State Route 1 Culvert Rehabilitation Project

Initial Study with Proposed Mitigated Negative Declaration

SONOMA COUNTY, CALIFORNIA
DISTRICT 4 – SON – 1 (PM 19.25/PM 21.84)
04-1Q340/041000242

Prepared by the
State of California, Department of Transportation

October 2022

General Information about This Document

What's in this document:

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the proposed State Route (SR) 1 Culvert Rehabilitation Project (Project). Caltrans proposes to replace three culverts at different locations (Locations 1, 2, and 3) in Jenner, California, in unincorporated Sonoma County. Location 1 is near Circle Drive at Post Mile (PM) 19.25, and Locations 2 and 3 are approximately 0.2 mile north of Burke Avenue at PM 21.84.

Caltrans is the lead agency under the California Environmental Quality Act (CEQA). This IS/MND describes why Caltrans proposes the Project, how the existing environment could be affected by the Project, potential environmental impacts, and the project features and avoidance and minimization and mitigation measures.

What you should do:

- Please read this document.
- The document, maps, and Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs). In addition, the document will be made available at three locations in the vicinity of the Project:
    - Guerneville Regional Library — 14107 Armstrong Woods Road, Guerneville, California 95446
    - Occidental Library — 73 Main Street, Occidental, California 95465
    - Sonoma County Library: Central Library — 211 E Street, Santa Rosa, California 95404
- We would like to hear what you think. Send comments by the November 3, 2022, deadline to:
    - Caltrans, District 4
      Attn: Arnica MacCarthy

P.O. Box 23660, MS: 8B
Oakland, CA 94623-0660

- or Arnica.MacCarthy@dot.ca.gov

What happens next:

Per CEQA Section 15073, Caltrans will circulate the IS/MND for 30 days, from October 3 to November 2, 2022. During the 30-day public review period, the general public and responsible and trustee agencies can submit comments on this document to Caltrans. Caltrans will consider the comments and respond after the 30-day public review period.

After comments have been received from the public and reviewing agencies, Caltrans may do one of the following:

1. Grant environmental approval to the Project
2. Conduct additional environmental studies
3. Abandon the Project

If the Project is granted environmental approval and funding is obtained, Caltrans could design and construct all or part of the Project.

Alternative formats:

For individuals with sensory disabilities, the document can be made available in Braille, with large print, on audiocassette, or on computer disk by writing to the above address, emailing the department, or calling the California Relay Service at (800) 735-2929 (TTY), (800) 735-2922 (voice), or 711.

An accessible electronic copy of this IS/MND is available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Initial Study with Proposed Mitigated Negative Declaration

04-SON-1	19.25–21.84	04-1Q340
Dist.-Co.-Rte.	PM	EA

Project title:	State Route 1 Culvert Rehabilitation Project
Lead agency name and address:	California Department of Transportation 111 Grand Avenue Oakland, CA 94612
Contact person and phone number:	Arnica MacCarthy, Senior Environmental Planner (510) 506-0481
Project location:	Jenner, Sonoma County
General plan description:	Highway
Zoning:	Transportation Corridor
Other public agencies whose approval is required (e.g., permits, financial approval, participation agreements); CEQA responsible agencies are denoted with an asterisk (*):	Sonoma County Local Costal Program California Department of Fish and Wildlife Section California Transportation Commission Regional Water Quality Control Board U.S. Army Corps of Engineers U.S. Fish and Wildlife Service

The document, maps and other Project information are available to download at the District 4 Environmental Documents by County website (https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs).

Scott M. Williams
Acting Chief, Office of Environmental Analysis
California Department of Transportation, District 4

9/26/2022
Date

To obtain a copy in Braille, with large print, on computer disk, or on audiocassette, please contact the California Department of Transportation, Attn: Arnica MacCarthy, Senior Environmental Planner, Office of Environmental Analysis, 111 Grand Avenue, MS 8-B, Oakland, CA 94612; call (510) 506-0481 (voice); or use the California Relay Service at (800) 735-2929 (TTY), (800) 735-2929 (voice), or 711.

Proposed Mitigated Negative Declaration

Project Description

The California Department of Transportation (Caltrans) has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the State Route 1 Culvert Rehabilitation Project (Project). Caltrans proposes to replace three culverts at different locations (Locations 1, 2, and 3). The Project would occur along State Route (SR) 1 in Jenner, California, in unincorporated Sonoma County. Location 1 is near Circle Drive at Post Mile (PM) 19.25, and Locations 2 and 3 are approximately 0.2 mile north of Burke Avenue at PM 21.84. Additional Project information is provided in Chapter 2.

Determination

This Proposed Mitigated Negative Declaration is included to notify the general public, responsible agencies, and trustee agencies that Caltrans intends to adopt a Mitigated Negative Declaration for the Project. This Mitigated Negative Declaration is subject to change based on comments received by the general public, responsible agencies, and trustee agencies.

Caltrans has prepared this IS/MND for the Project and, pending public review, expects to determine from this study that the Project would not have a significant effect on the environment for the following reasons:

- The Project would have no impacts on agriculture and forest resources, land use and planning, mineral resources, population and housing, and recreation.
- The Project would have less than significant impacts on aesthetics, air quality, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, transportation, tribal cultural resources, utilities and service systems, and wildfire.

With the incorporation of mitigation measures for biological resources, including MM-BIO-1 and MM-BIO-2, the Project would have a less than significant impact.

- **MM-BIO-1, Impacts to ESHAs**. Temporary Project impacts to ESHAs would be mitigated at a ratio of 1:1 for temporary impacts and permanent impacts to ESHAs, and waters of the United States would be mitigated at a ratio of 3:1, in accordance with the Caltrans Coastal Act Policy. Habitat mitigation would be

purchased from a USFWS- and CDFW-approved mitigation bank prior to Project construction. Temporary Project impacts on ESHAs, mitigation ratios, and appropriate compensation would be confirmed with the Sonoma County Local Coastal Program during the Project permitting phase.

- **MM-BIO-2, Tree Replacements**. The tree removal required for the Project would be replaced or compensated via an in-lieu fee in accordance with Chart No. 1 of the Tree Protection Ordinance (Section 26-88-010(m)). Appropriate tree replacement locations or in-lieu fee compensation would be confirmed with Sonoma County prior to construction.

_____ _____

Melanie Brent Date
Deputy District Director
Environmental Planning and Engineering
California Department of Transportation, District 4

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List of Appendices

List of Abbreviated Terms

Acronyms	Definitions
AB	Assembly Bill
AMM	avoidance and minimization measure
BMP	best management practice
BSA	Biological Study Area
CAL FIRE	California Department of Forestry and Fire Protection
CAL-CET 2020	Caltrans Construction Emissions Tool 2020
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	*Code of Federal Regulations*
CGS	California giant salamander
CNDDB	California Natural Diversity Database
CRLF	California red-legged frog
CSP	corrugated steel pipe
dBA	A-weighted decibels
DI	drainage inlet
DSA	disturbed soil area
EA	Expenditure Authorization
EPA	U.S. Environmental Protection Agency

Acronyms	Definitions
ESA	environmentally sensitive area
ESHA	environmentally sensitive habitat area
FEMA	Federal Emergency Management Agency
FES	flared-end section
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas
GL	grazing land
Guidelines	*Final Sonoma State Route 1 Repair Guidelines*
HFC	hydrofluorocarbon
ID	identification number
IS/MND	Initial Study with Proposed Mitigated Negative Declaration
LEA	land extensive agriculture
L_{eq}	average hourly noise level
L_{max}	maximum noise level
LRA	Local Responsibility Area
MLD	Most Likely Descendant
MM	mitigation measure
MND	Mitigated Negative Declaration
MRZ	Mineral Resource Zone
MSB	Myrtle's silverspot butterfly
NAHC	Native American Heritage Commission

Acronyms	Definitions
NCAB	North Coast Air Basin
NESMI	Natural Environmental Study (Minimal Impacts)
NSCAPCD	Northern Sonoma County Air Pollution Control District
OPC	Ocean Protection Council
PA	*First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of Federal-Aid Highway Program in California*
PA&ED	project approval and environmental document
PDE	permanent drainage easement
PF	project feature/public facilities
PHE	permanent highway easement
PM	post mile
PQP	public/quasi-public
PQS	Professionally Qualified Staff
PRC	Public Resources Code
Project	State Route 1 Culvert Rehabilitation Project
ROW	right of way
RR	rural residential district
RSP	rock slope protection
RWQCB	Regional Water Quality Control Board
SHOPP	State Highway Operation and Protection Program

Acronyms	Definitions
SHPO	State Historic Preservation Officer
SR	State Route
SRA	State Responsibility Area
SSC	Species of Special Concern
SSP	Standard Special Provision
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCDS	temporary creek diversion system
TCE	temporary construction easement
TMP	Traffic Management Plan
UBUL	urban and built-up land
USACE	U.S. Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VIA Memo	*Visual Impact Assessment and Scenic Resources Evaluation Memorandum*
W	water
WEAT	worker environmental awareness training
WPCP	Water Pollution Control Program

Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Caltrans), as the California Environmental Quality Act (CEQA) lead agency and sponsor for the proposed State Route 1 Culvert Replacement Project (Project), has prepared this Initial Study with Proposed Mitigated Negative Declaration (IS/MND) for the Project.

