehicle capacity or vehicle miles traveled (VMT), and would not induce substantial growth directly or indirectly through the addition of shoulder widening. No people or housing would be displaced, and no additional replacement housing is required because all work is scheduled to occur within Caltrans ROW. The Project would have no impact to population and housing.

2.1.15 Public Services

Question	CEQA Determination
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 following public services: a) Fire protection?	No Impact
b) Police protection?	No Impact
c) Schools?	No Impact
d) Parks?	No Impact
e) Other public facilities?	No Impact

CEQA Significance Determinations for Public Services

a, b, c, d) No Impact

The Caltrans District 4 Office of Environmental Analysis prepared a Community Impact Assessment scoping checklist for this Project (Caltrans 2026c). The scope of the Project consists of shoulder widening and installation of center- and edge-line rumble strips. The Project would not result in any physical impacts associated with the provision of new or physically altered governmental facilities, and it would not create a need for new or physically altered governmental facilities that could cause significant environmental impacts to maintain acceptable service ratios, response ratios, and other performance objectives for fire protection, police protection, schools, parks, or other public facilities and services. No modification to public services would result from the Project, and there would be no impacts.

2.1.16 Recreation

Question	CEQA Determination
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	No Impact

CEQA Significance Determinations for Recreation

a, b) No Impact

Construction for the Project would occur on SR 12 and would not encroach or require the use of existing neighborhood or regional parks, or other recreational facilities (Caltrans 2026c). The Project would not increase vehicle capacity on SR 12 or foster population growth, and there would be no increase in use of existing parks or recreational facilities due to the Project. Construction activities are not expected to impact these recreational resources. The Project would take place entirely within Caltrans ROW; therefore, there would be no direct impacts to existing neighborhood and regional parks, including Sonoma Valley Regional Park or other recreational facilities. The scope of the Project does not include construction on any recreational facilities, and it does not require the construction or expansion of recreational facilities that might have an adverse effect on the environment; therefore, there is no impact to these public recreation facilities.

2.1.17 Transportation

Would the project:

Question	CEQA Determination
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	No Impact
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	No Impact
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	No Impact
d) Result in inadequate emergency access?	Less-than-Significant Impact

CEQA Significance Determinations for Transportation

a, b, c) No Impact

The proposed Project is included in the 2024 SHOPP, which is the State Highway System's "fix-it-first" program that funds the repair and preservation, emergency repairs, safety improvements, and some highway operational improvements on the State Highway System (Caltrans 2024b). Caltrans is aware of a related, partially funded project in this area presented by Sonoma County Regional Parks in their *Sonoma Valley Trail Feasibility Study* (2016) (Caltrans 2025j). This related project is a proposed Corridor Improvement project that would install a Class 1 bike facility along SR 12 within the Project limits. The proposed bike lane would run parallel to SR 12 between Melita Road and Agua Caliente Road.

Caltrans has verified that the proposed Project would not obstruct or conflict with Sonoma County Regional Park's ability to move forward with their project. Therefore, the Caltrans SR 12 Shoulder Widening Project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

The scope of the Caltrans Project consists of shoulder widening and installation of center- and edge-line rumble strips within 5 feet of the existing roadway. No travel lanes would be added to SR 12, and the proposed shoulder widening would not increase vehicular capacity; therefore, the CEQA Guidelines section 15064.3, subdivision (b) is not applicable. The Project does not alter the roadway centerline; therefore, there is no anticipated increase in hazards due to a geometric design feature including sharp curves or dangerous intersections on this two-lane rural highway. No impacts would occur from the proposed Project.

Less-than-Significant Impact

The proposed Project would implement AMM-TRANS-1 to minimize impacts to emergency access. Changeable message signs would be placed along the road to indicate that a single-lane closure resulting in one-way traffic control is in operation during the construction phase of the Project. Commuters on this segment of SR 12 could experience delays for one-way travel with an estimated time of 10 to 15 minutes maximum, and this could impact emergency response vehicle response times. Through the implementation of AMM-TRANS-1, California Highway Patrol would take an active role in traffic management and emergency response when present during COZEEP operations, and impacts would be minimized to less than significant.

Avoidance and Minimization Measures for Transportation

The following AMM would be implemented:

AMM-TRANS-1: **Minimize Delays.** California Highway Patrol's COZEEP would be incorporated into the TMP to increase law enforcement near construction zones, assist with traffic management to minimize delays to local residents and highway users, and assist with emergency responses.

2.1.18 Tribal Cultural Resources

Question	CEQA Determination
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, 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	Less-than-Significant Impact
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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	No Impact

CEQA Significance Determinations for Tribal Cultural Resources

The Office of Cultural Resource Studies conducted a review of cultural resources in accordance with the Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer, the United States Army Corps of Engineers' Sacramento District, San Francisco District, and Los Angeles District, and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of the Federal-Aid Highway Program in California (2024) (PA), and Memorandum of Understanding between the California Department of Transportation and the California State Historic Preservation Officer Regarding Compliance with PRC Section 5024 and Governor's Executive Order W-26-92 (2024) (MOU).

Caltrans contacted the NAHC on June 23, 2025, with a request for an SLF search. On June 24, 2025, the NAHC responded that no information regarding sites in the APE was found in the SLF search. Caltrans was provided with contact information to communicate with Native American Tribes. Caltrans reached out via email FIGR, the Guidiville Rancheria of California, the Mishewal Wappo, the Lytton Rancheria, and the Pinoleville Pomo Nation. Responses were received from Lytton Rancheria, who requested all existing resources to be protected with ESAs, but did not enter ongoing consultation. FIGR responded to Caltrans outreach on July 24, 2025 requesting

consultation under Section 106 and AB 52. Representatives from Caltrans and FIGR had a meeting on January 29, 2026 to discuss the Project details and technical studies. Caltrans is actively consulting with FIGR, and would remain in consultation throughout the life of the project, both under the 106 PA and pursuant to AB 52 and CEQA. The remaining Tribes did not request consultation or provide comments.

a) Less-than-Significant Impact

Two sites located in the project area were previously determined eligible for the NRHP; these sites are also eligible for registration under the California Register of Historical Resources. The Caltrans Office of Cultural Resources would implement AMM-CUL-1, AMM-CUL-2, and AMM-CUL-3 to protect and minimize impacts to cultural resources and sensitive areas within the Project area (Caltrans 2026bg). These measures include the establishment of an ESA that would limit the area from construction activities; an Environmental Monitoring Area to ensure oversight of previously identified sensitive areas, and the implementation of Cultural Sensitivity Training for construction personnel. Through the implementation of the previously described AMMs, the Project is expected to have a less-than-significant impact on Tribal cultural resources.

b) No Impact

The Office of Cultural Resources is in continuing consultation with the FIGR under AB 52. Through this consultation, OCRS has not identified any additional resources as TCRs considered significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. PF-CUL-1 (Section 1.2.2.10) contains procedures for inadvertent discovery of previously unidentified TCRs.

2.1.19 Utilities and Service Systems

Would the project:

Question	CEQA Determination
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	Less-than-Significant Impact
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	No Impact
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	No Impact
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	No Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	No Impact

CEQA Significance Determinations for Utilities and Service Systems

a) Less-than-Significant Impact

Utility owners within the Project limits include AT&T, Comcast, PG&E, Frontier, Valley of the Moon Water District, and Sonoma County Water Agency. The Project anticipates the temporary relocation of utilities in the construction area (Caltrans 2026d). Caltrans would consult with utility providers to verify the temporary relocation needs. No permanent utility relocation is needed. Temporary disruptions to utilities may occur due to relocations that would be minimized, and sensitive resources would be avoided. The impacts to relocation of utilities would be less than significant.

b, c, d, and e) No Impact

The proposed Project would not result in any substantial demands for solid waste disposal, and would comply with federal, state, and local statutes regarding the disposal of solid waste. Implementation of full trash capture devices would not be added to the Project. The Project would not generate a demand for water supplies or the services of wastewater treatment; therefore, no impact to these services is expected.

2.1.20 Wildfire

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

Question	CEQA Determination
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	No Impact
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	No Impact
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	No Impact

CEQA Significance Determinations for Wildfire

In Sonoma County, the Project is within a State Responsibility Area, and the agency responsible for addressing wildfires is California Department of Forestry and Fire Protection (CalFire). The geographic parcels where the Project is located in Sonoma County range from moderate fire hazard to high fire hazard severity zone (CalFire 2026).

a, b, c, d) No Impact

The Project would not substantially impair an adopted emergency response plan or emergency evacuation plan. A TMP, as described in PF-TRANS-1, would develop guidance to avoid traffic delays, allowing one-way traffic in the event of an evacuation.

The construction and operation of the proposed Project on existing roadway infrastructure in SR 12 would not exacerbate wildlife risks, require the installation or maintenance of infrastructure that may exacerbate wildlife risk, or expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. The scope of the Project consists of shoulder widening and installation of center- and edge-line rumble strips within 5 feet of the existing roadway. The Project does not require or include the use of habitable structures, and it does not include the installation of associated infrastructure that would exacerbate wildlife risk.

2.1.21 Mandatory Findings of Significance

Question	CEQA Determination
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
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
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Less-than-Significant Impact

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less-than-Significant Impact

Resource types that are anticipated to have impacts from the proposed Project are primarily temporary impacts, and they are expected to be less than significant with the implementation of AMMs.

Temporary impacts to scenic vistas would occur due to construction, construction staging, and potential glare from construction lighting during night work. These impacts would be minimized through the implementation of AMMs, and are less than significant.

Temporary construction-related impacts to biological resources could occur as a result of the Project. Temporary construction-related activities could result in direct impacts to CRLF, up to and including take of an individual through incidental mortality or injury. However, with the implementation of AMMs, the potential for direct take of CRLF individuals is very low, and biological impacts have been determined to be less than significant.

The Project does not 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. The impacts are not substantial, and are less than significant.

b) Less-than-Significant Impact

Under CEQA Guidelines Section 15355, “cumulative impacts” refers to two or more individual effects which, when considered together, are considerable, or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the Project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

CEQA Guidelines Section 15130 describes when a cumulative impact analysis is necessary, and what elements are necessary for an adequate discussion of cumulative impacts.

The cumulative impacts analysis follows the Caltrans six-step process established in the May 2025 interim guidance on cumulative impact analysis under CEQA (Caltrans 2025), as follows:

1. Determine which environmental resources to include in the cumulative impact analysis.

2. Determine the resource study area.

3. Describe the existing cumulative condition.

4. Discuss whether the Project’s impacts are cumulatively considerable.

5. If the Project’s contribution is cumulatively considerable, discuss any additional proposed mitigation for Caltrans’ contribution to cumulative condition.

6. State post-mitigation conclusion (if additional mitigation was added to address cumulative impacts).

This analysis determines whether the Project, in combination with projects that are planned, approved, or under construction, would result in cumulatively considerable impacts; and if so, whether the Project’s contribution to the cumulative effect would be considerable. Resources that are typically considered in a cumulative impact analysis are those that are in poor health or those that are significantly impacted by a project and projects in the same general vicinity. Table 8 below provides information about current and planned projects that are being evaluated for potential cumulative impacts in this analysis.

Table 8 Current and Reasonably Foreseeable Future Projects in the Project Vicinity

Project Title	EA	County-Route	Post Mile	Description	Impacts	Current Status
SON-12 Minor Pavement Rehabilitation	04-3Y790	SON-12	24.40-35.11	Address pavement distress and restore the pavement to good condition, and install/upgrade the curb ramps in compliance with ADA standards.	The project is still in its initial scoping phase, and it will likely identify critical habitat for CRLF. More detailed information on potential impacts on biological resources would be available during later phases of project development.	Preliminary scoping
SON-12 Minor Bridge Scour Mitigation	04-4H050	SON-12	25.8 – 33.30	Scour mitigation.	Potential for incidental take if CRLF individuals enter construction area, and potential contamination due to sediment or chemical contamination.	In construction
SON-12 Horizontal Alignment Warning Signs	04-4AC40	SON-12	9.23- 41.36	Installed and upgraded horizontal alignment warning signs.	No impact was expected due to the lack of suitable habitat for CRLF.	In construction
SON-12 Maintenance of Existing Plantings at Hooker and Sonoma Creek Bridges	04-4H051	SON-12	25.80-33.30	Scour mitigation.	NONE. This project will implement Conservation Measures for EA-4H050 and requires collaboration with USFWS to establish habitat and movement connectivity across SR 12 corridor in Sonoma County.	Construction pending

Project Title	EA	County-Route	Post Mile	Description	Impacts	Current Status
SON-12 Class 1 Bike Lane	NA	SON-12	Between Melita Road and Agua Caliente Road	Construct separated bike lane	Potential for incidental take if CRLF individuals enter construction and potential permanent loss of habitat. Specifics not yet determined.	Preliminary scoping
SR 37 Sears Point to Mare Island Improvement Project	04-1Q761	SON-37	Between Lakeville Hwy and Mare Island.	Widen the highway from 2 to 4 lanes, replace Tolay Creek Bridge, and enhance degraded marsh habitat at Strip Marsh East.	Potential for incidental take if CRLF individuals enter construction and potential permanent loss of habitat.	Construction pending
Settlement Restoration	04-2X00	SON-37	At Lakeville Highway intersection	Correct pavement settlement	Potential for incidental take if CRLF individuals enter construction, and potential temporary loss of habitat.	Preliminary scoping
Construct Roundabout	04-2Q770	SON-116	At Lakeville Highway intersection with Stage Gulch Road	Improve safety at intersection by constructing roundabout	Potential for incidental take if CRLF individuals enter construction and potential temporary and permanent loss of habitat.	Construction pending

Notes:

ADA = Americans with Disabilities Act
EA = Environmental Analysis
CRLF = California red-legged frog
SR = State Route

Resources Considered for Cumulative Impact Analysis

The Project is anticipated to have no impact or less than significant impacts on all resources identified in this document. Technical studies prepared by Caltrans identify that many of the resources that are less than significantly impacted are not in poor or declining health.

The sensitive biological resource that would be impacted by the Project and is in poor or declining health, or at risk, and therefore included in the cumulative analysis, is the federally threatened species CRLF.

Resource-by-Resource Cumulative Impact Analysis

Section 2.1.4 of this document outlines the potential impacts of the Build Alternative on biological resources. The projects listed in Table 8 are based on a resource study area (RSA), which is a zone used to study the potential for a project and nearby projects to cumulatively impact a resource.

In a cumulative impact analysis, the shape and the spatial extent of the RSA is determined using data and information pertaining to each resource. The RSA for CRLF was determined by using observational data, known species ranges, critical habitat data, species dispersal range, and land use data.

Determining Resource Study Areas

The RSA displays an area for the analysis of cumulative impacts for CRLF, and is outlined below in Figure 9. The RSA was determined by using a combination of CRLF range and CRLF observational data from the CNDDB in relation to the Project area. Areas of designated critical habitat for this species exist in Sonoma County, but neither CDFW nor USFWS has identified any specific population management units in Sonoma County. Using the spatial and biological data, combined with geographic landforms that would likely serve as natural dispersal barriers, the RSA was established as the Sonoma Creek watershed (Figure 9). The Sonoma Creek watershed has its headwaters on Sonoma Mountain, near designated critical habitat for CRLF. The watershed is approximately 170 square miles, and drains into San Pablo Bay.

Existing Cumulative Condition

This section details the current condition of the CRLF in the RSA, and provides context for the historical pressures and conditions that led to this species becoming listed as threatened under the Federal Endangered Species Act, and listed as a California Species of Special Concern by CDFW. The purpose of this section is to provide information on past and current stressors for this biological resource to explain potential impacts from this Project, and from current and planned projects that occur within the RSA outlined in the previous section.