The Project would occur along State Route (SR) 1 in Jenner, California, in unincorporated Sonoma County (Figures 1-1 and 1-2 in Appendix A).

The Project would be funded by the State Highway Operation and Protection Program (SHOPP) under program code 201.151 (Drainage System Restoration) for the 2023/2024 construction fiscal year. The SHOPP Program is the state's "fix-it-first" program, which funds the repair and preservation of the state highway system, safety improvements, and some highway operational improvements. The total cost estimate, including capital and support costs, is $8,100,000.

1.2 Purpose and Need

The purpose of the Project is to restore, improve, and upgrade the three culverts to reduce the potential for highway flooding and damage. The Project is needed because maintenance surveys determined that the culverts have exceeded their service life and exhibit structural deficiency due to corrosion, deformation, and/or abrasion. If not addressed, these conditions could lead to insufficient drainage across SR 1 in the Project footprint that could threaten future use of the highway.

SR 1 is an important coastal connector for local residents and businesses in unincorporated Sonoma County and the only connecting road for several coastal communities. Insufficient drainage across the highway would affect access to these rural areas for the traveling public including emergency service providers.

1.3 Existing Facilities

Within the Project vicinity, SR 1 is a two-lane undivided highway bordered by rural residential and agricultural land uses. Travel lanes are approximately 12 feet wide, with narrow shoulders ranging from less than 1 foot in width to approximately 3 feet,

and no designated pedestrian or bicycle facilities. Table 1-1 summarizes the existing conditions at Locations 1 through 3.

Table 1-1. Existing Culvert Facilities

Location	Post Mile	Existing Culvert Length (feet)	Existing Culvert Diameter (inches)	Existing Culvert Type
1	19.25	58	90	CSP
2	21.84	66	18	CSP
3	21.84	68	72	CSP

Note: CSP = corrugated steel pipe
Source: Caltrans 2019a

1.3.1 Locations

LOCATION 1

The existing culvert is 58 feet long, with pairs of vertical struts on both sides that span the length of the pipe. The paired metal struts are spaced approximately 5 feet apart (Photo 1 in Appendix B) and were installed within the CSP culvert in 1958; however, the reason for strut installation is unclear based on documents found for the that project. Because the drainage system does not convey runoff volumes that would warrant a 90-inch (7.5 feet)-diameter culvert, it is believed that the existing culvert served as a livestock crossing and potentially either served or serves as a wildlife crossing. However, a review of site records does not identify the culvert's previous or existing use as a livestock or wildlife crossing (Photo 2 in Appendix B).

LOCATIONS 2 AND 3

The culvert at Location 2 measures 18 inches in diameter, and the culvert at Location 3 measures 72 inches (6 feet) in diameter. The culvert at Location 2 was installed south of the culvert at Location 3 in 1983 and intercepts a ditch east of the northbound lane on SR 1. Drainage from the culvert at Location 2 is conveyed under SR 1 and outfalls southwest of SR 1 at approximately the same area as the Location 3 culvert. Seven steel rails span the length of the culvert at Location 3 (Photo 3 in Appendix B). These were installed as part of a rehabilitation project in 1983 to support the large bed load of SR 1.

Chapter 2 Project Description

2.1 Introduction

Caltrans proposes to replace three culverts at different locations (Locations 1, 2, and 3) along SR 1 in Jenner, California, in unincorporated Sonoma County. The scope of the Project includes replacing three culverts at different locations near Post Mile (PM) 19.25 (Location 1) and PM 21.84 (Locations 2 and 3) (Figure 1-3 in Appendix A). The Project would also include removing one tree at Location 1 and removing and replacing a drainage inlet, flared-end section, concrete spillway, concrete apron, and rock slope protection (RSP) at Locations 2 and 3. The Project footprint totals 0.29 acre and encompasses the maximum extent of construction-related activities for Locations 1, 2, and 3, including staging, as well as disturbed areas outside the Caltrans right of way (ROW).

2.2 Project Components

The following sections describe the Project components, which are also shown on Figure 1-3 in Appendix A.

2.2.1 Culvert Work

The Project would remove and replace existing culverts at Locations 1, 2, and 3, as detailed in Table 2-1 and shown on Figure 1-3 in Appendix A. Replacement culvert lengths, diameters, and types would be finalized during the final design phase.

Table 2-1. Project Components

Location	Post Mile	Existing Culvert Length (feet)	Existing Culvert Diameter (inches)	Existing Culvert Type	Proposed Culvert Length (feet)	Proposed Culvert Diameter (inches)	Proposed Culvert Type
1	19.25	58	90	CSP	58	90	CSP
2	21.84	66	18	CSP	66	24	CSP
3	21.84	68	72	CSP	68	72	CSP or Structural Plate Pipe

Source: Caltrans 2019a

LOCATION 1

The existing culvert would be replaced with a new 90-inch-diameter CSP culvert. Although the drainage system does not convey runoff volumes that would warrant a 90-inch-diameter culvert, Caltrans has chosen to replace the existing culvert at Location 1 in kind to maintain its potential use as a wildlife crossing. The bottom of the proposed culvert would be buried with approximately 2 feet of course substrate similar to the surrounding native material to facilitate its use as a potential wildlife crossing. The replacement culvert is not anticipated to require reinstallation of the metal struts.

LOCATIONS 2 AND 3

The existing 18-inch-diameter, 66-foot-long CSP culvert at Location 2 would be replaced with a 24-inch-diameter, 66-foot-long CSP culvert. The Location 2 culvert was installed south of the Location 3 culvert in 1983. The Location 2 culvert intercepts a ditch east of the northbound lane on SR 1. Drainage is conveyed under SR 1 and outfalls in approximately the same location as the Location 3 culvert, south of SR 1 (Figure 1-3 in Appendix A).

The existing culvert at Location 3 would be replaced with a CSP of the same size. The pipe would also feature a polymeric sheet coating (i.e., a thick pipe wall with a protective coating) or a structural plate pipe with thicker steel along the invert (bottom of the pipe). Seven steel rails span the length of the existing culvert (Photo 3 in Appendix B). These were installed as part of a rehabilitation project in 1983 to support the large bed load of SR 1 and would not be replaced under the Project.

2.2.2 Rock Slope Protection

LOCATION 1

RSP has not been installed on either end of the existing culvert. The Project does not propose to install RSP at Location 1.

LOCATIONS 2 AND 3

The two culverts at Locations 2 and 3 outfall onto a concrete spillway and RSP between two rural residences at 11047 and 11054 Burke Avenue (Sonoma County Assessor Parcel Numbers 099-150-023 and 099-150-006, respectively). The Project would remove the concrete spillway (Photo 4 in Appendix B) and replace it in kind with a new concrete spillway (Figure 1-3 in Appendix A).

Approximately 0.003 acre (130 square feet) of the RSP located downstream of the culverts at Locations 2 and 3 would be removed and replaced. The exact dimensions

and acreage associated with anticipated RSP removal and replacement would be determined during the final design phase. In addition, a section of RSP located approximately 15 feet downstream from the Location 3 culvert outfall would be replaced because of flows in the area observed below the surface of the existing RSP.

There is a concrete apron located east of the SR 1 northbound lane (upstream end) that would be removed and replaced with RSP.

2.2.3 Flared-End Section

LOCATION 1

Flared-end sections (FESs) have not been installed on either end of the existing culvert. The Project does not propose to install an FES at Location 1.

LOCATIONS 2 AND 3

FESs have not been installed on either end of the existing culvert at Location 2. The Project does not propose to install an FES at Location 2.

An existing FES is located east of the northbound lane of SR 1, on the Location 3 culvert. The Project would remove the existing FES and replace in kind with a new FES (Figure 1-3 in Appendix A).

2.2.4 Drainage Inlet

LOCATION 1

Drainage inlets (DIs) have not been installed within the northbound or southbound lanes of SR 1. The Project does not propose to install DIs at Location 1.