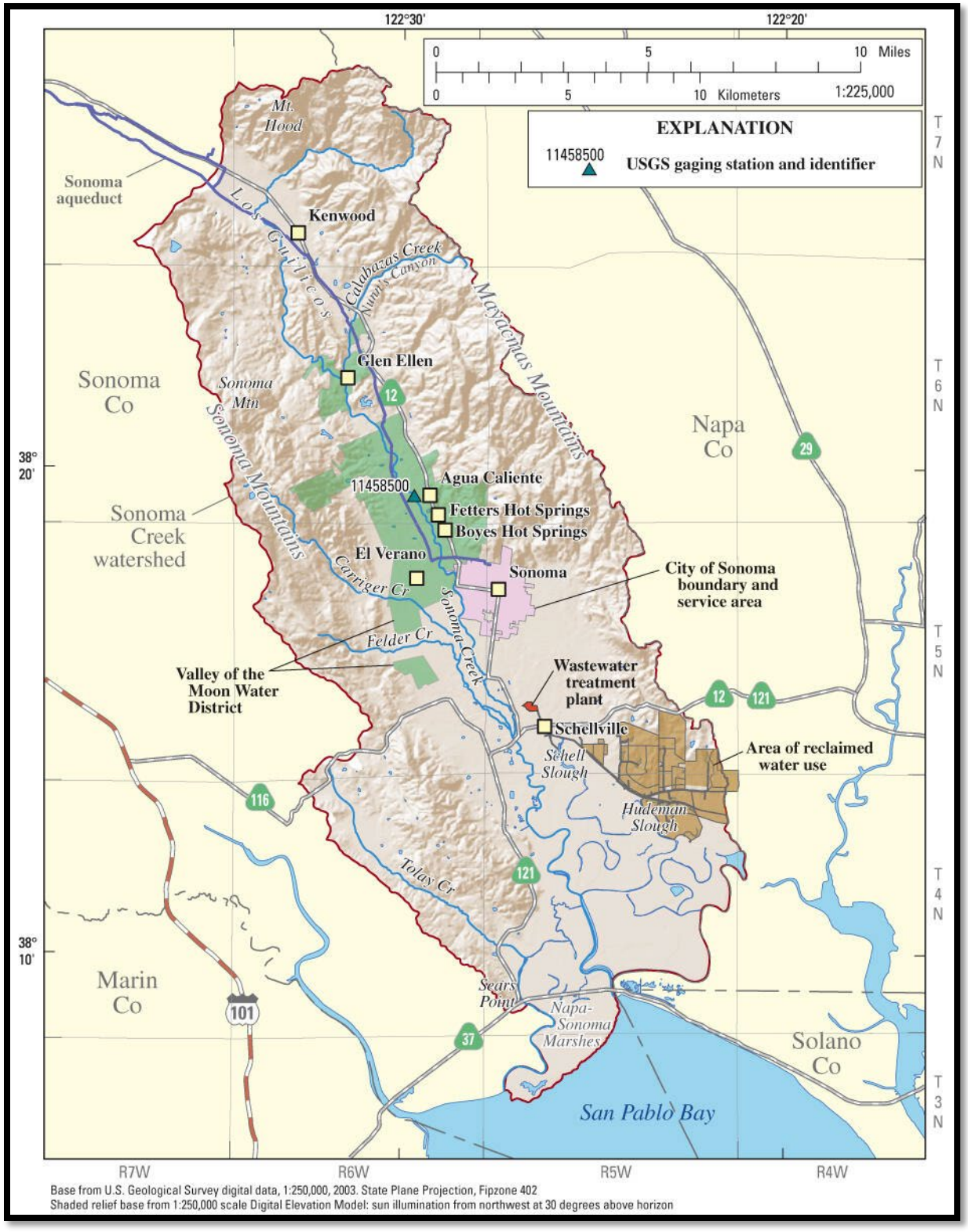

Figure 9 Sonoma Creek Watershed Resource Study Area for Cumulative Analysis of California Red-Legged Frog

California Red-Legged Frog

The CRLF inhabits lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. This species requires 11 to 20 weeks of permanent water for larval development, and it must have access to upland estivation habitat. CRLF is distributed throughout the RSA, but the only location of designated critical habitat for this species is on Sonoma Mountain. Agricultural lands such as row crops, orchards, vineyards, and pastures do not constitute barriers to CRLF dispersal. Threats to the species include removal and alteration of habitat from urbanization, fragmentation, overgrazing of aquatic and riparian habitats, erosion and siltation because of flooding, and predation by nonnative species. Due to the impact of human activities, this species is federally listed as threatened, and active conservation measures to support populations of the species include habitat restoration, reintroduction programs, and the creation of conservation banks. USFWS initiated a status review of the species in 2018, but has not published its findings. Due to continued habitat loss, it is likely the population of CRLF in the RSA is declining.

Proposed Project's Cumulative Contributions

Within the scope of the Project, the shoulder widening component would result in impacts to CRLF, and those effects are considered in this cumulative impact analysis. The CRLF has the potential to occur within the RSA; however, suitable habitat for its reproduction is not present within the Project limits or immediate vicinity. Construction practices such as minor excavation for shoulder widening and the addition of impervious surfaces would have temporary and permanent impacts.

Impacts to CRLF habitat in the Project area could result from the transformation of land that could be used as potential habitat by CRLF. This land use transformation can limit the use of roadside areas that could provide vegetation cover for CRLF and support dispersal for the population. If there is incidental loss of this species, the effect would be minor on the scale of this species' regional population and abundance. There is no suitable habitat for reproduction of CRLF within the Project limits. The existing high levels of human-induced disturbance and fragmentation adjacent to SR 12 shape the current habitat for the species. No permanent impacts to CRLF populations or protected habitats is anticipated.

Overall, although cumulative pressures on this biological resource remain high due to historic and ongoing loss of habitat in the RSA, the Project's effects are limited, and would not substantially increase cumulative impacts within the RSA.

Table 8 includes projects considered in the analysis of current and planned projects within the RSA with the potential to impact CRLF. The past project 04-4H050, a future project to construct a Class 1 bike lane parallel to SR 12 proposed by Sonoma County, and future projects proposed by Caltrans identified as EAs 04-3Y790, 04-1Q761, 04-2Q770, and 04-2X00 contribute to disturbance of CRLF habitat and individuals. This disturbance can result from vegetation removal, ground compaction that could crush individuals estivating in burrows, or any release of pollutants into aquatic habitats during

construction. Project 04-4H051 contributes to regional remediation of habitat for CRLF through the ongoing and future establishment of wildlife and movement connectivity structures on SR 12, and was programmed by Caltrans to mitigate for the effects of the 04-4H050 project to this, and other, species and habitats. Overall, although cumulative pressures on this biological resource remain high due to historic and ongoing loss of habitat in the region, the proposed Project's effects are limited, and would not substantially increase cumulative impacts within the RSA.

Results

Potential cumulative impacts to the CRLF considered in this analysis were determined through the definition of an RSA and assessing trends in project-related impacts to biological resources within the RSA. This information contextualizes the impacts to CRLF within a broader scope of development and transportation projects for the SR 12 corridor.

The projects in Table 8 present potential impacts to CRLF. In comparison with the potential impacts of current and planned projects within the RSA for biological resources, the Project's impacts to biological resources are cumulatively considerable, but are still temporary and minimal in scale. The implementation of AMMs for this Project would make cumulatively considerable impacts less than significant.

c) Less-than-Significant Impact

The Project is not expected to have environmental effects that would cause substantial adverse effects on human beings—either directly or indirectly. Hazardous waste is one of the factors considered for environmental effects on humans. The hazardous waste of primary concern is potential exposure to ADL, which could be released due to excavation of soils adjacent to the roadway for the installation new pavement as a result of shoulder widening. Lead from vehicle exhaust tends to accumulate in soils adjacent to roadways and can be mobilized as dust from ground-disturbing activities. Caltrans would implement PFs in accordance with federal and state laws that apply to the generation, treatment, storage, and disposal of hazardous materials, substances, and waste in accordance with an investigation to be completed during soil testing. Any applicable AMMs required by the proposed Project would be implemented, and impacts would be less than significant.

Noise-related impacts from this Project are outlined in Section 2.1.13. These temporary and short-term noise impacts would be caused at different levels by different construction equipment. A list of sensitive receptors has been compiled, and a set of PFs would be implemented to prevent or minimize excessive noise to nearby communities. Additionally, a TMP would inform the public about delays associated with the construction work schedule, and the impact is expected to be less than significant.

The Project would not cause substantial adverse effects on human beings, either directly or indirectly, but would result in temporary impacts that are less than significant.

Chapter 3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the Earth's climate system. The Intergovernmental Panel on Climate Change, established by the United Nations and World Meteorological Organization in 1988, is devoted to GHG emissions reduction and climate change research and policy. Research published by the Intergovernmental Panel on Climate Change and other scientists over recent decades have demonstrated an accelerated rate of climatological changes over the past 150 years, attributed to GHG emissions generated from the production and use of fossil fuels.

The impacts of climate change are already being observed in the form of sea level rise, drought, extended and severe fire seasons, and historic flooding from changing storm patterns. The most important strategy to address climate change is to reduce GHG emissions. Additional strategies are necessary to mitigate and adapt to these impacts. In the context of climate change, “mitigation” involves actions to reduce GHG emissions to lessen adverse impacts that are likely to occur. “Adaptation” is planning for and responding to impacts to reduce vulnerability to harm, such as by adjusting transportation design standards to withstand more intense storms, heat, and higher sea levels. This analysis includes a discussion of both in the context of this transportation Project.

3.1 Regulatory Setting

For a full list of laws, regulations, and guidance related to climate change (GHGs and adaptation), refer to https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-16-climate-change.

3.1.1 Environmental Setting

The proposed Project is surrounded by agriculture and residential areas in Sonoma County. State Route 12 is an east-west corridor linking the Bay Area within Sonoma County. This highway links the City of Sebastopool to the west and the City of Santa Rosa to the east. Within the Project limits, the topography is flat and the highway passes through residential neighborhoods and active farmland serving a vital route for the movement of goods. The Kenwood and Glen Ellen corridor, known for its scenic beauty and countryside character, and wineries are a key value of the region. The Project is in a semi-arid region, and its rainy season runs between October 15 and April 15. Average annual precipitation ranges from 40.0 to 47.0 inches per year. The average temperature in this area is 46 degrees Fahrenheit in winter and 63 degrees Fahrenheit in summer.

3.1.2 GHG Inventories

A GHG emissions inventory estimates the amount of GHGs discharged into the atmosphere by specific sources over a period of time. Tracking annual GHG emissions

allows countries, states, and smaller jurisdictions to understand how emissions are changing, and what actions may be needed to attain emission reduction goals. Figure 10 through Figure 12 show GHG emissions by sector at the national and state levels, as well as changes in California gross state product, GHG emissions, and GHG emissions per gross state product since 2000.

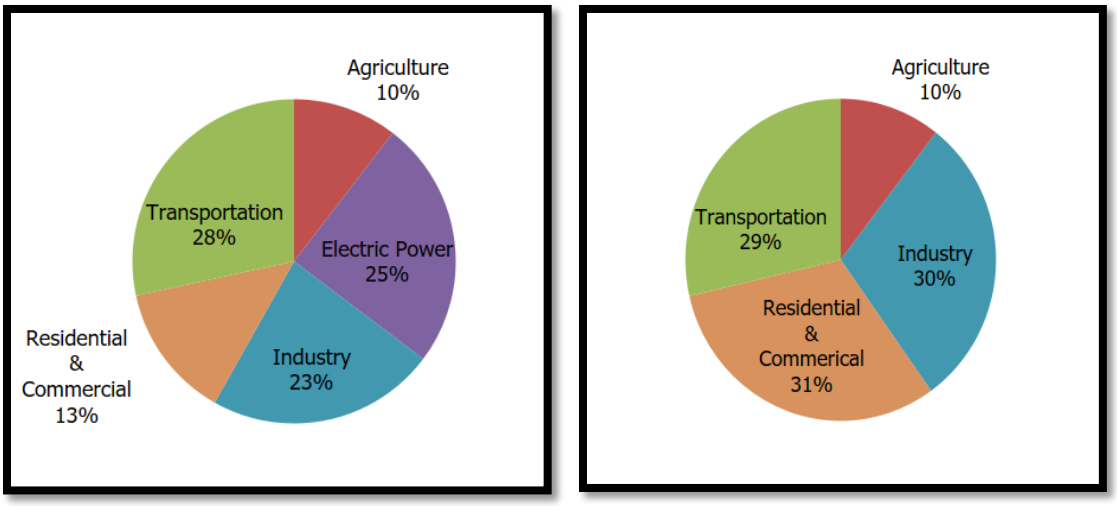

Figure 10 U.S. 2022 Greenhouse Gas Emissions and with Electricity End-Use

Source: United States Environmental Protection Agency (2025).

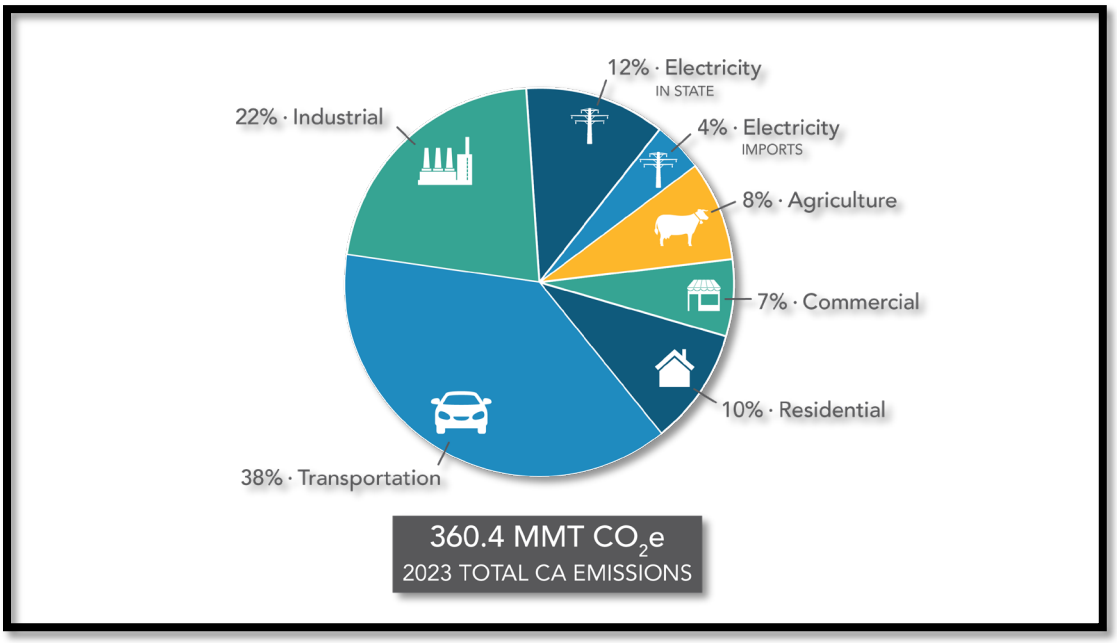

Figure 11 California 2023 Greenhouse Gas Emissions by Economic Sector

Source: California Air Resources Board (CARB). 2023.

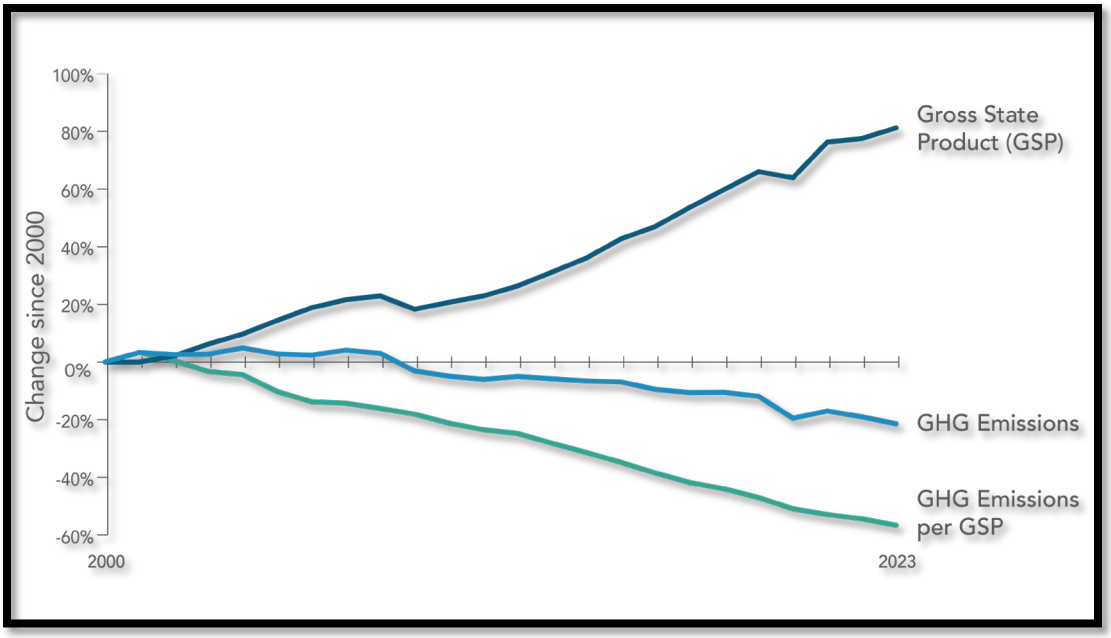

Figure 12 Change in California Gross State Product and GHG Emissions Since 2000

Source: Source: California Air Resources Board (CARB). 2023.

3.2 Regional Plans

As required by *The Sustainable Communities and Climate Protection Act of 2008* (Senate Bill 375), California Air Resources Board (CARB) sets regional GHG reduction targets for California's 18 metropolitan planning organizations (CARB 2008). CARB works to achieve these goals through planning future projects that would cumulatively achieve those goals, and tracking reporting on how they would be met in the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (CARB 2021). Targets are set as a percentage reduction in passenger vehicle GHG emissions per person, based on 2005 levels.

The proposed Project is included in the RTP/SCS for the Metropolitan Transportation Commission for the San Francisco Bay Area region. The regional reduction target for the Metropolitan Transportation Commission (MTC) is 19 percent by 2035 (CARB 2021). Refer to Table 9 for a list of Regional and Local Greenhouse Gas Reduction Plans.

The GHG reduction approach set by the Plan Bay Area 2050+ (updated March 25, 2026) would increase bicycle and pedestrian pathways, transportation alternatives including car sharing, vanpool initiatives, and commuter benefits ordinances (Caltrans 2026f). MTC would also implement alternative fuel and vehicle strategies such as plug-in electric vehicle infrastructure upgrades, incentive for plug-in vehicles for low- to moderate-income households, and promotion of emission reduction technology as well as marketing and education efforts.

Table 9 Regional and Local Greenhouse Gas Reduction Plans

Title	GHG Reduction Policies or Strategies
ABAG Plan Bay Area 2050 + Sustainable Communities Strategy Plan Regional Transportation Plans (Caltrans 2026e).	• Set a goal to reduce GHG emissions from driving by 19 percent in the Bay Area by the year 2035 • Encourage a switch to electric vehicles • Advance a safer and cleaner transit system for everyone • Strategic capacity and technology enhancements to existing highways
Shift Sonoma County Low Carbon Transportation Plan (SCTCA 2018).	• Reduce GHG from transportation • Reduce vehicle miles traveled • Promote safety and health • Promote economic vitality
Sonoma Climate Mobilization Strategy (Regional Climate Protection Authority 2021).	• Significantly reduce GHG by 2030 • Reduce VMT • EV access for all partnership • SC VMT Mitigation Bank

Notes:
ABAG = Association of Bay Area Governments
GHG = greenhouse gas
EV = electric vehicle
SC = Sonoma County
VMT = vehicle miles traveled

3.3 Project Analysis

GHG emissions from transportation projects can be divided into those produced during operation and use of the State Highway System (operational emissions) and those produced during construction. The primary GHGs produced by the transportation sector are CO_2, methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, and various hydrofluorocarbons. CO_2 emissions are a product of burning gasoline or diesel fuel in internal combustion engines, along with relatively small amounts of methane and nitrous oxide. Additionally, the transportation sector emits a minor amount of hydrofluorocarbon emissions, which are related to refrigeration and air conditioning systems used in vehicles.

GHGs vary in their ability to trap heat in the atmosphere, a characteristic known as global warming potential. CO_2 is the most significant GHG due to its abundance and impact; therefore, the amounts of other gases are expressed relative to CO_2 using a metric called “carbon dioxide equivalent” (CO_2e). The global warming potential of CO_2 is assigned as a value of 1, and the global warming potential of other gases is assigned as multiples of CO_2. Both operational and construction emissions associated with the proposed Project are analyzed in the sections below, and emission values, if required, are expressed in CO_2e to provide a standardized measure of their impact.

The CEQA Guidelines generally address GHG emissions as a cumulative impact due to the global nature of climate change (PRC, § 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 Assn. of Governments (2017) 3 Cal.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 GHGs must necessarily be found to contribute to a significant cumulative impact on the environment.

3.3.1 Operational Emissions

The purpose of the proposed Project is to improve safety on the State Highway System by widening shoulders and installing rumble strips; upgrades to culverts in the Project area are incidental. This type of project would not increase the vehicle capacity of the highway. This type of project generally causes minimum or no increase in operation GHG emissions. Vehicle miles traveled are not expected to increase because the number of travel lanes on SR 12 would not increase. No increase in operational GHG emissions is expected.

3.3.2 Construction Emissions

Construction GHG emissions would result from material processing and transportation, 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. Although construction GHG emissions are only produced for a short time, they have long-term effects in the atmosphere, so cannot be considered “temporary” in the same way as criteria pollutants that subside after construction is completed.

Use of long-life pavement, improved traffic management plans, and changes in materials can also help offset GHG emissions produced during construction by allowing longer intervals between maintenance and rehabilitation activities. Table 10 summarizes estimated construction-related GHG emissions in metric tons per year.

Certain common regulations reduce construction vehicle emissions also help reduce GHG emissions. Some of these include PF-AQ-3 (Regular vehicle and equipment maintenance), PF-PF-AQ-4 (Limit idling of vehicles and equipment on site), PF-GHG-3 (Recycle material to reduce energy consumption), and PF-GHG-4 (Reduce the use of non-renewable energy).

Table 10 Construction-Related Greenhouse Gas Emissions by Alternative

Construction Year 2029	CO_2 (tons)	CH_4	N_2O	HFC (tons)	CO_{2e} (metric tons)	Project Total
Build Alternative	94	0.002		0.005	0.002	95
No Build	0	0		0	0	0

Notes:

CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
HFC = hydrofluorocarbons
N_2O = nitrous oxide

All construction contracts include Caltrans Standard Specifications related to air quality. Section 7-1.02A and 7 1.02C, Emissions Reduction, requires 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. Section 14-9.02, Air Pollution Control, requires contractors to comply with all air pollution control rules, regulations, ordinances, and statutes. Certain common regulations that reduce construction vehicle emissions also help reduce GHG emissions.

3.3.3 CEQA Conclusion

The Project would not increase highway capacity along SR 12, and no change in operational GHG is expected. Although construction would result in an increase in construction GHGs, this is a temporary impact and would be minimized with applicable PFs. Therefore, the Project would have a less-than-significant impact on GHG. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.4 Greenhouse Gas Reduction Strategies

3.4.1 Greenhouse Gas Reduction Strategies

In response to AB 32, the Global Warming Solutions Act, California is implementing measures to achieve emission reductions of GHGs that cause climate change. Additionally, Caltrans has enacted policies and initiatives to reduce GHG emissions in transportation to reach the state's climate goals. For a full list of statewide and Caltrans GHG reduction strategies, refer to Standard Environmental Reference, Chapter 16, Climate Change.

Project-level GHG Reduction Strategies

The following measures would also be implemented in the Project to reduce GHG emissions and potential climate change impacts from the Project:

- PF-AQ-1. Contractor Air Quality Compliance.
- PF-AQ-2. Control Measures for Construction Emissions of Fugitive Dust.
- PF-AQ-3. Construction Vehicles and Equipment.
- PF-AQ-4. Minimize Idling.
- PF-GHG-2: Recycle Material to Reduce Energy Consumption.
- PF-GHG-3. Reduce the Use of Non-Renewable Energy.

3.5 Adaptation

Although reducing GHG emissions is crucial in combating climate change, it is only one part of the solution. Caltrans must proactively plan for the impact of climate change on California's transportation infrastructure. This involves modifying and protecting facilities to reduce potential damage and build resilience against future climate-related challenges.

Caltrans has conducted District Climate Change Vulnerability Assessments to identify segments of the State Highway System that are vulnerable to climate change impacts, such as sea level rise, increased temperatures, and extreme weather events. These assessments help prioritize areas for adaptation efforts and inform the development of strategies to enhance the resilience of critical infrastructure.

Additionally, Caltrans periodically prepares a Sustainability Roadmap, which outlines the agency's strategic plans and progress reports aimed at achieving state sustainability goals. The roadmap is a 2-year progress report on several important milestones achieved by Caltrans while implementing Executive Orders B-16-12, B-18-12, and the adaptation planning process of Executive Orders B-30-15, N-19-19, and N-82-20.

Refer to https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-16-climate-change for additional information regarding federal, state, and Caltrans adaptation efforts.

3.5.1 Project Adaptation Analysis

A climate change vulnerability assessment was completed to identify segments of the State Highway System vulnerable to climate change effects from precipitation, temperature, wildfire, storm surge, and sea level rise.

The Project is not identified to be at risk of any climate stressors such as wildlife, sea level rise, precipitation change, and temperature change over the anticipated design life of the Project (Caltrans 2024c).

3.5.2 Wildfire

The Project is not within or near a very high fire hazard severity zone (CalFire 2025). The Project is within a State Responsibility Area; the agency responsible for addressing wildfires is CalFire The geographic parcels of the Project in Sonoma County range from moderate fire hazard to high fire hazard severity zone (CalFire 2025).

3.5.3 Greenhouse Gas Emissions

In response to AB 32, the Global Warming Solutions Act, California is taking significant actions to reduce GHG emissions that contribute to climate change. This Project would not increase the motor vehicle capacity of SR 12. Although some construction-related emissions are anticipated, they would be minimized as much as possible through careful planning and the use of BMPs.

3.5.4 Sea Level Rise

The Project is outside of the Coastal Zone, and not in an area subject to sea level rise (Caltrans n.d.). Accordingly, direct impacts on transportation facilities due to projected sea level rise are not expected.

Chapter 4 Coordination

Caltrans is in coordination with local regulatory agencies and stakeholder groups in the development of this proposed Project.

4.1 Community Outreach

The Initial Study, maps, Project information, and supporting technical studies are available for review weekdays from 8:00 a.m. to 5:00 p.m. at the Caltrans District 4 Office, 111 Grand Avenue, Oakland, CA 94612. The document is also available online to download at: the District 4 Environmental Documents by County Website.

Additionally, the Initial Study will be made available at Sonoma Valley Regional Library at 755 West Napa Street, Sonoma, CA 945476, and Sonoma County Central Library at 211 E St., Santa Rosa, CA 94504. The deadline for submission of comments on the Initial Study with Negative Declaration is July 27, 2026.

4.2 Consultation and Coordination with Public Agencies

Consultation with several agencies occurred during the environmental evaluation process. A list of coordination activities and contacts is provided in Table 11.

Table 11 Agency Coordination Meetings and Contacts

Organizations	Date	Topic
Native American Heritage Commission	June 23, 2025	Caltrans requested a search of the Sacred Lands File.
Native American Heritage Commission	June 24, 2025	The NAHC responded with negative results for the Sacred Lands File search and included a list of representatives from Native American Tribes for additional consultation.
Native American Consultation	July 15, 2025	Section 106 and AB 52 letters were sent to the Federated Indians of Graton Rancheria (FIGR), Mishewal Wappo Tribe of Alexander Valley, Lytton Rancheria, Pinoleville Pomo Nation, and the Guidiville Rancheria of California.
Native American Consultation	July 17, 2025	Lytton Rancheria responded that they had no additional information for the project area, and requested that known resources be protected by placing ESAs and avoiding staging or disturbance in them, but did not enter formal consultation.
Native American Consultation	July 25, 2025	FIGR responded, requesting formal consultation under Section 106 and AB 52. Consultation is ongoing (refer to Section 2.1.5).
Native American Consultation	September 2, 2025	The Mishewal Wappo Tribe of Alexander Valley responded, requesting formal consultation under Section 106 and AB 52. Consultation is ongoing (refer to Section 2.1.5).
Sonoma County Department of Public Works	2025	Right-of-way boundaries and detailed scope of the Project.
United States Fish and Wildlife Service	October 15, 2025	Caltrans requested technical assistance from USFWS and provided a short description of the Project and the USFWS species list.
United States Fish and Wildlife Service	October 17, 2025	Caltrans and USFWS discussed intended species determinations for the Biological Assessment. USFWS concurred with formal consultation for CRLF.
Sonoma County Regional Parks	March 4, 2026	Temporary construction occupancy of the West County Rodota trail during repaving was discussed

Notes:

AB = Assembly Bill
ADA = Americans with Disabilities Act
Caltrans = California Department of Transportation
FIGR = Federated Indians of the Graton Rancheria
NAHC = Native American Heritage Commission
USFWS = United States Fish and Wildlife Service

Chapter 5 Distribution List

The following agencies and government officials will receive copies of this Initial Study with Proposed Negative Declaration.

5.1 State Agencies

- Bay Area Air Quality Management District (BAAQMD)
- California Department of Fish and Wildlife (CDFW)
- Regional Water Quality Control Board (RWQCB)

5.2 Local Agencies and Organizations

- Sonoma County Regional Parks
- Sonoma County Transportation Agency

5.3 Elected Officials

- U.S. Senator Alejandro “Alex” Padilla
- U.S. Senator Adam Schiff
- U.S. Congressman Mike Thompson
- California State Senate Member Christopher Cabaldon
- California State Assembly Member Damon Connolly
- Sonoma County Supervisor Rebecca Hermosillo (District 1)

Chapter 6 List of Preparers

Name	Role	Office/Functional Group (Caltrans District)
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Gurdeep Brar	Project Engineer	Design Central Region (D6)
Kifle Abishu	Project Engineer	Design Central Region (D6)
Lawrence Bonner	Office Chief	Office of Environmental Analysis (D4)
Christopher Pincetich	Branch Chief	Environmental Analysis-North (D4)
Edith Gonzales	Environmental Scientist	Environmental Analysis-North (D4)
Shilpa Mareddy	Branch Chief	Air/Noise Senior (D4)
Brian Rowley	Branch Chief	Water Quality (D4)
Robert Blizard	Branch Chief	Biology Senior (D4)
Alex Mcdonald	Branch Chief	Landscape Architecture
Ramon Lopez-Maciel	Branch Chief	Hydraulics Central Design (D6)
Rajvi Koradia	Transportation Engineer	Air and Noise (D4)
Va Lee	Transportation Engineer	Air and Noise (D4)
Kristina Montgomery	Branch Chief	Cultural Resource Studies (D4)
Alicia Sanhueza	Architectural Historian	Cultural Resource Studies (D4)
Daniel Busch	Archaeologist	Cultural Resource Studies (D4)
Megan Wu	Environmental Scientist	Biology Specialist (D4)
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Andy Do	Transportation Engineer	Hydraulics Specialist (D4)
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Jinhee Ha	Landscape Architect	Landscape Architecture (D4)
Camille Thomas-Fill	Landscape Architect	Landscape Architecture (D4)
Chase Fidler	Traffic Engineer	Maintenance (D4)
Ganaga Tripathi	Water Specialist	Water Quality (D4)
Nick Riqueros	Geotech Specialist	Engineering

Appendix A Title VI/Non-Discrimination Policy Statement

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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September 2025

TITLE VI/NON-DISCRIMINATION POLICY STATEMENT

It is the policy of the California Department of Transportation (Caltrans), in accordance with Title VI of the Civil Rights Act of 1964 and the assurances set forth in the Caltrans' Title VI Program Plan, to ensure that no person in the United States shall on the grounds 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 non-discrimination authorities, remedies, and state law further those protections, including sex, disability, religion, sexual orientation, age, low income, and Limited English Proficiency (LEP).