LOCATIONS 2 AND 3

The Project would remove the existing DI west of the southbound lane of SR 1 at Location 2 and replace it in kind with a new DI in the same location within the southbound shoulder (Photo 5 in Appendix B). Existing DIs have not been installed in association with the culvert at Location 3 and the Project does not propose to install DIs at this location.

2.2.5 Temporary Creek Diversion System

LOCATION 1

Replacement of the culvert at Location 1 would require a temporary creek diversion system (TCDS) to provide a dry working environment and control sediment within the creek during construction. The final design would be determined during construction, but could consist of temporary installation of a gravel-filled-bag

cofferdam or sheet pile dam. A TCDS would be installed both upstream and downstream of the culvert prior to the replacement work.

LOCATIONS 2 AND 3

It is not anticipated that a TCDS would be required for the culvert at Location 2.

Replacement of the culvert at Location 3 would require a TCDS to convey water through work areas during the construction period. The final design would be determined during construction, but be constructed similarly to the TCDS for Location 1.

2.3 Construction Methodologies

This section discusses the anticipated methodology for construction staging, schedule, equipment, utilities and ROW of the Project.

2.3.1 Construction Staging

Prior to the beginning of ground-disturbing activities at Locations 1 through 3, construction area signs, environmentally sensitive area (ESA) fencing, and construction best management practices (BMPs) would be installed. A TCDS would be installed at Locations 1 and 3.

The Project is anticipated to be constructed in three stages. The first stage would include implementing one-way alternating traffic control at all three sites to maintain use of SR 1 for the driving public during construction. This would involve restriping for temporary one-way alternating traffic control, installing temporary barrier systems and temporary crash cushions along the centerline of SR 1 and installing temporary traffic signals along the approach sections. Staging areas would be established within the closed traffic lane (i.e., within Caltrans ROW) for the overnight storage of equipment and materials. Only one lane along SR would be closed at any time.

The second stage would include clearing and grubbing vegetation prior to excavating and removing the existing culverts within the closed traffic lane. Separate work windows would apply to clearing and grubbing activities, compared to those required for excavating and culvert removal activities. Vegetation removal would not occur within the typical bird nesting season (February 1 to September 30) unless pre-construction surveys are completed for nesting birds. Excavation and culvert removal would be restricted to the dry season (between April 15 and October 31) except for when located within jurisdictional waters, which would require work to be further

restricted to between June 15 and October 31. The proposed vegetation clearing and grubbing is anticipated to occur in temporary work areas adjacent to the culverts. The Project is anticipated to require the removal of one tree at Location 1, which would occur during this phase. If work associated with excavation and culvert removal activities is not completed in a single workday and results in the creation of open trenches, these trenches would be covered with steel plates or similar until the next workday. To maintain access along SR 1 through construction, the Project would remove and replace portions of the existing culverts within the lanes closed to travel, before these areas are backfilled (potentially with a rapid-setting slurry cement) and the highway repaved. Traffic along SR 1 would then be shifted to the previously closed travel lane where the culvert replacement has been completed, and the opposing travel lane would be closed for the other part of the culvert replacement. The two culvert replacement segments would be joined together in the trench during the instillation of the second culvert replacement portion. Excess soil would be reused onsite or hauled away.

The third stage would include removing all construction-related items, including TCDS, temporary BMPs, ESA fencing, temporary barrier systems along the centerline of SR 1, temporary crash cushions, temporary traffic signals along the lane-closure areas, and construction area signs; restriping; and reopening the closed lane to the traveling public.

2.3.2 Construction Schedule

It is assumed that construction would occur at Locations 1 through 3 simultaneously. Ground-disturbing activities would be restricted to the dry season (between April 15 and October 31); however, proposed ground-disturbing activities within jurisdictional waters would be further restricted to between June 15 and October 31.

Construction is anticipated to take approximately 6 months (or one construction season) to complete. If excavation and culvert removals cannot be completed during the dry season, then construction would extend into a second construction season. The Project is anticipated to require approximately 120 working days and occur between August 2024 and February 2025. Construction activities would be limited to daytime hours.

2.3.3 Staging Areas

Staging areas for the overnight storage of equipment and materials would be limited to areas within the Caltrans ROW, such as the closed lane adjacent to the culverts that are being removed and replaced.

LOCATION 1

Lane closures and staging areas at Location 1 would extend from approximately PM 19.19 to PM 19.33. There is one residential driveway within the anticipated temporary lane-closure and staging area. Access to this driveway would be maintained by implementing the measures described in the Traffic Management Plan (TMP), as discussed in **Section 3.3.17, Transportation**, and summarized in Appendix C.

LOCATIONS 2 AND 3

Lane closures and staging areas at Locations 2 and 3 would extend from approximately PM 21.65 to PM 21.92. Multiple residences along Burke Avenue, the River's End Restaurant and Inn, and approximately three residential driveways are within the anticipated temporary lane-closure and staging area. Access to the residences and the restaurant would be managed through the TMP. In addition, a motor vehicle pullout area east of the northbound lane on SR 1 at Locations 2 and 3 would be used as a staging area.

2.3.4 Construction Equipment

Construction equipment may include, but would not be limited to, utility trucks, backhoes, excavators, dump trucks, jackhammers, saws, generators, vacuums, water trucks, street sweepers, air compressors, pavers, augers, compactors, concrete pumps, and hydraulic pumps.

2.3.5 Utilities

Utility verification (i.e., potholing) would occur during the final design phase to confirm the need for utility relocations. If needed, utility relocations would occur prior to the beginning of construction and in consultation with utility providers.

2.3.6 Right of Way

Location 1 would require two permanent drainage easements to conduct construction-related activities and maintain Project components outside the Caltrans ROW. Locations 2 and 3 would require one permanent drainage easement, one temporary construction easement, and one permanent highway easement to conduct

construction-related activities and maintain Project components. ROW acquisition is described in Table 2-2.

Table 2-2. Right of Way Acquisition

Location	Sonoma County Assessor Parcel Number	Easement Type	Approximate Size (acre)	Land Use	Zoning	Farmland	Notes
1	099-050-015	PDE	0.008	LEA	LEA	GL, W	Rural residential with miscellaneous residential
1	099-060-006	PDE	0.009	PF	PQP	GL	Grazing land
2 and 3	099-030-027	TCE	0.004	LEA	LEA	GL, UBUL	Open space
2 and 3	099-150-023	PDE	0.005	RR	RR	UBUL	Rural residential with driveway along Burke Avenue
2 and 3	099-150-023	PHE	0.047	RR	RR	UBUL	Rural residential with driveway along Burke Avenue

Source: Sonoma County 2021
Notes:

GL = grazing land
LEA = land extensive agriculture
PDE = permanent drainage easement
PF = public facilities
PHE = permanent highway easement
PQP = public/quasi-public
RR = rural residential district
TCE = temporary construction easement
UBUL = urban and built-up land
W = water

Caltrans ROW acquisition of temporary construction easements, permanent drainage easements, and permanent highway easements would be completed during the final design phase.

2.4 Permits, Licenses, Agreements, Certifications, and Approvals Needed

Table 2-3 lists the permits, licenses, agreements, certifications, and approvals that are anticipated to be required for Project construction.

Table 2-3. Required Permits, Licenses, Agreements, Certifications, and Approvals Needed

Agency	Permit	Description
U.S. Army Corps of Engineers	Section 404 Permit	Application submittal anticipated during the final design phase
North Coast Regional Water Quality Control Board	Section 401 Water Quality Certification	Application submittal anticipated during the final design phase
California Department of Fish and Wildlife	Section 1602 Lake and Streambed Alteration Agreement	Application submittal anticipated during the final design phase
U.S. Fish and Wildlife Service	Biological Opinion	Targeting to receive by December 15, 2022
Sonoma County/California Coastal Commission	Local Coastal Development Permit	Application submittal anticipated during the final design phase
California Transportation Commission	Project Approval	Targeting to receive by August 28, 2024

Chapter 3 California Environmental Quality Act Evaluation

The following discussions evaluate potential environmental impacts related to the CEQA checklist to comply with state CEQA Guidelines (Title 14 California Code of Regulations, Division 6, Chapter 3, Section 15091). The analysis considers potential environmental impacts of the Project as discussed in Chapter 2.

3.1 Environmental Factors Potentially Affected

As part of the scoping and environmental analysis carried out for the Project, the following environmental issues were considered, but no impacts were identified: agriculture and forestry, mineral resources, population and housing, and recreation.

The environmental factors noted in the following checklist could be affected by the Project. Further analysis of these environmental factors is provided in the discussion that follows.