Caltrans is committed to complying with 23 C.F.R. Part 200, 49 C.F.R. Part 21, 49 C.F.R. Part 303, and the Federal Transit Administration Circular 4702.1B. Caltrans will make every effort to ensure nondiscrimination in all of its services, programs, and activities, whether they are federally funded or not, and that services and benefits are fairly distributed to all people, regardless of race, color, or national origin (including LEP). In addition, Caltrans will facilitate meaningful participation in the transportation planning process in a non-discriminatory manner.

The overall responsibility for this policy is assigned to the Caltrans Director. The Caltrans Title VI Coordinator is assigned to the Caltrans Office of Civil Rights Deputy Director, who then delegates sufficient responsibility and authority to the Office of Civil Rights' managers, including the Title VI Branch Manager, to effectively implement the Caltrans Title VI Program. Individuals with questions or requiring additional information relating to the policy or the implementation of the Caltrans Title VI Program should contact the Title VI Branch Manager at title.vi@dot.ca.gov or at (916) 639-6392, or visit the following web page: https://dot.ca.gov/programs/civil-rights/title-vi.

Dina El-Tawansy (Sep 12, 2025 16:52:12 PDT)
DINA A. EL-TAWANSY
Director

"Improving lives and communities through transportation."

Appendix B List of Technical Studies and References

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Appendix C Avoidance and Minimization Measures

AMM-AES-1: Install Temporary Fencing. Avoid impacts to existing trees, vegetation, and associated root systems. Use temporary fencing to protect existing trees abutting or within construction work and staging areas.

AMM-AES-2: Minimize Impact on Scenic Resource. Locate staging areas on paving or unvegetated surfaces and away from root systems to preserve scenic resource trees. Minimize appearance of construction equipment by screening with temporary fencing or other appropriate screening material.

AMM-AES-3: Replace all Fences or Stone Walls to Original Condition. If any fencing or stone walls are impacted or removed, provide replacement in a similar design to its original condition.

AMM-AES-4: Blend Construction Elements with Environment. Apply aesthetic treatment and camouflage any visible drainage features, such as culvert pipes, headwalls, drainage rock, etc., by coloring with earth-tone coating or stains.

AMM-AES-5: Restore Vegetation. Revegetate areas disturbed by construction activities, including staging areas, with climate appropriate, native erosion control seeding and associated permanent erosion control measures.

AMM-BIO-1: Preconstruction California Red-Legged Frog (CRLF) Surveys. Preconstruction surveys for CRLF will be conducted by a USFWS approved biologist(s) no more than 24 hours prior to any initial ground disturbance and immediately prior to ground-disturbing activities (including vegetation removal) beyond the existing pavement. These efforts will consist of walking surveys of the Project footprint focusing on mesic areas, and if possible, on accessible adjacent areas of upland habitat within at least 50 feet of the Project footprint. The biologist(s) will investigate potential cover sites when it is feasible and safe to do so. This includes a thorough investigation of mammal burrows, rocky outcrops, appropriately sized soil cracks, tree cavities, and debris. Native vertebrates found in the cover sites within the Project footprint will be documented and relocated to an adequate cover site in the vicinity. Safety permitting, the biologist(s) will investigate areas of disturbed soil for signs of frogs within 30 minutes following initial disturbance of the given area.

AMM-BIO-2: Biological Monitor. The agency-approved biologist will appoint a biological monitor (e.g., the crew foreman) who will be responsible for ensuring that all crew members comply with permit guidelines.

AMM-BIO-3: Worker Environmental Awareness Training. To aid in compliance with permit guidelines, the biological monitor will conduct worker environmental awareness training for all personnel. Subsequent environmental training will be conducted for new personnel before they can participate in construction activities. At a minimum, the

training will include a description of special-status species with a focus on CRLF, migratory birds, and their habitats, how the species might be encountered within the Project area, an explanation of the status of these species and protection under the federal and state regulations, the measures to be implemented to conserve listed species and their habitats as they relate to the work site, boundaries within which construction may occur, and how to best avoid the incidental take of listed species. The field meeting will include topics on species identification, life history, descriptions, and habitat requirements during various life stages. Emphasis will be placed on the importance of the habitat and life stage requirements within the context of Project maps showing areas where avoidance and minimization measures are to be implemented. The program will include an explanation of applicable federal and state laws protecting endangered species as well as the importance of compliance with Caltrans and various resource agency conditions.

AMM-BIO-4: Protocol for Species Reporting. If a CRLF is encountered in the immediate work area, the following procedures will be followed:

a) If a CRLF is discovered during surveys or proposed work activities, the resident engineer and USFWS-approved biologist(s) will be immediately informed. If a CRLF gains access to a construction zone, work will be halted immediately within 50 feet until the animal leaves on its own or is removed from the construction zone based on language in the USFWS agreement.

b) The USFWS-approved biologist(s) will have the authority to halt work through coordination with the resident engineer if a CRLF is discovered within the Project footprint. The resident engineer will ensure construction activities remain suspended in any construction area where the qualified biologist(s) has determined that a potential take of the CRLF could occur. Work will resume once the animal leaves the site voluntarily, is removed from the construction zone following agreements in USFWS Biological Opinion, or it is determined that the CRLF is not being harassed by construction activities.

c) Caltrans will submit post-construction compliance reports prepared by the biologist to USFWS within 60 calendar days following completion of Project activities or within 60 calendar days of any break in construction activity lasting more than 60 calendar days. This report will detail (1) dates that relevant Project activities occurred; (2) pertinent information concerning the success of the Project in implementing avoidance and minimization measures for listed species; (3) an explanation of failure to meet such measures, if any; (4) known Project effects on the CRLF, if any; (5) documentation of employee environmental education; and (6) other pertinent information.

AMM-BIO-5: Nighttime Restrictions/Lighting. Night work would be limited wherever possible. If night work must be performed, lighting will be directed towards the roadway to the greatest extent practicable to avoid exposing nocturnal wildlife and their habitats to excessive glare.

AMM-BIO-6: Avoidance of Entrapment. To prevent inadvertent entrapment of animals during construction, excavated, steep-walled holes or trenches more than 1 foot deep will be covered at the close of each working day using plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks. Before such holes or trenches are filled, they must be thoroughly inspected for trapped animals. Pipes, culverts, or similar structures stored in the BSA overnight will be inspected before they are subsequently moved, capped, or buried.

AMM-BIO-7: Pre-construction Nesting Bird Surveys and Nest Avoidance. During the nesting season (February 1 through September 30), pre-construction surveys for nesting birds will be conducted by a qualified biologist no more than 72 hours prior to the start of construction activities. If work is to occur within 300 feet of active raptor nests or 50 feet of active non-game bird nests, a non-disturbance buffer will be established at a distance sufficient to minimize and avoid disturbance based on the nest location, topography, cover, the species' sensitivity to disturbance, and the intensity/type of potential disturbance. To avoid take of migratory birds, their nests, and their young, Caltrans will conduct vegetation and tree trimming outside of the bird nesting season, prior to construction. This work will be limited to vegetation and trees that are within the Project footprint. Additional bird nesting surveys will be required if work must occur during the nesting season.

AMM-BIO-8: Environmentally Sensitive Area Fencing. Before starting construction, ESAs (defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed) will be clearly delineated as needed using high-visibility orange fencing. The ESA fencing will remain in place at each location until work at that location is complete and will prevent construction equipment or personnel from entering sensitive habitat areas. The ESA fencing also serves to delineate the Project footprint in which all construction activity is to occur. The final Project plans will depict the locations where ESA fencing will be installed and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable fencing material and prohibited construction-related activities, vehicle operation, material and equipment storage, and other surface-disturbing activities within ESAs. The ESA fencing will be removed following completion of construction activities.

AMM-BIO-9: Wildlife Exclusion Fencing. Before starting construction, at the discretion of the Caltrans biologist, wildlife exclusion fencing (WEF) may be installed along the Project footprint perimeter in the areas where wildlife could enter the Project site. The final Project plans will depict the locations where WEF will be installed, if needed, and how it will be assembled/constructed. The special provisions in the bid solicitation package will clearly describe acceptable WEF fencing material and proper WEF installation and maintenance. The WEF will remain in place at each location until work at that location is complete and will be regularly inspected for stranded animals and fully maintained daily. The WEF will be removed following completion of construction activities.

AMM-CUL-1: Environmentally Sensitive Area. The Caltrans Archaeologist will collaborate with all responsible parties to ensure ESAs are accurately represented in plans, specifications, and estimates, and the ESA Action Plan will be included in the Residente Engineer (RE) Pending File. During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss the ESAs with construction personnel, emphasizing that no construction activity, including material storage, is permitted within these areas and that workers must remain outside of them. The RE will notify the Caltrans Archaeologist at least two weeks prior to construction, who will then inform the Tribe. Prior to construction, the Caltrans Project Archaeologist will mark ESA locations in the field with the contractor using temporary high-visibility fencing (THVF). Regular inspections and site visits will be conducted by the Caltrans Archaeologist and the Tribe to ensure the integrity of the ESAs.

AMM-CUL-2: Environmental Monitoring Area. The Caltrans Archaeologist will collaborate with all responsible parties to ensure Environmental Monitoring Area(s) are accurately represented in plans, specifications, and estimates, and the RE Pending File. During the preconstruction meeting, a qualified archaeologist and Tribal representative will discuss monitoring areas with construction personnel. It will be emphasized that archaeological monitoring will occur at specific Project areas. The RE will notify the Caltrans Archaeologist at least two weeks prior to construction, who will then inform the Tribe. Monitoring will be conducted by a qualified archaeologist and the Tribe.

AMM-CUL-3: Cultural Sensitivity Training. Prior to the initiation of construction for the Project, a qualified archaeologist and Tribal representative from FIGR will conduct a cultural sensitivity training for all construction personnel with a focus on cultural, tribal, and archaeological resources. At minimum the training will include discussion of archaeological and tribal resources which may be encountered (including the traditional importance of resources such as cultural landscapes, significant waterways, and ethnobotanical plants), the procedures when working within Environmental Monitoring Areas or near Environmentally Sensitive Areas, if applicable, and summary of state and federal regulations pertaining to cultural resources, as well as the importance of compliance with Caltrans' conditions.

AMM-NOI-1: Construction Noise Control and Noise Monitoring. Noise control and noise monitoring will be required during construction to avoid and minimize construction noise. The contractor will be required to submit a Noise Control Plan to Caltrans for approval to demonstrate compliance with construction noise limits, which require the contractor to limit construction noise levels to 86 dBA L_{max} from 9:00 p.m. to 6:00 a.m.

- Public outreach will be required throughout the Project construction to update nearby residents, businesses, and other Project stakeholders on upcoming construction activities and any changes to the Project construction timeline.

- Noisy activities will be scheduled within the same time frame. The total noise level will not be significantly greater than the level produced if operations are performed separately.

- Unnecessary idling of internal combustion engines will be avoided within 100 feet of sensitive receptors.

- All stationary noise-generating construction equipment will be located as far as practical from noise-sensitive receptors or provide baffled housing or sound aprons to equipment when sensitive receptors adjoin or are near a construction Project area.

- All internal combustion engine driven equipment will be equipped with manufacturer recommended intake and exhaust mufflers that are in good condition and appropriate for the equipment.

- No construction equipment will be delivered and dropped off before 6:00 a.m.

AMM-TRANS-1: Minimize Delays. California Highway Patrol's Construction Zone Enhanced Enforcement Program (COZEEP) would be incorporated into the TMP to increase law enforcement near construction zones, assist with traffic management to minimize delays to local residents and highway users, as feasible, and assist with emergency response.

AMM-WQ-1: Post-Construction Treatment Best Management Practices. Either a biofiltration swale or a biofiltration strip will be designed and constructed to treat the stormwater from the increase in net impervious area (NIS) resulting from shoulder widening. Stormwater treatment BMPs treat approximately 0.81 (35,300 square feet) within the Project limits. Post-construction treatment BMPs technology will follow the Caltrans Project Planning and Design Guide.

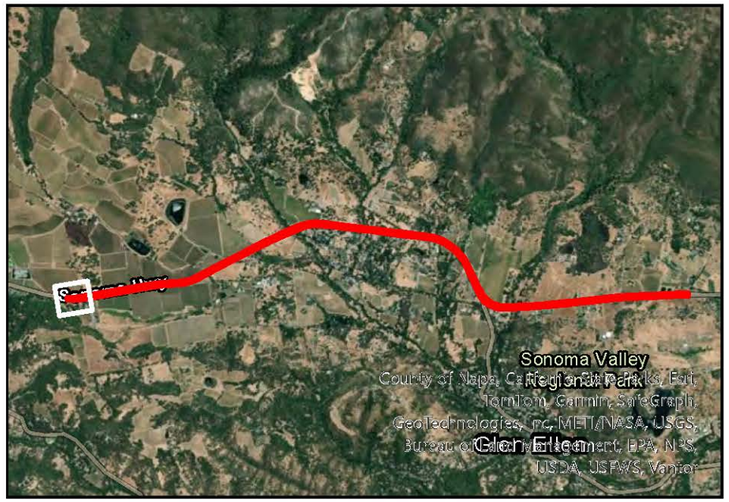
Appendix D List of Acronyms and Abbreviations

AB	Assembly Bill
ADL	aerially deposited lead
AMM	Avoidance and/or Minimization Measure
APE	Area of Potential Effect
ASR	Archaeological Survey Report
AT&T	American Telephone & Telegraph
AVE	Area of Visual Effect
BAAQMD	Bay Area Air Quality Management District
BSA	Biological Study Area
BMP	best management practice
BUOW	burrowing owl
CAL-CET	Caltrans Construction Emission Tool
CalFire	California Department of Forestry and Fire Protection
Caltrans	California Department of Transportation
CAM	California Assessment Manual
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CGS	California giant salamander
CH_4	methane
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COHA	Cooper's Hawk
COZEEP	Construction Zone Enhancement Enforcement Program
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRLF	California red-legged frog
CUL	cultural resources
dBA	A-weighted decibels
DPS	distinct population segment
ESA	environmentally sensitive area
FEMA	Federal Emergency Management Agency

FHWA	Federal Highway Administration
FIGR	Federated Indians of Graton Rancheria
FYLF	foothill yellow-legged frog
GHG	greenhouse gas
GIS	Geographic Information System
GWP	global warming potential
HFC	hydrofluorocarbon
HMA	hot-mix asphalt
HRER	Historical Resources Evaluation Report
L_{eq}	equivalent continuous sound level
L_{max}	maximum sound level
MM	Mitigation Measure
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MTC	Metropolitan Transportation Commission
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NES	Natural Environment Study
NIS	net impervious surface
NNI	net new impervious
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NSO	Northern Spotted Owl
NWI	National Wetlands Inventory
NWPT	northwestern pond turtle
OCRS	Office of Cultural Resources Studies
PF	project feature
PM	post mile
PRC	Public Resources Code
PSI	preliminary site investigation
RCNM	Roadway Construction Noise Model
RE	Resident Engineer
RHMA-G	rubberized hot-mix asphalt–gap graded
ROW	right-of-way

RSA	resource study area
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SHPO	State Historic Preservation Officer
SHOPP	State Highway Operation and Protection Program
SLF	Sacred Lands File
SR	State Route
SWPPP	Stormwater Pollution Prevention Plan
TCR	Tribal Cultural Resource
TMP	Traffic Management Plan
THVF	temporary high-visibility fencing
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VMT	vehicle miles traveled
WEF	wildlife exclusion fencing
XPI	Extended Phase I

Appendix E Biological Study Area



Legend

- Project footprint (16.2 acres)
- Biological Study Area (28.2 acres)
- Permanent impact: shoulder widening (0.82 acre)
- Temporary impact: shoulder backing (0.85 acre)

Landcover type

- Agriculture
- Developed
- Herbaceous
- Forest Sliver
- Hardwood Forest
- Riparian Forest
- Non-native Forest
- Herbaceous Wetland

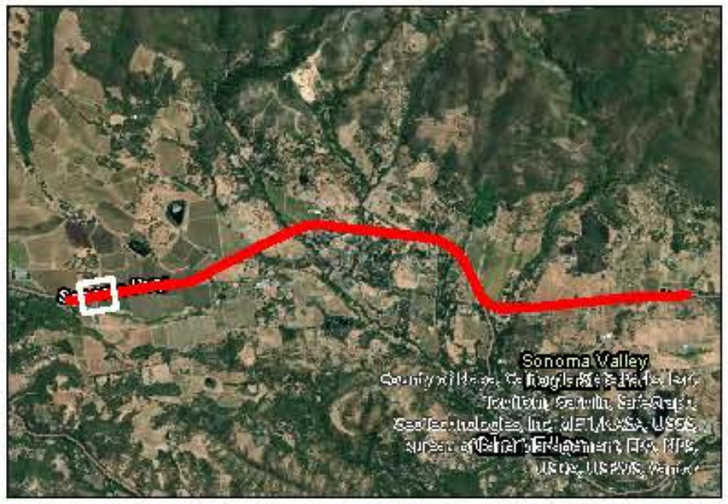
Caltrans

0 0.01 0.03 0.05 Miles

N

Biological Study Area Page 1 of 27
Potential Impact to Landcover and CRLF Habitat

State Route 12 Shoulder Widening Project
EA 04-4Q830-SON-012-PM 28.1-31.67
Sonoma County, California



Legend

- Project footprint (16.2 acres)
- Biological Study Area (28.2 acres)
- Permanent impact: shoulder widening (0.82 acre)
- Temporary impact: shoulder backing (0.85 acre)
- Culvert upgrades

Landcover type

- Agriculture
- Developed
- Herbaceous
- Forest Sliver
- Hardwood Forest
- Riparian Forest
- Non-native Forest
- Herbaceous Wetland

0 0.01 0.03 0.05 Miles

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Biological Study Area Page 2 of 27
Potential Impact to Landcover and CRLF Habitat

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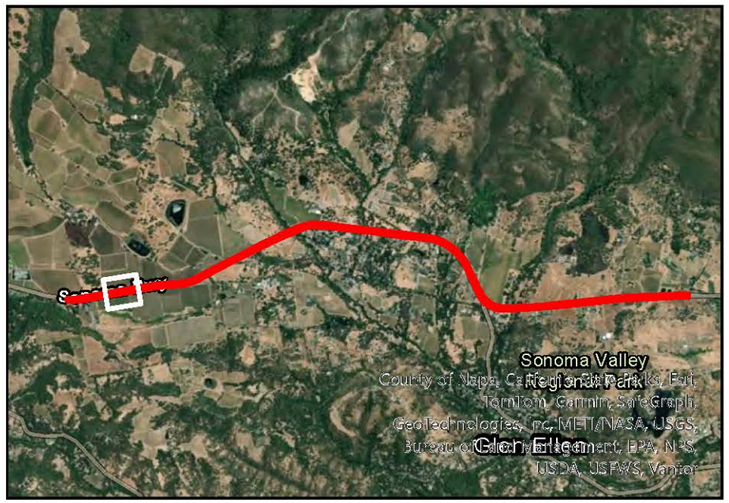

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Landcover type

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Caltrans

0 0.01 0.03 0.05 Miles

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Biological Study Area Page 3 of 27

Potential Impact to Landcover and CRLF Habitat

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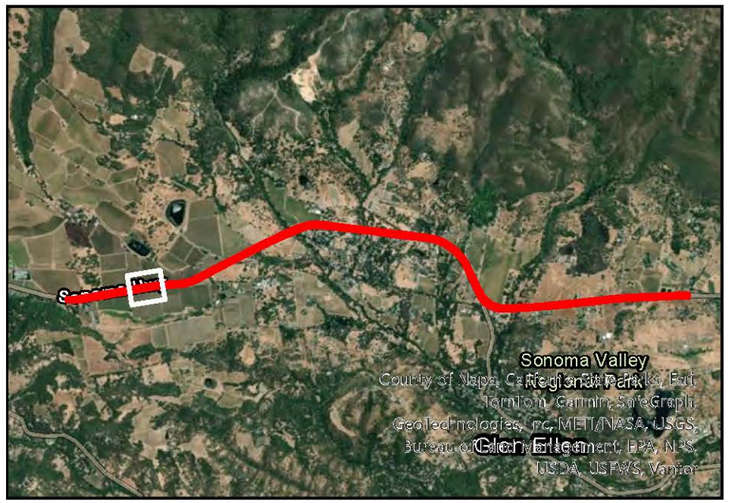
Sonoma County, California



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Landcover type

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Caltrans

0 0.01 0.03 0.05 Miles

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Biological Study Area Page 4 of 27
Potential Impact to Landcover and CRLF Habitat

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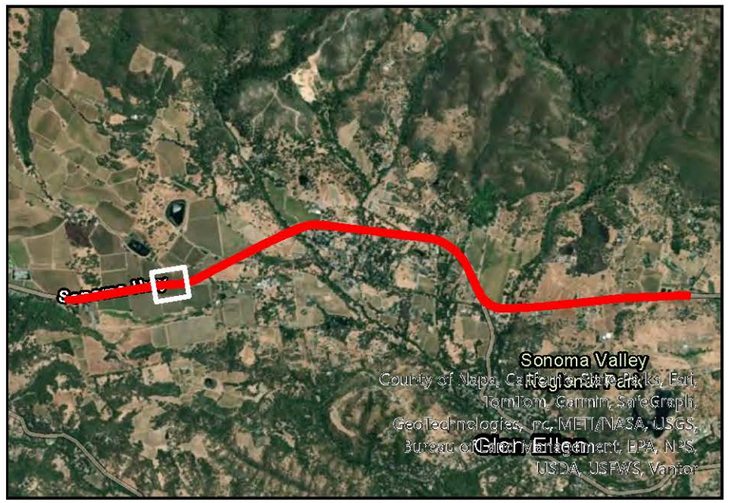
Sonoma County, California



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Landcover type

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0 0.01 0.03 0.05 Miles

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Biological Study Area Page 5 of 27
Potential Impact to Landcover and CRLF Habitat

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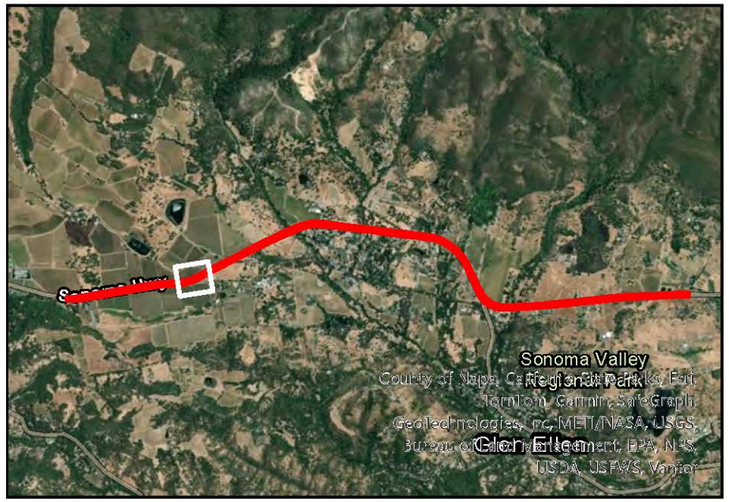

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Caltrans

0 0.01 0.03 0.05 Miles

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Biological Study Area Page 6 of 27
Potential Impact to Landcover and CRLF Habitat

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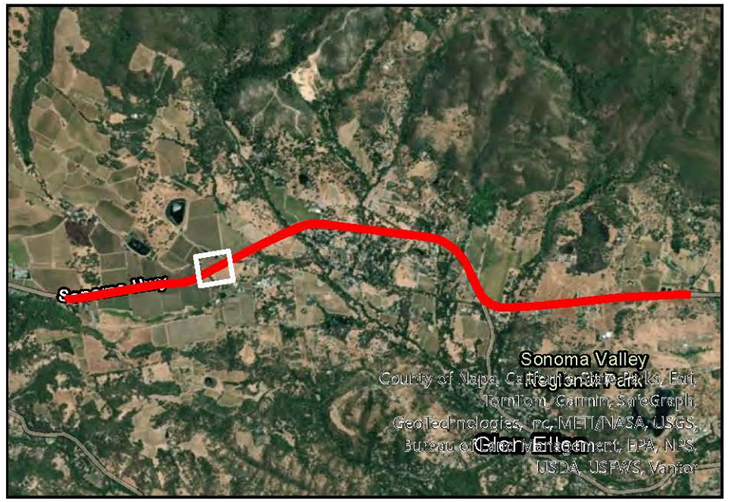
Sonoma County, California



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Caltrans

0 0.01 0.03 0.05 Miles

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Biological Study Area Page 7 of 27
Potential Impact to Landcover and CRLF Habitat

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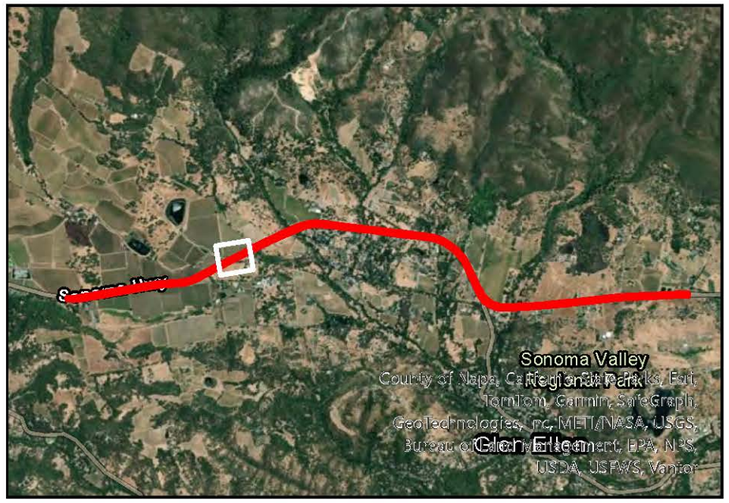

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Biological Study Area Page 8 of 27
Potential Impact to Landcover and CRLF Habitat

State Route 12 Shoulder Widening Project
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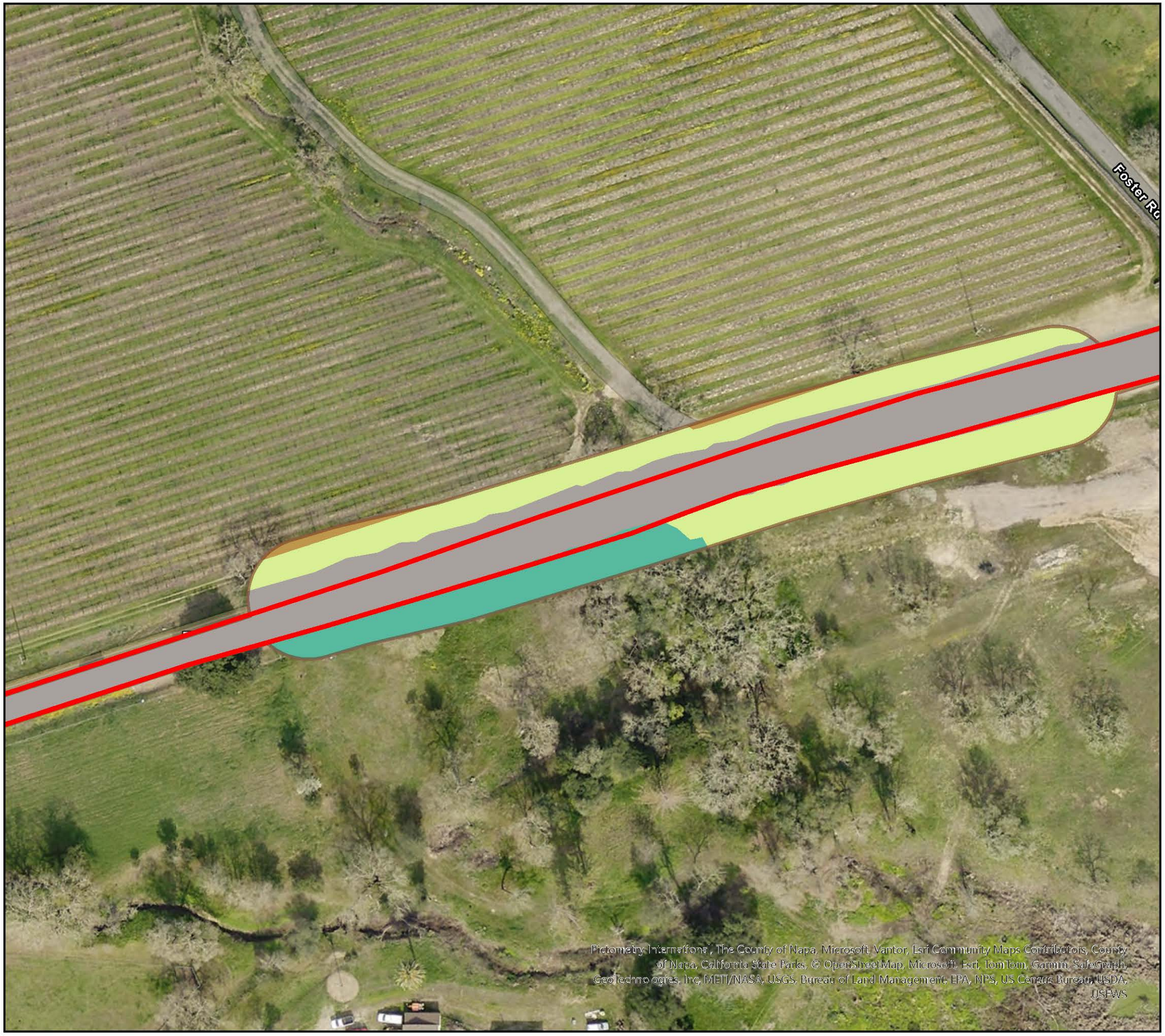
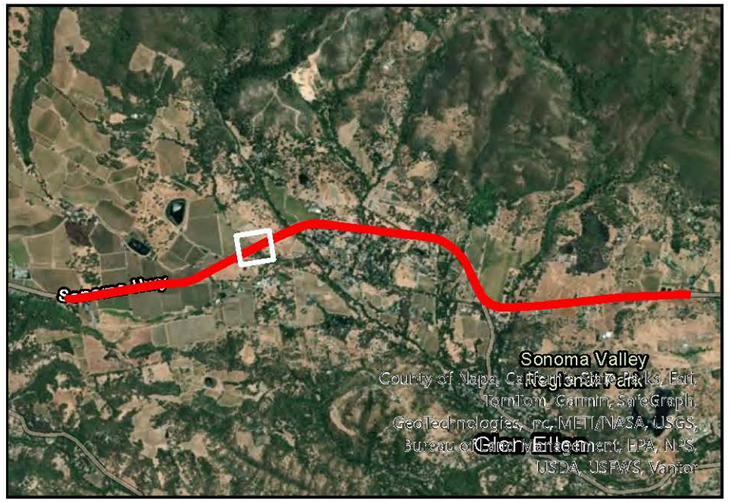
Sonoma County, California