X	Aesthetics		Agriculture and Forestry	X	Air Quality
X	Biological Resources	X	Cultural Resources	X	Energy
X	Geology/Soils	X	Greenhouse Gas Emissions	X	Hazards and Hazardous Materials
X	Hydrology/Water Quality		Land Use/Planning		Mineral Resources
X	Noise		Population/Housing	X	Public Services
	Recreation	X	Transportation/Traffic	X	Tribal Cultural Resources
X	Utilities/Service Systems	X	Wildfire	X	Mandatory Findings of Significance

3.2 Determination

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards and 2) has been addressed by mitigation measures, based on the earlier analysis, as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature:	**Date:**
Printed Name: Scott M. Williams	**For:**

3.3 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the Project. In many cases, background studies performed in connection with projects will indicate that there are no impacts to a particular resource. A "no impact" answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not National Environmental Policy Act, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features (PFs) are measures incorporated into Caltrans projects to reduce environmental impacts that can include both design components of the Project and standardized measures that are applied to all, or most of, Caltrans projects, such as BMPs and measures included in the Standard Plans and Standard Specifications or as Standard Special Provisions. Project features are an integral part of the Project. Avoidance and minimization measures (AMMs) are additional measures to avoid and/or minimize a project's environmental impacts, but are more specifically tailored to a given project's particular impacts. The project features and AMMs presented in this section have been considered prior to any significance determinations documented in this section; refer to Sections 3.3.1 through 3.3.20 and Appendix C for a detailed discussion and summary, respectively, of these project features and AMMs.

Sections 3.3.1 through 3.3.20 present the CEQA determinations under Appendix G of the CEQA Guidelines. The CEQA determinations depend on the level of potential environmental impact that would result from the Project. The level of significance determinations are defined as follows:

- 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 environmental impact that would be mitigated to a less than significant impact level.
- Potentially Significant Impact: Indicates the potential for a significant and unavoidable environmental impact.

3.3.1 Aesthetics

Except as provided in Public Resources Code 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 that would adversely affect daytime or nighttime views in the area?	Less Than Significant Impact

CEQA Significance Determinations for Aesthetics

The *Visual Impact Assessment and Scenic Resources Evaluation Memorandum* (VIA Memo) assessed visual impacts associated with the Project (Caltrans 2022c). The assessment included views from nearby properties and residences with respect to Locations 1 through 3 along SR 1, as well as the view for highway users on SR 1. A summary of the findings is presented here.

The entire length of SR 1 within Sonoma County (from PM 0 to PM 59) is listed as eligible for State Scenic Highway designation, but no portion of this highway has been officially designated (Caltrans 2022b). SR 1 does not include landscaping installed or maintained by Caltrans. The visual character throughout the corridor is highly scenic. Location 1 is adjacent to a residential tree-lined driveway located on the west side of the highway. On the opposite side of the highway is a hillside with low-growing grasses and shrubs in the foreground and mature trees scattered between in the midground and background. The dominate views at Location 1 include the mature trees that surround the corridor; views of the vegetated hills east of the locations are highly obstructed by topography and vegetation in the background.

Locations 2 and 3 are adjacent to several single-family residences located west of the highway that include a variety of landscaping and privacy walls. On the opposite side of the highway is a steep hillside with low-growing grasses and shrubs. The view in the northbound direction at Locations 2 and 3 is dominated by a vegetated hill in the foreground. Traveling southbound along SR 1 at Locations 2 and 3, the view is of a

vegetated slope, along with partially obscured views of the Russian River and Pacific Ocean.

There are no wild and scenic rivers within or near the Project footprint.

a, b, c) Less Than Significant Impact

The Project scope is limited to replacing culverts; therefore, the Project would not substantially affect a scenic vista, damage scenic resources, or degrade the existing visual character or quality of the view. The VIA Memo concluded that the Project would not adversely affect any designated scenic resources, such as a rock outcropping, tree grouping, or historic property. Project elements would not substantially affect the appearance of the SR 1 corridor and would be visually consistent with the character of the surrounding area.

Removal of a mature cypress tree at the downstream end of the culvert at Location 1 would result in minimal change to the visual environment because of the abundant tree canopy that would remain following construction. In addition, although vegetation clearing and grubbing is anticipated to occur in work areas adjacent to the culverts, existing mature vegetation and landscaping would be protected in place to the greatest extent possible. Any changes to the visual environment associated with clearing and grubbing is anticipated to be minor and only minimally visible to highway users, if at all, given the site topography and tree cover at all three culvert locations.

Most Project components, including the proposed culverts, DI, concrete spillway, concrete apron, and RSP, would experience minimal changes compared to existing conditions or would be buried and therefore are unlikely to be noticed by highway users. In addition, design and construction of the Project would comply with all applicable elements of the *Final Sonoma State Route 1 Repair Guidelines* (Guidelines) (Caltrans 2019b). Measures identified in the VIA Memo would be incorporated as PF-AES-1 through PF-AES-5 and AMM-AES-1 through AMM-AES-4 to avoid, reduce, or minimize the visual impacts of the Project and associated construction activities. As a result, replacement of the culverts at Locations 1 through 3 would not have a substantial adverse effect on a scenic vista, scenic resources, or the visual character of the area. Impacts on visual resources would be less than significant.

d) Less Than Significant Impact

Replacing the existing culverts within the Caltrans ROW would not result in new permanent sources of light or introduce reflective features that would be likely to create glare. Vegetation removal to facilitate construction access would not increase glare. In addition, nighttime construction is not anticipated. Therefore, the Project would not require directional lighting and/or temporary lighting that would affect highway users or nearby residences. This impact would be less than significant.

Project Features

Caltrans would incorporate standard project features into the Project to offset potential impacts to visual resources. PF-AES-1 through PF-AES-5 are discussed here and summarized in Appendix C.

- **PF-AES-1, Minimize Vegetation Impacts**. Impacts on vegetation would be minimized to the greatest extent possible during construction. Vegetation to remain would be protected from construction activities through the installation of temporary fencing when it is close to construction work.
- **PF-AES-2, Temporary Fencing**. Temporary fencing would be used to protect the roots and canopies of nearby trees.
- **PF-AES-3, Tree Trimming**. Where the pruning of trees is required to accommodate construction operations, pruning would be performed under the supervision of a certified arborist.
- **PF-AES-4, Staging Areas Positioning**. Construction materials and equipment would be stored in a staging area beyond direct view of the motoring public and residential properties to the extent feasible.
- **PF-AES-5, RSP Treatment**. If it is determined that RSP would be visible to highway users, the Office of Landscape Architecture would determine if aesthetic treatment of the RSP is needed. This may include staining and/or other measures.

Avoidance and Minimization Measures

AMM-AES-1 through AMM-AES-4, as discussed here and summarized in Appendix C, would avoid or minimize potential impacts to visual resources.

- **AMM-AES-1, Staging Areas Impact Reduction**. Staging areas would not be located where they require the removal of vegetation or result in ground compaction impacting tree roots.
- **AMM-AES-2, Project Design Compliance**. As the design is advanced, any modifications required to ensure compliance with the Guidelines would be implemented as the need becomes apparent.
- **AMM-AES-3, Revegetating**. Trees or vegetation removed during construction would be replaced or compensated via in-lieu fee. Consultation with the Office of Biological Science and Permits, the Office of Environmental Analysis, as well as the Office of Landscape Architecture would be necessary regarding potential tree or vegetation loss, avoidance, and replacement.
- **AMM-AES-4, Reseeding**. Disturbed areas would be revegetated with a regionally appropriate native seed mix following construction.

3.3.2 Agriculture and Forest Resources

In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forestland, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project, as well as the forest carbon measurement methodology provided in the forest protocols adopted by the California Air Resources Board. Would the project:

Question	CEQA Determination
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Less Than Significant Impact
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	Less Than Significant Impact
c) Conflict with existing zoning for, or cause rezoning of, forestland (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 forestland or conversion of forestland to non-forest use?	No Impact
e) Involve other changes in the existing environment that, because of their location or nature, could result in the conversion of Farmland to non-agricultural use or forestland to non-forest use?	No Impact

CEQA Significance Determinations for Agriculture and Forest Resources

This analysis of potential impacts on agriculture and forest resources is based on a review of the following: California Important Farmland Maps, produced by the California Department of Conservation (2019); Sonoma County Williamson Act Land Contacts Map (Sonoma County 2016); and the Sonoma County General Plan 2020 Land Use Map (Sonoma County 2016). The Project is located along previously disturbed portions of SR 1 and the Project footprint is not located within farmland, forestland, or timberland (California Department of Conservation 2019a).