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Caltrans

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Biological Study Area Page 9 of 27
Potential Impact to Landcover and CRLF Habitat

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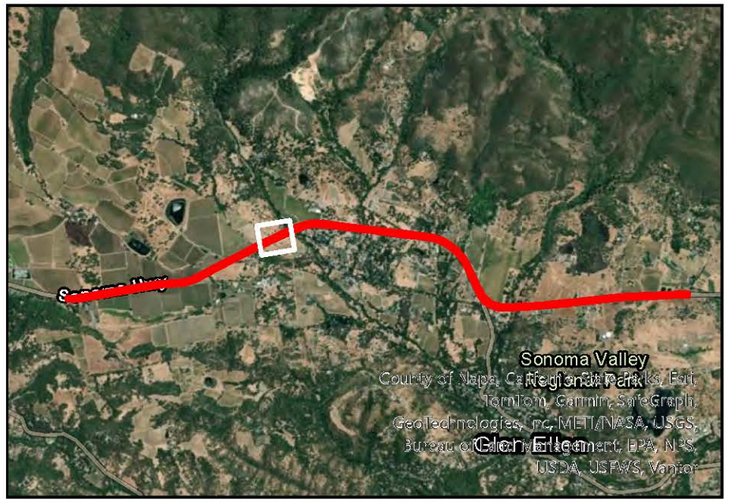
Sonoma County, California



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Caltrans

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Biological Study Area Page 10 of 27
Potential Impact to Landcover and CRLF Habitat

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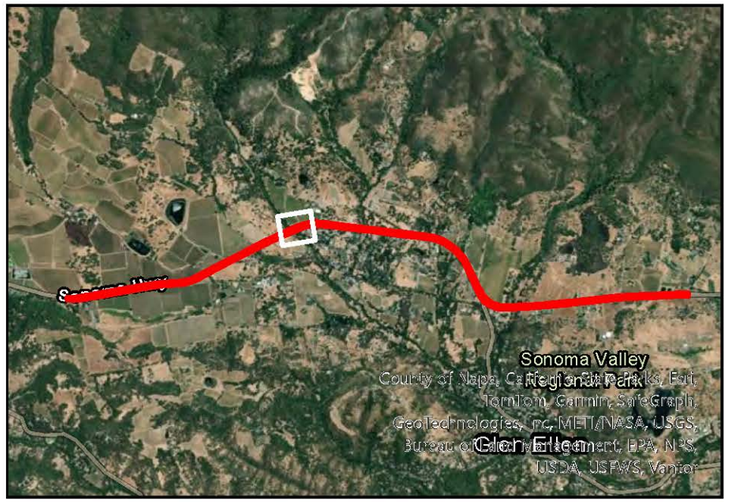

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Caltrans

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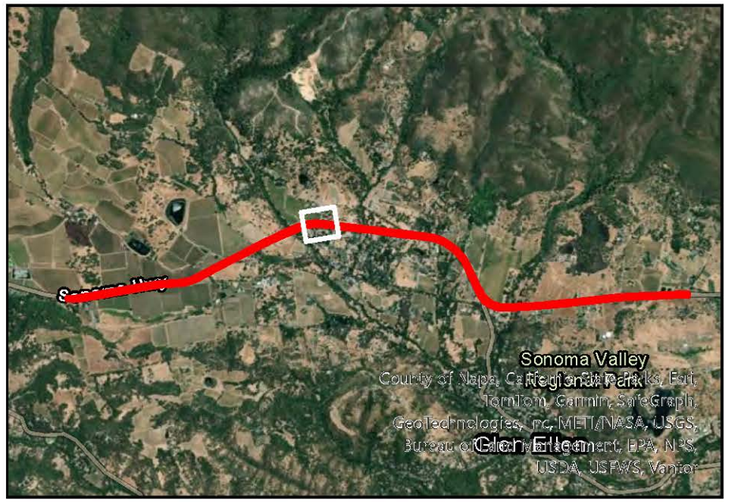

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Caltrans

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Biological Study Area Page 12 of 27
Potential Impact to Landcover and CRLF Habitat

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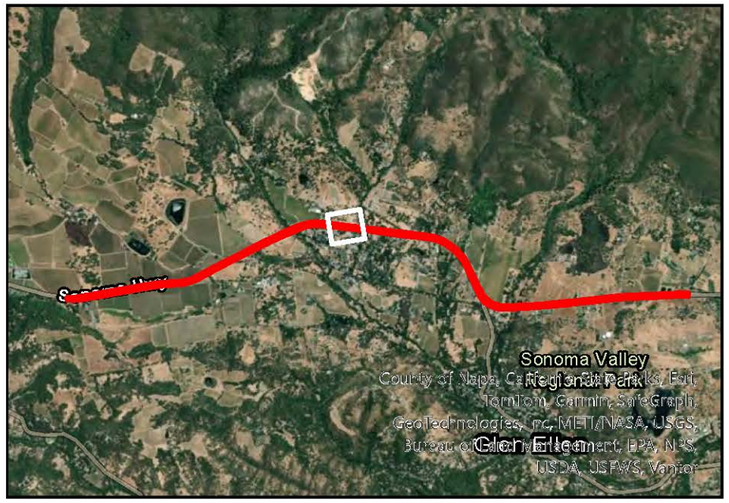

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Caltrans

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N

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Potential Impact to Landcover and CRLF Habitat

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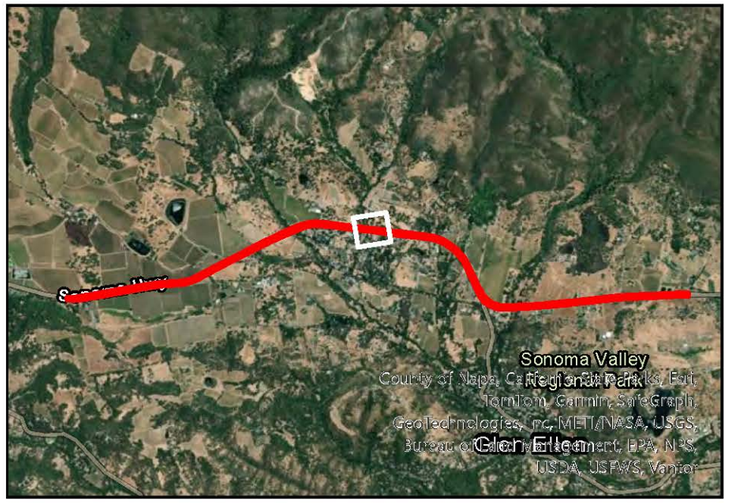

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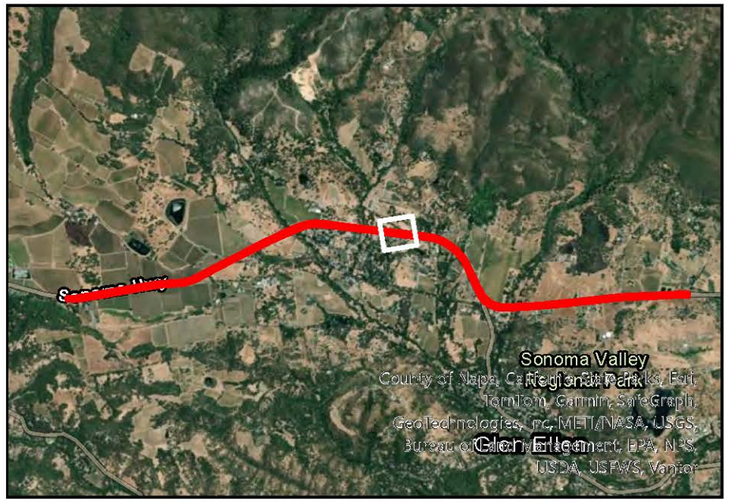

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Caltrans

N

0 0.01 0.03 0.05 Miles

Biological Study Area Page 15 of 27
Potential Impact to Landcover and CRLF Habitat

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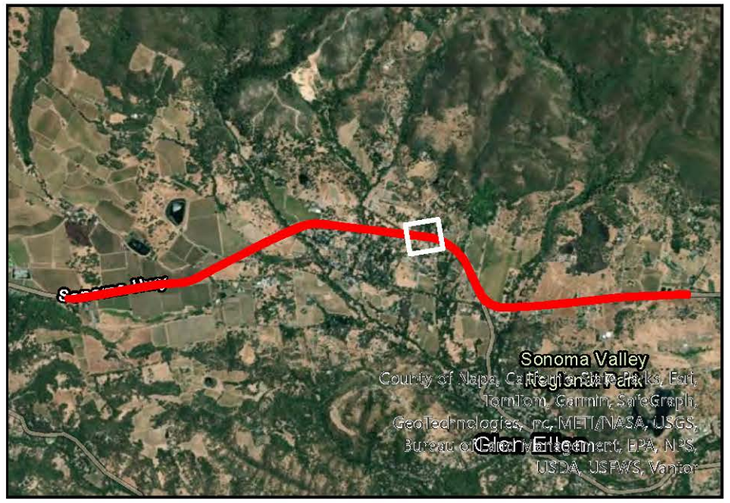
Sonoma County, California



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Caltrans

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N

Biological Study Area Page 16 of 27
Potential Impact to Landcover and CRLF Habitat

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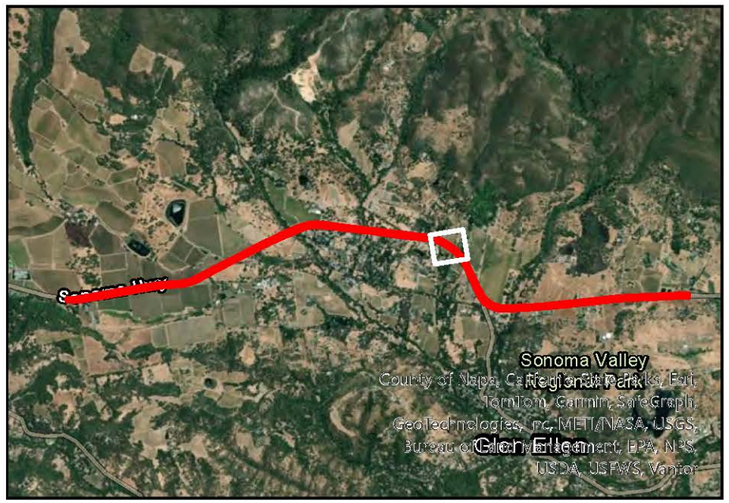

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Caltrans

0 0.01 0.03 0.05 Miles

N

Biological Study Area Page 17 of 27
Potential Impact to Landcover and CRLF Habitat

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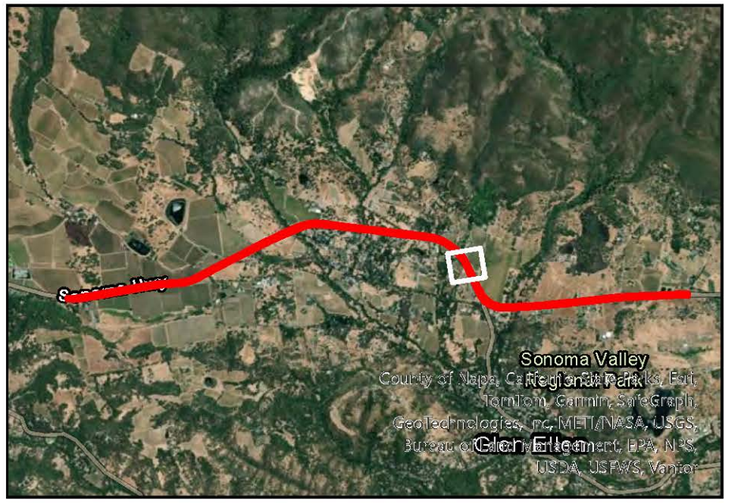

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Caltrans

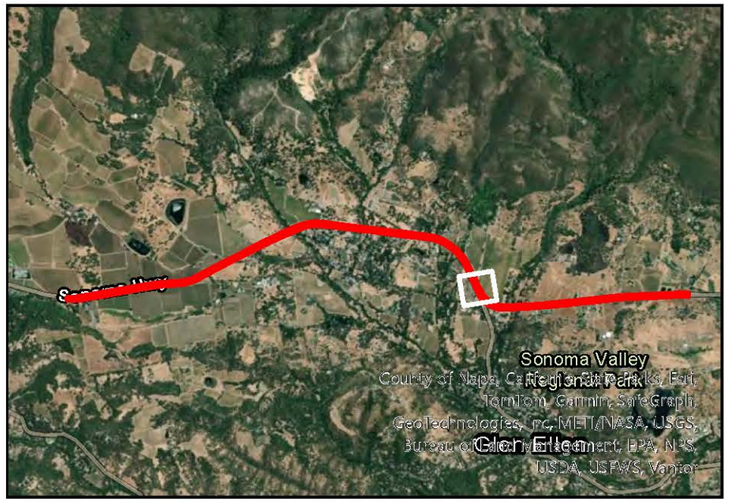
0 0.01 0.03 0.05 Miles

N

Biological Study Area

Potential Impact to Landcover and CRLF Habitat

State Route 12 Shoulder Widening Project
EA 04-4Q830-SON-012-PM 28.1-31.67
Sonoma County, California



Legend

- Project footprint (16.2 acres)
- Biological Study Area (28.2 acres)
- Permanent impact: shoulder widening (0.82 acre)
- Temporary impact: shoulder backing (0.85 acre)

Landcover type

- Agriculture
- Developed
- Herbaceous
- Forest Sliver
- Hardwood Forest
- Riparian Forest
- Non-native Forest
- Herbaceous Wetland

0 0.01 0.03 0.05 Miles

N

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Potential Impact to Landcover and CRLF Habitat

State Route 12 Shoulder Widening Project
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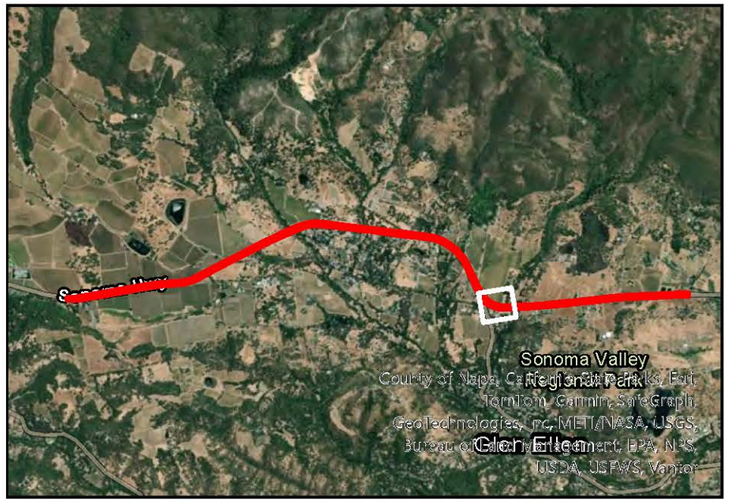

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Caltrans

0 0.01 0.03 0.05 Miles

N

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Potential Impact to Landcover and CRLF Habitat

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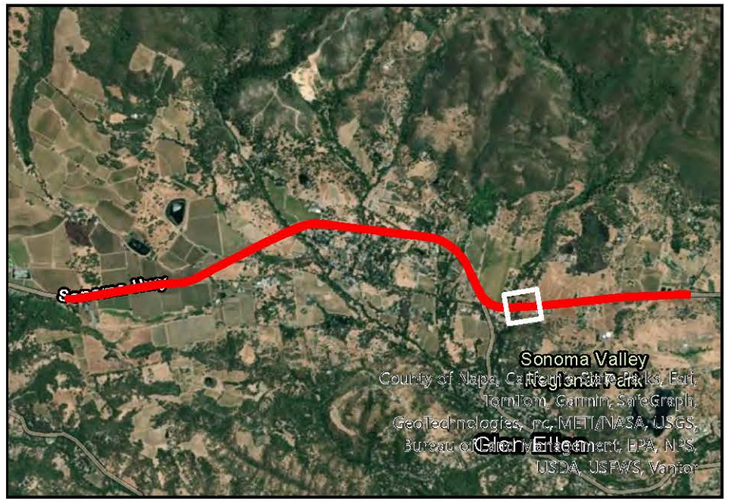
Sonoma County, California



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N

Biological Study Area Page 21 of 27
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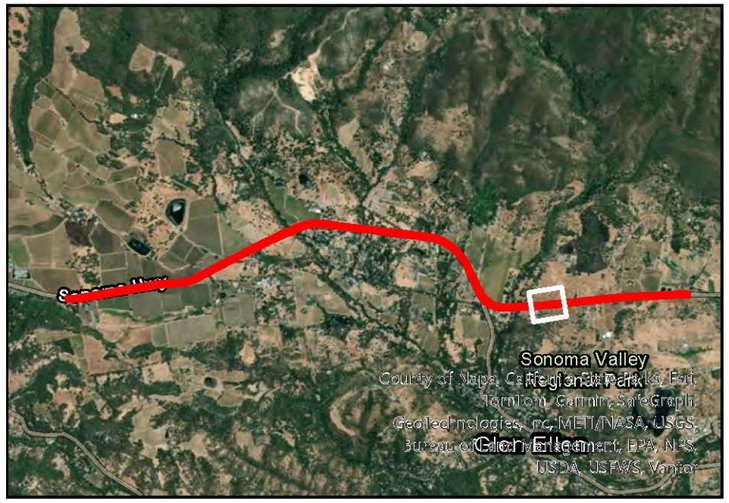

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Caltrans

0 0.01 0.03 0.05 Miles

N

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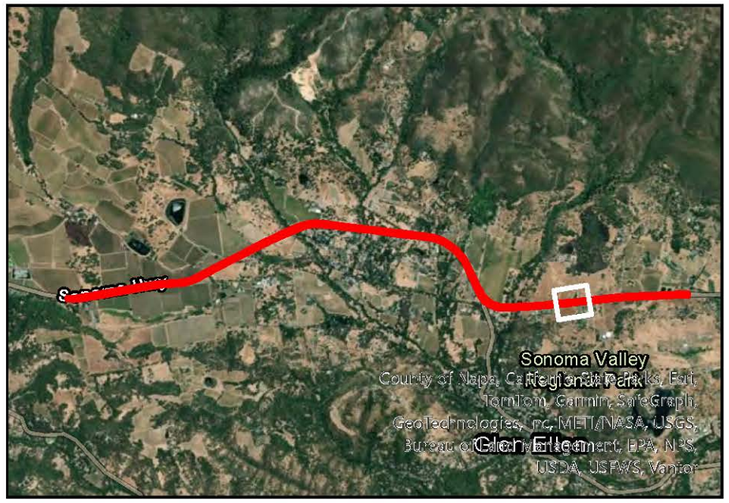

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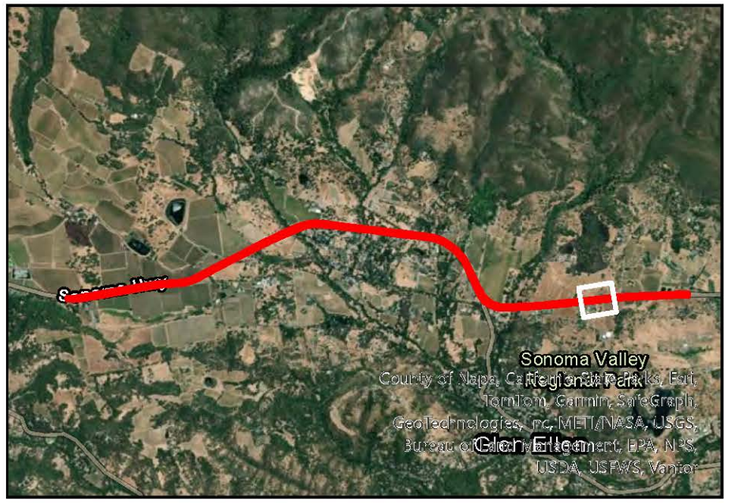

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Caltrans

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N

Biological Study Area Page 24 of 27
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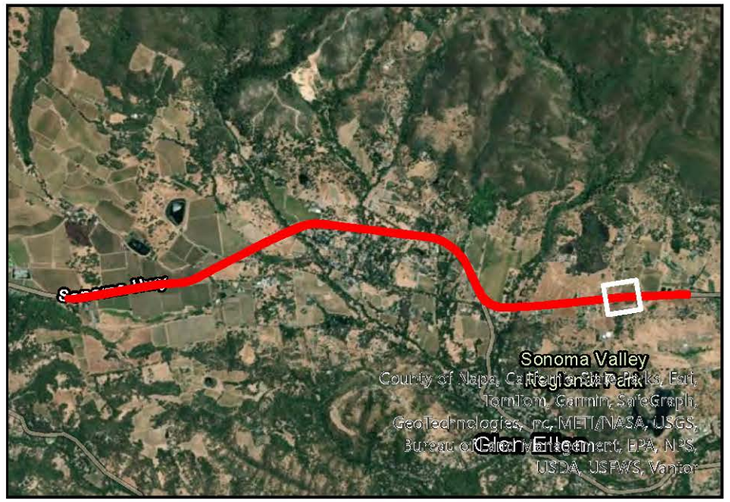

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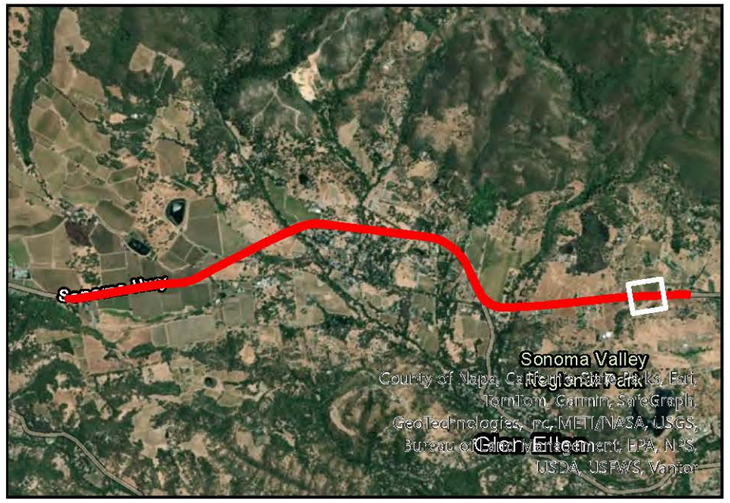

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Caltrans

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Biological Study Area Page 26 of 27
Potential Impact to Landcover and CRLF Habitat

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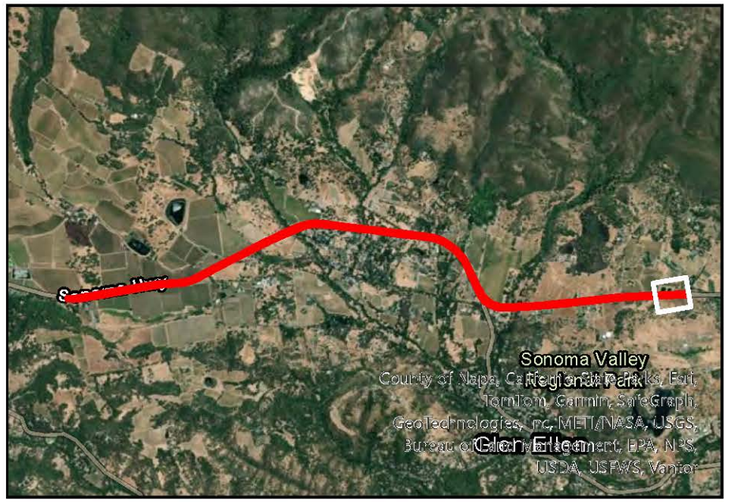
Sonoma County, California



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0 0.01 0.03 0.05 Miles

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Potential Impact to Landcover and CRLF Habitat

State Route 12 Shoulder Widening Project
EA 04-4Q830-SON-012-PM 28.1-31.67
Sonoma County, California

Appendix F Potential for Special-Status Species to Occur in the Biological Study Area

Table F-1 Special-Status Plant Species with Potential to Occur in the Biological Study Area

Scientific Name	Common Name	FED Status	CA Status	CA Rare Plant Bank	Blooming Period	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Allium peninsulare var. *franciscanum*	Franciscan onion	None	None	1B.2	May-June	Cismontane woodland, valley and foothill grassland.	Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5 to 320 meters.	**None.** No suitable serpentine habitat is present.	-
Alopecurus aequalis var. *sonomensis*	Sonoma alopecurus	Endangered	None	1B.1	May-July	Freshwater marshes and swamps, riparian scrub.	Wet areas, marshes, and riparian banks, with other wetland species. 3 to 360 meters.	**None.** No suitable freshwater marsh habitat is present.	No effect
Amorpha californica var. *napensis*	Napa false indigo	None	None	1B.2	April-July	Broadleaved upland forest, chaparral, cismontane woodland.	Openings in forest or woodland or in chaparral. 30 to 735 meters.	**Low.** 13 CNDDB occurrences were recorded within 5 miles of the Project footprint. Nearest occurrence was recorded in 2018, around 0.18 miles east of the Project. Species potentially could occur, but was not found during habitat assessment, because vegetation communities surrounding the three BSA areas are disturbed roadside areas composed of ruderal species, annual grasslands, and sparse landscape-ornamental shrubs and trees.	-
Amsinckia lunaris	bent-flowered fiddleneck	None	None	1B.2	March-June	Cismontane woodland, valley and foothill grassland, coastal bluff scrub.	3 to 795 meters.	**None.** 1 CNDDB occurrence was recorded within 5 miles of the Project footprint. No suitable habitat is present.	-
Arctostaphylos stanfordiana ssp. *decumbens*	Rincon Ridge manzanita	None	None	1B.1	February-April	Chaparral, cismontane woodland.	Highly restricted endemic to red rhyolites in Sonoma County. 90 to 375 meters.	**None.** No suitable habitat is present.	-
Astragalus claranus	Clara Hunt's milk-vetch	Endangered	Endangered	1B.1	March-May	Cismontane woodland, valley and foothill grassland, chaparral.	Open grassy hillsides, especially on exposed shoulders in thin, volcanic or serpentine clay soil moist in spring. 95 to 355 meters.	**None.** 2 CNDDB occurrences were recorded within 5 miles of the Project footprint. No suitable serpentine habitat is present.	No effect

Scientific Name	Common Name	FED Status	CA Status	CA Rare Plant Bank	Blooming Period	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Balsamorhiza macrolepis	big-scale balsamroot	None	None	1B.2	March-June	Chaparral, valley and foothill grassland, cismontane woodland.	Sometimes on serpentine. 35 to 1,465 meters.	**None.** 1 CNDDB occurrence was recorded within 5 miles of the Project footprint. No suitable habitat is present.	-
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	1B.1	March-May	Vernal pools, valley and foothill grassland.	Vernal pools and swales. 10 to 290 meters.	**None.** No suitable vernal pool habitat is present.	No effect
Brodiaea leptandra	narrow-anthered brodiaea	None	None	1B.2	May-July	Broadleafed upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland.	Volcanic substrates. 30 to 590 meters.	**None.** No suitable volcanic habitat is present.	-
Ceanothus confusus	Rincon Ridge ceanothus	None	None	1B.1	February-June	Closed-cone coniferous forest, chaparral, cismontane woodland.	Known from volcanic or serpentine soils, dry shrubby slopes. 150 to 1,280 meters.	**None.** No suitable volcanic habitat is present.	-
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2	February-April	Chaparral.	Rocky, serpentine or volcanic sites. 100 to 950 meters.	**Very low.** 10 CNDDB occurrences were recorded within 5 miles of the Project footprint. Nearest occurrence was recorded in 1974, around 2.2 miles north of the Project. Occurrences are clustered near Sugarloaf Ridge State Park. Species potentially could occur but was not found during habitat assessment, likely due to the lack of suitable soil.	-
Ceanothus purpureus	holly-leaved ceanothus	None	None	1B.2	March-May	Chaparral, cismontane woodland.	Rocky, volcanic slopes. 140 to 720 meters.	**None.** No suitable habitat is present.	-
Ceanothus sonomensis	Sonoma ceanothus	None	None	1B.2	February-April	Chaparral.	Sandy, serpentine or volcanic soils. 140 to 795 meters.	**Low.** 27 CNDDB occurrences were recorded within 5 miles of the Project footprint. Nearest occurrence was recorded in 2013, around 0.65 miles east of the Project. Species potentially could occur but was not found during habitat assessment, likely due to the lack of suitable soil.	-

Scientific Name	Common Name	FED Status	CA Status	CA Rare Plant Bank	Blooming Period	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Downingia pusilla	dwarf downingia	None	None	2B.2	March-May	Valley and foothill grassland (mesic sites), vernal pools.	Vernal lake and pool margins with a variety of associates. In several types of vernal pools. 1 to 490 meters.	**None.** No suitable vernal pool habitat is present.	-
Erigeron greenei	Greene's narrow-leaved daisy	None	None	1B.2	May-September	Chaparral.	Serpentine and volcanic substrates, generally in shrubby vegetation. 90 to 835 meters.	**None.** No suitable serpentine habitat is present.	-
Eryngium jepsonii	Jepson's coyote-thistle	None	None	1B.2	April-August	Vernal pools, valley and foothill grassland.	Clay. 3 to 305 meters.	**None.** No suitable vernal pool habitat is present.	-
Fritillaria liliacea	fragrant fritillary	None	None	1B.2	February-April	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland.	Often on serpentine; various soils reported though usually on clay, in grassland. 3 to 385 meters.	**None.** No suitable serpentine habitat is present.	-
Hemizonia congesta ssp. *congesta*	congested-headed hayfield tarplant	None	None	1B.2	April-November	Valley and foothill grassland.	Grassy valleys and hills, often in fallow fields; sometimes along roadsides. 5 to 520 meters.	**None.** 3 CNDDB occurrence was recorded within 5 miles of the Project footprint. No suitable habitat is present.	-
Horkelia tenuiloba	thin-lobed horkelia	None	None	1B.2	May-July	Broadleafed upland forest, chaparral, valley and foothill grassland.	Sandy soils; mesic openings. 45 to 640 meters.	**None.** 1 CNDDB occurrence was recorded within 5 miles of the Project footprint. No suitable habitat is present.	-
Lasthenia burkei	Burke's Goldfields	Endangered	Endangered	1B.1	April-June	Vernal pools, wet meadows.	Elevation: < 500 meters.	**None.** No suitable vernal pool habitat is present.	No effect
Layia septentrionalis	Colusa layia	None	None	1B.2	April-May	Chaparral, cismontane woodland, valley and foothill grassland.	Scattered colonies in fields and grassy slopes in sandy or serpentine soil. 15 to 1,100 meters.	**None.** 2 CNDDB occurrences were recorded within 5 miles of the Project footprint. No suitable habitat is present.	-
Legenere limosa	legenere	None	None	1B.1	April-June	Vernal pools.	In beds of vernal pools. 1 to 1,005 meters.	**None.** No suitable habitat is present.	-
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	1B.2	March-May	Chaparral, cismontane woodland, valley and foothill grassland.	Open to partially shaded grassy slopes. On volcanics or the periphery of serpentine substrates. 55 to 855 meters.	**Very low.** 8 CNDDB occurrences were recorded within 5 miles of the Project footprint. Nearest occurrence was recorded in 2004, around 0.9 mile west of the Project. Species potentially could occur but was not found during habitat assessment, likely due to the lack of suitable soil.	-