According to the Farmland Mapping and Monitoring Program's *Farmland Finder*, parcels around Locations 1 through 3 are identified as primarily grazing land, other lands, and urban and built-up land (California Department of Conservation 2019a). No parcels within or adjacent to the Project footprint are under a Williamson Act

contract. In addition, no forestland or timberland is in or near the Project footprint (California Department of Conservation 2016).

a, b) Less Than Significant Impact

The Project would occur primarily within a Caltrans ROW (i.e., SR 1), with two minor (less than 0.1-acre) PDEs and one minor TCE within properties currently zoned for land extensive agriculture. All three of the affected properties are used for grazing land or rural residential uses. The Project would not convert farmland to a non-agricultural use and the Project would not affect any areas under a Williamson Act contract. The Project would acquire a Local Coastal Development Permit and is anticipated to be consistent with the policies set forth in the Sonoma County Local Coastal Plan (Sonoma County 2001) and California Coastal Act relating to the preservation of agricultural lands within the California Coastal Zone. There would be less than significant impact.

c, d) No Impact

The Project would replace existing culverts along SR 1. The area within the Project footprint is not within areas zoned for timberland or forestland (Sonoma County 2022). The Project would not result in the loss or conversion of forestland. There would be no impact.

e) No Impact

The Project would not involve other changes in the existing environment that would result in the conversion of forestland or agricultural land. There would be no impact.

3.3.3 Air Quality

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

Question	CEQA Determination
a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant Impact
b) Result in a cumulatively considerable net increase in any criteria pollutant for which the project region is in non-attainment status under an applicable federal or state ambient air quality standard?	Less Than Significant Impact
c) Expose sensitive receptors to substantial pollutant concentrations?	Less Than Significant Impact
d) Result in other emissions (such as those leading to odors) that would adversely affect a substantial number of people?	Less Than Significant Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR AIR QUALITY

The following analysis is based on a greenhouse gas (GHG) emissions memorandum prepared for the Project by Caltrans (Caltrans 2021b).

The Project footprint is in the northern portion of Sonoma County, which is within the North Coast Air Basin (NCAB) and within the jurisdiction of the Northern Sonoma County Air Pollution Control District (NSCAPCD). The NCAB comprises all of Del Norte, Humboldt, Mendocino, and Trinity counties and the north portion of Sonoma County. NSCAPCD jurisdiction covers the northern and coastal regions of Sonoma County, including all or portions of 21 Sonoma County communities. The NSCAPCD's goal is to regulate the emissions of air pollution from "stationary sources" that have the potential to be detrimental to the health, safety, and welfare of the public. Sonoma County and the Project footprint are designated as nonattainment for ozone and particulate matter, with aerodynamic diameter equal to or less than 2.5 micrometers ($PM_{2.5}$) under National Ambient Air Quality Standards (EPA 2022), and in nonattainment for ozone, PM2.5, and particulate matter, with aerodynamic diameter equal to or less than 10 micrometers (PM_{10}) under California Ambient Air Quality Standards (CARB 2019a).

Construction-related GHG emissions were calculated using Caltrans Construction Emissions Tool 2020 (CAL-CET 2020), version 1.0. For the Project construction duration of 6 months, it was estimated that the total amount of carbon dioxide (CO_2) produced by Project construction would be approximately 223 tons (Caltrans 2021b).

a, b) Less Than Significant Impact

The Project is required to comply with Caltrans Standard Specification 14-9, Air Quality, which requires compliance with air pollution rules, regulations, ordinances, and statutes for Locations 1 through 3. No long-term impacts to air quality would occur.

Construction of the Project would result in the temporary increase in emissions in the Project footprint. Construction-generated air pollutants are expected to be short-term and include emissions resulting from material processing by onsite construction equipment, workers commuting to and from the Project, and traffic delays due to construction. The emissions would be produced at different rates throughout the Project depending on the construction-related activities occurring in the three phases of construction. Potential impacts on air quality (e.g., a violation of air quality standards, exposure of sensitive receptors to criteria pollutants, creation of odors during construction) or considerable net increase in any criteria pollutant for which the Project region is in nonattainment status under an applicable federal or state ambient air quality standard are not anticipated, based on the scope and duration of the Project. In addition, the Project would implement PF-AQ-1 through PF-AQ-4, as discussed here and summarized in Appendix C, to further reduce potential air quality impact.

With the implementation of PF-AQ-1 through PF-AQ-4, construction emissions associated with the Project would not conflict with or obstruct implementation of an applicable air quality plan. In addition, with the incorporation of the project features, the Project would not result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is in nonattainment status under an applicable federal or state ambient air quality standard. There would be less than significant impact.

c, d) Less Than Significant Impact

The closest receptor to the Project footprint is a private residence approximately 24 feet from the culverts at Locations 2 and 3. Because construction activities would be short-term, emissions resulting from construction activities would not expose sensitive receptors to substantial pollutant concentrations or result in other emissions that would adversely affect a substantial number of people. PF-AQ-1 through PF-AQ-3 would reduce and minimize temporary impacts to nearby residences to the extent feasible. This impact would be less than significant.

Project Features

Caltrans would incorporate standard project features into the Project to offset potential impacts to air quality. PF-AQ-1 through PF-AQ-4 are discussed here and summarized in Appendix C.

- **PF-AQ-1, 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. Any material stockpiled during construction would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

- **PF-AQ-2, Construction Vehicles and Equipment.** Construction vehicles and equipment would be maintained and tuned in accordance with manufacturer's specifications. In addition, solar-powered traffic control lights would be used if feasible.

- **PF-AQ-3, 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-AQ-4, Recycle Waste and Materials.** If practicable, nonhazardous waste and excess material would be recycled. If recycling is not practicable, dispose of material according to applicable regulations.

3.3.4 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 with Mitigation Incorporated
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less Than Significant Impact with Mitigation Incorporated
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marshes, vernal pools, coastal areas, etc.) through direct removal, filling, hydrological interruption, or other means?	Less Than Significant 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?	Less Than Significant Impact with Mitigation Incorporated
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

A *Natural Environmental Study (Minimal Impacts)* (NESMI) was prepared by the Caltrans Office of Biological Sciences and Permits to evaluate the effects of the Project on biological resources, including sensitive plants and wildlife species (Caltrans 2022e). A summary of the findings is presented here. Additional information is summarized from the *Biological Assessment for California Red-Legged Frog and Myrtle Silverspot Butterfly* (Caltrans 2022f).

The Biological Study Area (BSA) is approximately 0.176 acre and includes the Project footprint at Locations 1 through 3, as well as additional areas immediately adjacent to the culvert footprint. Roadside areas within the BSA are dominated by ruderal species, developed and landscaped areas, and coastal scrub located along either side of SR 1.

The Project footprint is located in the Coastal Hills-Santa Rosa Plain subsection of the Northern California Coast ecological section and in the Bodega Coastal Hills of

the Central California Foothills and Coastal Mountains ecoregion. Location 1 is near the edge of a bluff overlooking the Russian River about 1.5 miles south from its mouth at the Pacific Ocean. Locations 2 and 3 are near the bottom of a steep draw that discharges north of the mouth of the Russian River. The land surrounding the Project footprint is mostly rural residential with steep, undeveloped hills on the north side of the highway at Locations 2 and 3.

Locations 1 through 3 are located within the California Coastal Zone. Vegetation communities within the BSA include coyote brush (*Baccharis pilularis*) scrub, Monterey Cypress (*Hesperocyparis macrocarpa*) Woodland, arroyo willow (*Salix lasiolepis*) thickets, and forested areas. Wetland features were identified at Location 1, and riparian habitat has been identified at Locations 2 and 3. Locations 2 and 3 include an intermittent stream with riparian vegetation. No designated sensitive vegetation communities are anticipated to be affected by Project activities.

A regional list of special-status wildlife and plant species was compiled using databases to evaluate the potential impacts that could occur to sensitive biological resources as a result of the Project. The database search included the California Natural Diversity Database (CNDDB), the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation Database, species list from the National Marine Fisheries Service, the California Native Plant Society Inventory of Rare and Endangered Plants of California, the National Wetlands Inventory, and soils information from the Natural Resources Conservation Service. The special-status plant and animal species compiled from these data sources were evaluated to determine their potential to occur within the BSA.

a) Less Than Significant Impact with Mitigation Incorporated

Special-status species habitats were evaluated for their potential to occur in the BSA. Suitable habitats for special-status species are considered environmentally sensitive habitat areas (ESHAs). This analysis provides approximate impacts to ESHAs within the BSA and these impacts, and mitigation measures (MMs) would be refined in consultation with the Sonoma County Local Coastal Program during the permitting phase of the Project. Special-status species that are potentially present within or adjacent to the BSAs are discussed here.