Scientific Name	Common Name	FED Status	CA Status	CA Rare Plant Bank	Blooming Period	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Lupinus sericatus	Cobb Mountain lupine	None	None	1B.2	March-June	Chaparral, cismontane woodland, lower montane coniferous forest, broadleafed upland forest.	In stands of knobcone pine-oak woodland, on open wooded slopes in gravelly soils; sometimes on serpentine. 120 to 1,390 meters.	**None.** No suitable habitat is present.	-
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	None	None	1B.1	April-August	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest.	Vernal pools and swales; adobe or alkaline soils. 3 to 1,680 meters.	**None.** No suitable vernal pool habitat is present.	-
Northern Vernal Pool	Northern Vernal Pool	None	None	-	-	Vernal pool; wetland.		**None.** No suitable vernal pool habitat is present.	-
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	None	None	1B.3	April-August	Chaparral.	Crevices in rock outcrops and talus slopes. 425 to 1,405 meters.	**None.** No suitable habitat is present.	-
Sidalcea oregana ssp. *valida*	Kenwood Marsh checkerbloom	Endangered	Endangered	1B.1	June-September	Marshes and swamps.	Edges of freshwater marshes. 115 to 125 meters.	**None.** No suitable freshwater marsh habitat is present within Project footprint. One CNDDB occurrence was recorded in 2013 within 5 miles of the Project.	No effect
Streptanthus hesperidis	green jewelflower	None	None	1B.2	May-July	Chaparral, cismontane woodland.	Openings in chaparral or woodland; serpentine, rocky sites. 240 to 765 meters.	**None.** No suitable habitat is present.	-
Trifolium amoenum	two-fork clover	Endangered	None	1B.1	April-June	Valley and foothill grassland, coastal bluff scrub.	Sometimes on serpentine soil, open sunny sites, swales. Most recently cited on roadside and eroding cliff face. 5 to 310 meters.	**None.** 1 CNDDB occurrence was recorded within 5 miles of the Project footprint. No suitable habitat is present.	No effect
Valley Needlegrass Grassland	Valley Needlegrass Grassland	None	None	-	-	Valley & foothill grassland.		**None.** Community not present in Project footprint.	-
Viburnum ellipticum	oval-leaved viburnum	None	None	2B.3	May-June	Chaparral, cismontane woodland, lower montane coniferous forest.	215 to 1,400 meters.	**None.** No suitable habitat is present.	-
Allium peninsulare var. *franciscanum*	Franciscan onion	None	None	1B.2	May-June	Cismontane woodland, valley and foothill grassland.	Clay soils; often on serpentine; sometimes on volcanics. Dry hillsides. 5 to 320 meters.	**None.** No suitable habitat is present.	-

Notes:

California Native Plant Society (CNPS) California Rare Plant Ranks (CRPR):

1A = Plants presumed extirpated in California and either rare or extinct elsewhere 1B = Plants rare, threatened, or endangered in California and elsewhere
2A = Plants presumed extirpated in California but more common elsewhere
2B = Plants rare, threatened, or endangered in California but more common elsewhere

CNPS Threat Ranks

1 = Seriously threatened in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)
2 = Moderately threatened in California (20 percent to 80 percent occurrences threatened/moderate degree and immediacy of threat)
3 = Not very threatened in California (less than 20 percent of occurrences threatened/low degree and immediacy of threat of no current threats known)

Federal Endangered Species Act (FESA) Ratings:

Endangered: any species in danger of extinction throughout all or a significant portion of its range
Threatened: any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range
Proposed Threatened
Candidate: any species that is a candidate for federal listing

California Endangered Species Act (CESA) Ratings:

Species of Special Concern Fully Protected
Endangered: any species at risk of becoming extinct in all or a significant portion of its range
Threatened: any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range Sources: CNPS 2026, USFWS 2026a, CDFW 2026a

Table F-2 Special-Status Animal Species with Potential to Occur in the Biological Study Area

Scientific Name	Common Name	FED Status	CA Status	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Mammals							
Antrozous pallidus	pallid bat	None	None	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting.	Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low. 7 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2020, 0.05 mile south of the Project. Structures such as bridges commonly used for roosting are not present in the BSA.	-
Erethizon dorsatum	North American porcupine	None	None	Forested habitats in the Sierra Nevada, Cascade, and Coast ranges, with scattered observations from forested areas in the Transverse Ranges.	Wide variety of coniferous and mixed woodland habitat.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Myotis thysanodes	fringed myotis	None	None	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley foothill hardwood and hardwood-conifer.	Uses caves, mines, buildings or crevices for maternity colonies and roosts.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Myotis volans	long-legged myotis	None	None	Most common in woodland and forest habitats above 4,000 feet. Trees are important day roosts; caves and mines are night roosts.	Nursery colonies usually under bark or in hollow trees, but occasionally in crevices or buildings.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Myotis yumanensis	Yuma myotis	None	None	Optimal habitats are open forests and woodlands with sources of water over which to feed.	Distribution is closely tied to bodies of water. Maternity colonies in caves, mines, buildings or crevices.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Taxidea taxus	American badger	None	None	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils.	Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Birds							
Ammodramus savannarum	grasshopper sparrow	None	None	Dense grasslands on rolling hills, lowland plains, in valleys and on hillsides on lower mountain slopes.	Favors native grasslands with a mix of grasses, forbs and scattered shrubs. Loosely colonial when nesting.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Aquila chrysaetos	golden eagle	None	None	Rolling foothills, mountain areas, sage-juniper flats, and desert.	Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-

Scientific Name	Common Name	FED Status	CA Status	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Astur cooperii	Cooper's hawk	None	None	Woodland, chiefly of open, interrupted or marginal type.	Nest sites mainly in riparian growths of deciduous trees, as in canyon bottoms on river floodplains; also, live oaks.	Low (foraging); none (nesting). None. 3 CNDDB occurrence was recorded within 5 miles of the Project. Only low-quality suitable habitat is present, because vegetation communities surrounding the three BSA areas are disturbed roadside areas composed of ruderal species, annual grasslands, and sparse landscape-ornamental shrubs and trees.	-
Athene cunicularia	burrowing owl	None	Candidate Endangered	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	Very low (foraging); None (nesting). 5 CNDDB occurrence was recorded within 5 miles of the Project. Nearest occurrence was recorded in 2023, 4.5 miles south of the Project. Only low-quality suitable habitat is present.	-
Buteo regalis	ferruginous hawk	None	None	Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon and juniper habitats.	Eats mostly lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. Only low-quality suitable habitat is present.	-
Buteo swainsoni	Swainson's hawk	None	Threatened	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees.	Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. Only low-quality suitable habitat is present.	-
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Threatened	Endangered	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems.	Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	No effect
Coturnicops noveboracensis	yellow rail	None	None	Summer resident in eastern Sierra Nevada in Mono County.	Freshwater marshlands.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Cypseloides niger	black swift	None	None	Coastal belt of Santa Cruz and Monterey Counties; central and southern Sierra Nevada; San Bernardino and San Jacinto Mountains.	Breeds in small colonies on cliffs behind or adjacent to waterfalls in deep canyons and sea-bluffs above the surf; forages widely.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Elanus leucurus	white-tailed kite	None	None	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. Only low-quality suitable habitat is present.	-
Eremophila alpestris actia	California horned lark	None	None	Coastal regions, chiefly from Sonoma County to San Diego County. Also main part of San Joaquin Valley and east to foothills.	Short-grass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, alkali flats.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-

Scientific Name	Common Name	FED Status	CA Status	General Habitat	Micro-habitat	Potential to Occur in the BSA	Federal Effects Determination
Falco columbarius	merlin	None	None	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches.	Clumps of trees or windbreaks are required for roosting in open country.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures.	Nest consists of a scrape or a depression or ledge in an open site.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Haliaeetus leucocephalus	bald eagle	Delisted	Endangered	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water.	Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Melospiza melodia samuelis	San Pablo song sparrow	None	None	Resident of salt marshes along the north side of San Francisco and San Pablo Bays.	Inhabits tidal sloughs in the Salicornia marshes; nests in Grindelia bordering slough channels.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Riparia riparia	bank swallow	None	Threatened	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert.	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, and ocean to dig nesting hole.	None (foraging and nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Strix occidentalis caurina	Northern California spotted owl	Threatened	Endangered	Northern spotted owls do not build their own nests, but instead seek out naturally occurring nest sites such as broken-top trees, tree cavities, mistletoe brooms, accumulated debris, or nests built by other wildlife. Structural components of high-quality spotted owl habitat include a multilayered, multispecies canopy, large conifer overstory trees, shade-tolerant understory conifers or hardwoods.	High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris, and space under canopy.	Low (foraging); none (nesting). 1 CNDDB occurrence was recorded within 5 miles of the Project. However, numerous occurrences are recorded on the CDFW Spotted Owl Observations. The species primarily inhabit mature, structurally complex forests; however, no suitable old-growth forest habitat is present. NSO is rare in active, open agricultural land; therefore, the habitat present in the Project footprint is considered low quality, and unlikely to support activities outside of minimal foraging.	No effect
Reptiles							
Actinemys marmorata	northwestern pond turtle	Proposed Threatened	None	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation.	Need basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.3 mile from water for egg laying.	Low. 17 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2024, 0.5 mile south of the Project. A number of freshwater ponds are present nearby, but not within the Project footprint or the BSA; therefore, species potential to occur in the BSA is low.	No effect

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Chelonia mydas (Population: East Pacific DPS)	Green Sea Turtle	Threatened	None	Requires beaches for nesting, open ocean for convergence zones, and coastal areas for "benthic" feeding. Occurs in pan-tropical portions of the Atlantic, Pacific, and Indian Oceans, but can occur in higher latitudes in conjunction with above-normal sea temperatures. Nesting occurs on sandy beaches, primarily along islands and other undeveloped, less-exposed areas.	-	None. No suitable habitat is present.	No effect
Amphibians							
Ambystoma californiense pop. 3	California tiger salamander - Sonoma County DPS	Endangered	Threatened	Lives in vacant or mammal-occupied burrows throughout most of the year; in grassland, savanna, or open woodland habitats.	Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	No effect
Dicamptodon ensatus	California giant salamander	None	None	Known from wet coastal forests near streams and seeps from Mendocino County south to Monterey County, and east to Napa County.	Aquatic larvae found in cold, clear streams, occasionally in lakes and ponds. Adults known from wet forests under rocks and logs near streams and lakes.	Low. 26 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2016, 0.4 mile east of the Project. A number of freshwater ponds are present nearby, but not within the Project footprint or the BSA; therefore, species potential to occur in the BSA is low.	-
Rana boylii pop. 1	foothill yellow-legged frog - north coast DPS	None	None	Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Found in Northern Coast Ranges north of San Francisco Bay Estuary, Klamath Mountains, and the Cascade Range.	Partly shaded shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying and at least 15 weeks to attain metamorphosis.	Low. 10 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2024, 0.35 mile east of the Project. A number of freshwater ponds are present nearby, but not within Project footprint or the BSA; therefore, species potential to occur in the BSA is low. No off-pavement work is anticipated for this Project, and the Project footprint does not include stream areas that could support this species.	-

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Rana draytonii	California red-legged frog	Threatened	None	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Requires 11 to 20 weeks of permanent water for larval development. Must have access to estivation habitat.	Low to Moderate. 12 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2019, 0.7 mile west of the Project. The nearest USFWS Critical Habitat is around 2.6 miles northwest of the Project. Roadside ditches could potentially constitute upland dispersal/upland habitat in wet season. However, no aquatic breeding habitat is present in the BSA.	May affect, likely to adversely affect
Taricha rivularis	red-bellied newt	None	None	Coastal drainages from Humboldt County south to Sonoma County, inland to Lake County. Isolated population of uncertain origin in Santa Clara County.	Lives in terrestrial habitats, juveniles generally underground, adults active at surface in moist environments. Will migrate over 1 km to breed, typically in streams with moderate flow and clean, rocky substrate.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. Nearest occurrence was recorded in 2024, 3.1 miles east of the Project. However, no suitable habitat is present.	-
Fish							
Hesperoleucus venustus subditus	southern coastal roach	None	None	Found in the drainages of Tomales Bay and northern San Francisco Bay in the north, and drainages of Monterey Bay in the south.	-	None. 5 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in 2024, 0.7 mile west of the Project. However, no suitable habitat is present within the Project footprint.	-
Oncorhynchus mykiss irideus pop. 8	steelhead - central California coast DPS	Threatened	None	DPS includes all naturally spawned populations of steelhead (and their progeny) in streams from the Russian River to Aptos Creek, Santa Cruz County, California (inclusive). Also includes the drainages of San Francisco and San Pablo Bays.	-	Low. 14 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrences were recorded in two stream systems that cross the Project footprint at two locations. However, no off-pavement work is anticipated for this Project, and the Project footprint does not include stream areas that could support this species.	No effect
Crustaceans							
Caecidotea tomalensis	Tomales isopod	None	None	Inhabits localized freshwater ponds or streams with still or near-still water from San Mateo to Del Norte County.	-	None. 2 CNDDB occurrences were recorded within 5 miles of the Project. No suitable habitat is present.	-
Linderiella occidentalis	California linderiella	None	None	Seasonal pools in unplowed grasslands with old alluvial soils underlain by hardpan or in sandstone depressions.	Water in the pools has very low alkalinity, conductivity, and total dissolved solids.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-

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Syncaris pacifica	California freshwater shrimp	Endangered	Endangered	Endemic to Marin, Napa, and Sonoma Counties. Found in low-elevation, low-gradient streams where riparian cover is moderate to heavy.	Shallow pools away from main streamflow. Winter: undercut banks with exposed roots. Summer: leafy branches touching water.	None. 5 CNDDB occurrences were recorded within 5 miles of the Project. Nearest occurrence was recorded in a nearby stream system in 2024, around 0.7 mile west of the Project. However, no suitable habitat is present within the Project footprint.	No effect
Mollusks							
Gonidea angulata	western ridged mussel	None	None	Primarily creeks and rivers and less often lakes. Originally in most of state, now extirpated from Central and Southern California.	-	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Insects							
Bombus caliginosus	obscure bumble bee	None	None	Coastal areas from Santa Barbara County north to Washington state.	Food plant genera include Baccharis, Cirsium, Lupinus, Lotus, Grindelia and Phacelia.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable coastal habitat is present.	-
Bombus crotchii	Crotch's bumble bee	None	Candidate Endangered	Coastal California east to the Sierra-Cascade crest and south into Mexico.	Food plant genera include Antirrhinum, Phacelia, Clarkia, Dendromecon, Eschscholzia, and Eriogonum.	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable coastal habitat is present.	-
Bombus occidentalis	western bumble bee	None	Candidate Endangered	Once common and widespread, species has declined precipitously from central California to southern British Columbia, perhaps from disease.	-	None. 3 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	None	None	Aquatic.	-	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable aquatic habitat is present.	-
Hydroporus leechi	Leech's skyline diving beetle	None	None	Aquatic.	-	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable aquatic habitat is present.	-
Trachusa gummifera	San Francisco Bay Area leaf-cutter bee	None	None	Flight period from May to June. Documented visiting Pickeringia flowers, but examination of pollen loads on females and pollen in brood cells indicate the species is polylectic.	-	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present.	-
Danaus plexippus	Monarch Butterfly	Proposed Threatened	None	The monarch population west of the Rocky Mountain range overwinter in California along the Pacific Coast, roosting in groves of eucalyptus, Monterey pines, and Monterey cypress trees. Most overwintering sites in California are 1.5 miles from the Pacific Ocean or San Francisco Bay. Adult monarchs feed on the nectar of diverse blooming sources during breeding and migration, but require milkweed plants to lay eggs.	-	None. 1 CNDDB occurrence was recorded within 5 miles of the Project. No suitable habitat is present. The Project is outside of the species' overwintering range, and no milkweed was observed during field surveys.	No effect

Notes:

DPS = Distinct Population Segment
ESU = Evolutionarily Significant Unit

Sources: CDFW 2026a; NMFS 2026; USFWS 2026a