Animals

California Red-Legged Frog: California red-legged frog (CRLF; *Rana draytonii*) is a federally threatened species and a California Species of Special Concern (SSC). The

Project is located outside of critical habitat and any designated recovery units and suitable breeding habitat was not identified within the BSA because of the lack of sufficient water depth and duration. However, the BSA has the potential to provide upland dispersal habitat in the wet season due to its proximity to the lower reaches of the perennial streams of Sheephouse Creek and Willow Creek, which have assumed potential to serve as breeding areas for CRLF. The Project is located within the current known range of CRLF, and there are four CNDDB occurrences within a 1- to 3-mile radius of the BSA.

Project impacts include loss of individuals during vegetation removal, removal of existing culverts and installation of new culverts with inlet and outlet features, and construction of RSP. Construction activities within the unpaved areas of the Project footprint have a potential for CRLF encounters within upland dispersal habitat. These activities would temporarily impact 0.0108 acre (470 square feet) of aquatic non-breeding habitat at Location 1 and 0.016 acre (700 square feet) of aquatic non-breeding habitat at each of Locations 2 and 3. However, impacts to suitable upland/dispersal habitat during and immediately after construction are not anticipated to affect the upland dispersal habitat's long-term suitability to support CRLF should they occur in the BSA in the future. Potential impacts to CRLF and its associated upland ESHA habitat would be mitigated through the implementation of MM-BIO-1.

In addition, implementation of PF-BIO-1 through PF-BIO-4, PF-HYD-1 and PF-HYD-2, and AMM-BIO-1 through AMM-BIO-8, presented in this section and summarized in Appendix C, would avoid or minimize potential impacts to CRLF and its habitat. The impact would be less than significant with mitigation incorporated.

California Giant Salamander: The California giant salamander (CGS; *Dicamptodon ensatus*) is listed as a California SSC. They are year-round residents of north-central California, from southern Santa Cruz County to extreme southern Mendocino and Lake Counties.

Seven CNDDB occurrences were identified between 1 and 5 miles from the Project footprint mostly in permanent streams flowing into the Russian River. Locations 1 through 3 provide potential dispersal habitat for CGS, while the stream at Location 3 is anticipated to provide suitable aquatic habitat when surveyed in January 2022 and thus could potentially support breeding CGS.

Project impacts on CGS include the potential loss of individuals during vegetation removal, removal of the existing culvert, installation of the new culvert with inlets

and outlets features, and construction of the RSP. Construction activities within the unpaved areas of the Project footprint have a potential for CGS encounters within upland dispersal habitat. These activities would temporarily impact approximately 0.016 (700 square feet) acre of potential aquatic habitat at Locations 3. However, impacts to suitable upland/dispersal habitat during and immediately after construction are not anticipated to affect the habitat's long-term suitability to support CGS in the future, should the species occur in the BSA.

Implementation of PF-BIO-1 through PF-BIO-4, PF-HYD-1 and PF-HYD-2, and AMM-BIO-1 through AMM-BIO-8, as presented here and summarized in Appendix C, would reduce, avoid, or minimize impacts to CGS and its habitat. The impact would be less than significant.

Myrtle's Silverspot Butterfly: The Myrtle's silverspot butterfly (MSB; *Speyeria zerene myrtleae*) was listed as a federally endangered species on June 22, 1992. There is no federally designated critical habitat for this species. Suitable habitat for *Viola adunca*, the larval host plant for MSB, occurs within portions of the Project footprint, including coyote brush coastal scrub observed during the vegetation characterization surveys although the larval host plant was not observed during rare plant surveys. The Project footprint may also contain foraging habitat for adult butterflies.

Occurrence of MSB in the Project footprint is not expected but cannot be ruled out with complete certainty. Negative findings of the habitat assessment surveys for *Viola adunca* within the BSA indicate that the Project footprint does not contain suitable breeding habitat for MSB. However, suitable foraging habitat may still be present. Therefore, Project impacts on MSB include potential loss of individuals during vegetation removal, removal of the existing culvert, installation of the new culvert with inlets and outlet features, and construction of RSP. Construction activities within the unpaved areas of the Project footprint have a potential for MSB encounters within foraging habitat.

Pre-construction spring surveys for the larval host plant would be conducted prior to construction to further assess the presence or absence of the species within the Project footprint. In addition, implementation of PF-BIO-1 through PF-BIO-4 and AMM-BIO-1 through AMM-BIO-9, as summarized in Appendix C, would avoid, reduce, or minimize impacts to MSB and its habitat. The impact would be less than significant.

Plants

No special-status plant species were observed within the BSA during the 2022 rare plant surveys and therefore, were not considered further. *Viola adunca,* while not a special-status plant species, has been identified as the host plant for larva of the federally endangered MSB and mitigation measures for the species are detailed in AMM-BIO-9 at the end of this section and in Appendix C.

The Project would have less than significant impacts either directly or through habitat modification, on any identified candidate, sensitive, or special-status species with implementation of project features, AMMs, and mitigation measures as presented here and summarized in Appendix C.

b) Less Than Significant Impact with Mitigation Incorporated

Upstream of the culvert at Location 3 is an intermittent stream surrounded by riparian habitat comprised of arroyo willow (*Salix lapiolepsis*) thickets.

Project activities would include vegetation clearing and grubbing; however, there is no anticipated loss of permanent riparian habitat. Implementation of PF-BIO-1 through PF-BIO-4 and AMM-BIO-1 through AMM-BIO-8, as presented in this section and summarized in Appendix C and PF-HYD-1 through and PF-HYD-2, as presented in Section 3.3.10, would reduce, avoid, or minimize impacts to riparian habitat or environmentally sensitive natural communities. Temporary impacts to riparian ESHA habitat are anticipated and would be mitigated through the implementation of MM-BIO-1. The impact would be less than significant with mitigation incorporated.

c) Less Than Significant Impact

The area surrounding the inlet of the culvert at Location 1 appears to have been dug out to install the existing culvert under SR-1. The culvert at Location 1 conveys water from uphill as well as roadway runoff to an unlined ditch north of the highway. Location 1 was determined to contain aquatic resources, including a wetland and a ditch, which are anticipated to be regulated by the RWQCB and the California Coastal Commission. The aquatic resources at Location 1 may also be subject to Clean Water Act jurisdiction. Locations 2 and 3 were determined to contain a U.S. Army Corps of Engineers (USACE) jurisdictional stream (i.e., waters of the United States) and culverted waters. Table 3.3-1 summarizes the aquatic features within the BSA.

Table 3.3-1. Potential Aquatic Resources within the BSA

Feature ID	Project Location	Feature Type	Area (square feet/ acres)
W-1	Location 1	Wetland	309 / 0.0070
D-1	Location 1	Waters (ditch)	160 / 0.0036
R-1	Locations 2 and 3	Waters	688 / 0.0157
CW-1	Locations 2 and 3	Waters (culverted)	13 / 0.0003
Total			1,170 / 0.0266

Note: ID = identification number

The Project would temporarily impact 0.027 acre (1,170 square feet) of waters of the United States during vegetation removal, removal of the existing culvert, installation of the new culvert with inlets and outlets features, and construction of RSP within the Project footprint. At Locations 2 and 3, the Project would permanently impact approximately 0.003 acre of the waters of the United States; however, these impacts would very small and result from the removal and replacement of the existing RSP. RSP removal and replacement within waters of the United States is not anticipated to substantially changes the function of the stream, however, consultation with USACE would be required. Caltrans would submit a request subject to Clean Water Act Section 404 Nationwide Permit #14. Water Quality Certification under Section 401 of the Clean Water Act would also be required from the North Coast RWQCB.

It is not anticipated that the Project would have significant impact on aquatic resources. The area of potential impact to aquatic features is considered relatively minor (0.027 acre) and AMMs and standard project features would be implemented to help avoid and minimize potential impacts. Therefore, the impact would be less than significant

d) <u>No Impact</u>

The Project would not construct barriers to wildlife movement or interfere with established native resident or migratory wildlife corridors. The Project would maintain the size of the culvert at Location 1, which has served as a livestock crossing in the past, and would bury the invert of the replaced culvert to promote its use as a wildlife crossing. The Project is not anticipated to affect any habitat's long-term suitability to support wildlife corridors or other animal movements in the future. The existing and proposed design of the culverts are not considered to be barriers to fish

passage and would not create barriers to fish movement. The Project would not impede the use of native wildlife nursery sites. There would be no impact.

e) Less Than Significant Impact with Mitigation Incorporated

Minor tree and vegetation trimming around Locations 1 through 3 in the BSA would not substantially conflict with existing local policies or ordinances. One tree, a Monterey Cypress at Location 1, would be removed as a result of the Project. The tree is not native to the area and was planted along the existing artificial drainage and culvert at Location 1. According to the Sonoma County Tree Protection Ordinance (Section 26-88-010(m)) this tree is protected and would require replacement or compensated via in-lieu fees under MM-BIO-2. Therefore, the impact would be less than significant with the incorporation of mitigation measures.

f) No Impact

The Project would not conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.

Project Features

Caltrans would incorporate standard project features into the Project to offset potential impacts to biological resources. PF-BIO-1 through PF-BIO-4 are discussed here and summarized in Appendix C.

- **PF-BIO-1, Delineated Construction Areas, Environmentally Sensitive Areas, and Equipment and Material Storage Sites:** A biological monitor would delineate construction areas, environmentally sensitive areas (ESAs), and equipment materials and storage sites. ESAs are areas containing sensitive habitats adjacent to or within the Project footprints, in which ground-disturbing activities are not allowed. ESAs would be delineated on the final Project plans. A biological monitor would be onsite to direct the installation of high-visibility, orange ESA fencing to prevent the encroachment of construction personnel, materials, and equipment into ESAs during construction-related activities, as needed. Construction equipment and materials would be stored outside of designated ESAs, as specified by a biological monitor, to avoid construction-related impacts to natural communities. At the discretion of the biological monitor, ESA fencing would be removed when construction is no longer active in the delineated construction areas.

- **PF-BIO-2, Construction Site Management Practices:** Construction BMPs for biological resources may include, but are not limited to, the following:
    - Construction vehicles would be restricted to SR 1 and delineated construction areas. Construction vehicles would observe a 15-mile-per-hour speed limit within the Project footprints, except when on the SR 1 travel lanes.
    - Construction access, staging, storage, and parking areas would be delineated outside of designated ESAs within the Project footprints and limited to the minimum area necessary to construct the Project.
    - All construction-related waste, such as wrappers, cans, bottles, and food scraps, would be disposed of or recycled in closed containers and removed at least once daily from the Project footprint.
    - All pets would be prohibited from entering the Project footprint.
    - Firearms would be prohibited within the Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.
- **PF-BIO-3, Pre-construction Surveys for Nesting Birds:** If clearing and grubbing vegetation should occur between February 1 and September 30, a biological monitor would conduct pre-construction surveys for nesting birds within the ground areas to be disturbed prior to beginning construction-related activities. The survey would include a perimeter buffer of approximately 50 feet for non-game migratory birds and approximately 300 feet for raptors. All nest avoidance requirements of the Migratory Bird Treaty Act, USFWS, and California Department of Fish and Wildlife (CDFW) codes would be observed. If an active nest is found, an appropriate protection buffer would be established until the young fledge. USFWS and/or CDFW would be contacted if a special-status species is discovered within the Project footprints within 24 hours.
- **PF-BIO-4, Noxious Weeds:** Noxious weeds would be controlled in accordance with Caltrans Highway Design Manual Topic 110.5, Control of Noxious Weeds—Exotic and Invasive Species, and Executive Order 13112, Invasive Species, and by methods approved by a Caltrans-approved landscape architect.

Avoidance and Minimization Measures

AMM-BIO-1 through AMM-BIO-9, as discussed here and summarized in Appendix C, would avoid or minimize impacts to biological resources.

- **AMM-BIO-1, Proper Use of Erosion Control Devices**. To prevent CRLF from becoming entangled or trapped in erosion control devices, plastic monofilament netting (i.e., erosion control matting) or similar material would not be used within the Project footprints. Acceptable substitutes would include coconut coir matting or tackified hydroseeding compounds.

- **AMM-BIO-2, Pre-construction Surveys for California Red-legged Frog:** Pre-construction surveys would be conducted by a USFWS-approved biological monitor. Visual surveys would be conducted immediately prior to the beginning of ground-disturbing activities. Suitable breeding and dispersal habitat within the Project footprints includes refugia habitat (such as in or under shrubs, downed logs, small woody debris, and burrows), which would be inspected. If an individual is observed, it would be evaluated and relocated in accordance with the observation and handling protocols outlined in AMM-BIO-5. Fossorial mammal burrows would be inspected for signs of CRLF usage to the maximum extent practicable. If it is determined that a fossorial mammal burrow may be occupied by a frog, the burrow would be flagged for avoidance.

- **AMM-BIO-3, Conduct Biological Monitoring:** A USFWS-approved biological monitor would be present onsite during construction-related activities, including vegetation clearing and grubbing, when special-status species have the highest likelihood of being harmed or harassed. If, at any point, any listed species is discovered within the Project footprint, the USFWS-approved biological monitor may stop work if deemed necessary and a 50-foot-wide work restriction buffer would be applied until the animal moves out of the area or is relocated out of harm's way. For state-listed species, CDFW would be contacted on how best to proceed. Alternately, other action may be taken as authorized in Project permits.

- **AMM-BIO-4, Conduct Biological Monitoring for California Red-legged Frog**. A USFWS-approved biological monitor would be present onsite during construction-related activities that have the potential to result in take of CRLF to monitor for the species. The USFWS-approved biological monitor may stop work if deemed necessary for any reason to protect CRLF and would advise the resident engineer or designee on how to proceed accordingly.

- **AMM-BIO-5, Discovery of a Special-Status Species**. The biological monitor would have the authority to halt work through coordination with the resident engineer if a special-status species is discovered in an active construction area or

might otherwise be at risk. The resident engineer would ensure construction-related activities remain suspended in any construction area where the biological monitor has determined that the special-status species could be harmed. For CRLF, work may resume when the individual moves away from the construction area of its own volition or is moved out of harm's way by a USFWS-approved biological monitor. For other federally and state-listed species, USFWS and/or CDFW would be contacted on how to proceed before work is allowed to resume.

- **AMM-BIO-6, Timing of Construction:** Ground-disturbing activities would be restricted to the dry season (i.e., between April 15 and October 31), and work within jurisdictional waters would be further restricted to between June 15 and October 31, when CRLF are anticipated to be estivating in moist refuges and not dispersing through the BSA.

  Construction-related activities would not occur during rain events or within 24 hours following a rain event. Prior to resuming construction-related activities, a USFWS-approved biological monitor would inspect the construction area and construction vehicles, equipment, and materials stored onsite for the presence of CRLF. Any discovered CRLF would be allowed to move away from the construction area of their own volition or would be moved by the USFWS-approved biological monitor.

- **AMM-BIO-7, Construction Materials Storage:** For onsite storage of construction materials that could provide shelter for CRLF, an open-top trailer would be used to elevate the construction materials above the ground surface to reduce the potential for any CRLF individuals to climb into the construction materials.

- **AMM-BIO-8, Worker Environmental Awareness Training:** Construction personnel would attend a mandatory worker environmental awareness training (WEAT) delivered by a qualified biologist prior to beginning construction. WEAT would provide information on special-status species and the construction personnel's responsibility in reducing, avoiding, or minimizing impacts to special-status species during construction. At a minimum, WEAT would include the following:

  - A description of special-status species and migratory birds that may occur in the BSA

- A discussion of the potential occurrence of special-status species within the Project footprints
- An explanation of the status of special-status species and protection measures under federal and state laws and regulations
- The description of avoidance or minimization measures to be implemented to conserve special-status species and their habitats as they relate to the Project

Information on special-status species would be provided to construction personnel, along with compliance reminders and relevant contact information. Documentation of WEAT and sign-in sheets would be kept on file and available on request.

- **AMM-BIO-9, Conduct Pre-construction Survey for *Viola adunca*.** A pre-construction surveys for *Viola adunca* would be conducted by a USFWS-approved biological monitor. Visual surveys would be conducted in the early spring, prior to construction, referencing phenology trends observed at Fort Ross or other nearby reference populations. If *Viola adunca* are found in the work area, they would be flagged for avoidance. Negative findings for *Viola adunca* within the BSA would indicate that the footprint does not contain suitable breeding habitat for MSB.

Mitigation Measures

Caltrans would implement mitigation measures as part of the Project to reduce potential impacts to biological resources. MM-BIO-1 and MM-BIO-2 are discussed here and summarized in Appendix C.

- **MM-BIO-1, Impacts to ESHAs.** Temporary Project impacts to ESHAs would be mitigated at a ratio of 1:1 for temporary impacts and permanent impacts to ESHAs, and waters of the United States would be mitigated at a ratio of 3:1, in accordance with the Caltrans Coastal Act Policy. Habitat mitigation would be purchased from a USFWS- and CDFW-approved mitigation bank prior to Project construction. Temporary Project impacts on ESHAs, mitigation ratios, and appropriate compensation would be confirmed with the Sonoma County Local Coastal Program during the Project permitting phase.

- **MM-BIO-2, Tree Replacements.** The tree removal required for the Project would be replaced or compensated via an in-lieu fee in accordance with Chart No. 1 of the Tree Protection Ordinance (Section 26-88-010(m)). Appropriate tree replacement locations or in-lieu fee compensation would be confirmed with Sonoma County prior to construction.

3.3.5 Cultural Resources

Would the project:

Question	CEQA Determination
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	No impact
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	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

Caltrans prepared a memorandum on cultural compliance for the Project (Caltrans 2022a). The investigation was prepared by a Caltrans archaeologist and architectural historian who are Professionally Qualified Staff (PQS) for prehistoric archaeology and architectural history. The investigation was conducted in accordance with Stipulation VII, Screened Undertakings, of the *First Amended Programmatic Agreement Among the Federal Highway Administration, the Advisory Council on Historic Preservation, the California State Historic Preservation Officer and the California Department of Transportation Regarding Compliance with Section 106 of the National Historic Preservation Act as it Pertains to the Administration of Federal-Aid Highway Program in California* (PA) (January 2014). A summary of the findings is presented here.

Caltrans PQS staff contacted the Native American Heritage Commission (NAHC) by email on September 21, 2021, and asked to conduct a search of its Sacred Lands File for any Native American cultural resources within the Project footprint. The NAHC responded on November 2, 2021, stating that no sacred sites were identified within the Project footprint.

Formal notification under Assembly Bill (AB) 52 began with emailing Native American consultation initiation letters on January 14, 2021, to individuals of the following tribes:

- Cloverdale Rancheria of Pomo Indians
- Dry Creek Rancheria Band of Pomo Indians
- Federated Indians of Graton Rancheria
- Guidiville Rancheria
- Kashia Band of Pomo Indians of the Stewarts Point Rancheria
- Lytton Rancheria

- Middletown Rancheria
- Mishewal-Wappo Tribe of Alexander Valley
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Pinoleville Pomo Nation
- Robinson Rancheria Band of Pomo Indians

To date, no responses have been received.

Caltrans' PQS staff conducted a literature review of the Caltrans Cultural Resource Database and found that no archaeological sites were recorded at Locations 1 through 3 as of March 2018. The residence near the TCE at Locations 2 and 3 was built in 1977 and is most likely exempt from consideration as a potential historic property. No other potentially eligible built-environment properties would be affected.

The Office of Cultural Resource Studies determined that the Project has no potential to affect cultural resources and therefore is exempt from further review pursuant to PA Stipulation VII, Screened Undertakings. The undertaking has been screened and is exempt under Class 12 (i.e., minor operational improvements, such as culvert replacements and median or side-ditch paving) of Attachment 2, Screened Undertakings, in the PA.

The Project would occur along the Pacific Coast on SR 1 near the mouth of the Russian River. The culvert located at Location 1 is adjacent to undeveloped portions of Sonoma Coast State Park to the south and a private residence to the north. Private property surrounds Locations 2 and 3. A residence is immediately adjacent to one of the TCEs. Soils at Locations 1 through 3 are pre-Quaternary or older Pleistocene and are not sensitive for the presence of buried archaeological deposits. Some sensitive soils dating to the Medieval Climatic Anomaly are located along the Russian River, just south of Locations 2 and 3; however, Project activities would not extend to those areas.

a) <u>No Impact</u>

According to the findings of the Section 106 Screening Memo (Caltrans 2022a), no historical resources pursuant to Section 15064.5 are present in the Project footprint. Therefore, there would be no impact.

b) Less Than Significant Impact

Cultural resource investigations conducted for the Project did not identify any archaeological resources, new or previously recorded, in the Project footprint. Soils at Locations 1 through 3 are pre-Quaternary or older Pleistocene and not sensitive with respect to buried archaeological deposits. However, the potential always exists for previously unrecorded buried cultural resources to be encountered during construction. Pursuant to PF-CUL-1, if previously unrecorded cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find. Therefore, impacts would be less than significant.

c) Less Than Significant Impact

As discussed under item b), the Project footprint is not considered sensitive for buried resources, including human remains. However, the potential always exists for buried cultural resources, including human remains, to be encountered during ground earthmoving activity. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find, pursuant to PF-CUL-1.

If human remains are discovered, California Health and Safety Code Section 7050.5 states that further disturbances and activities must stop in any area or nearby area suspected to overlie the remains and the county coroner must be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner would notify the NAHC, which would then notify the Most Likely Descendant (MLD). At that time, the person who discovered the remains would contact the Caltrans District 4 PQS, which would work with the MLD to ensure respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed, as applicable, pursuant to PF-CUL-2. Therefore, impacts would be less than significant.

Project Features

Caltrans would incorporate standard project features into the Project to offset unanticipated impacts to cultural resources. PF-CUL-1 and PF-CUL-2 are discussed here and summarized in Appendix C.

- **PF-CUL-1, Unanticipated Archaeological Discovery**. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

- **PF-CUL-2, Unanticipated Human Remains Discovery**. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie the remains and the county coroner would be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner would notify the NAHC, which would then notify the MLD. At that time, the person who discovered the remains would contact the Environmental Senior and PQS, which would work with the MLD to ensure respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 would be followed, as applicable.

3.3.6 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

This energy use analysis is based on the energy analysis report prepared for the Project in September 2021 (Caltrans 2021d). To assess energy consumed by construction equipment and vehicles associated with the Project, CAL-CET 2020, version 1.0, was used to quantify CO_2 emissions. U.S. Environmental Protection Agency (EPA) GHG equivalency formulas were used to convert CO_2 to fuel volume. Project energy usage in terms of diesel fuel consumption is estimated to be approximately 20,233 gallons.

a) Less Than Significant Impact

During Project construction, diesel and gasoline would be consumed during the operation of heavy-duty equipment, material deliveries, and debris hauling. Energy use associated with Project construction is estimated to result in the short-term consumption of approximately 20,233 gallons of diesel for powered equipment. This temporary demand would cease once construction is complete; no changes in operational energy use are anticipated. Moreover, the Project would not be a new permanent source of energy demand. The demand for fuel would have no noticeable effect on peak or baseline demands for energy. In addition, PF-AQ-3 and PF-AQ-4 (Section 3.3.3) would minimize energy consumption from construction activities associated with the Project. Therefore, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. This impact would be less than significant.

b) No Impact

The Project would replace deteriorating culverts to prevent potential damage to the highway. It would not obstruct state or local plans for renewable energy or energy efficiency. Therefore, there would be no impact on state or local plans for renewable energy or energy efficiency.

3.3.7 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.	Less Than Significant Impact
(ii) Strong seismic ground shaking?	Less Than Significant Impact
(iii) Seismically related ground failure, including liquefaction?	Less Than Significant Impact
(iv) Landslides?	Less Than Significant Impact
b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant Impact
c) Be located on a geologic unit or soil that is unstable, or would become unstable as a result of the project, and potentially result in on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse?	Less Than Significant 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 that would be incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant Impact

CEQA Significance Determinations for Geology and Soils

Caltrans investigated impacts on geology and soils from the Project and prepared the *Preliminary Geotechnical Design Report for Drainage System Restoration* (Caltrans 2021e). A summary of the findings is presented here.

Site reconnaissance was conducted at the Project footprint on December 14, 2021. Geotechnical subsurface exploration and laboratory testing were not performed for the Project. The following discussion presents results from the site reconnaissance and other desktop research conducted that analyzes the geology and soils in consideration of the Project.

GEOLOGY

Fault Rupture

Locations 1 through 3 are not within an Alquist-Priolo Earthquake Fault Zone or 1,000 feet from any Holocene or younger fault lines (California Department of Conservation 2015). Therefore, the culverts are not considered susceptible to surface fault rupture hazards.

Seismic Hazards

The U.S. Geological Survey Quaternary Faults and Folds Database (USGS 2022) and California Geological Survey Fault Activity Map of California (California Department of Conservation 2015) do not indicate the presence of any faults crossing SR 1 within the Project footprint. The Holocene-active San Andreas fault is approximately 1.25 miles west of Locations 1 through 3. The Project footprint is susceptible to strong earthquake-induced ground motions during the design life of the planned improvements. However, site-specific ground motion data are not necessary for the design of the new culverts or other drainage improvements.

Liquefaction Potential

Surficial soils are predominantly clayey and overlie Franciscan Complex bedrock. There is no potential for liquefaction in the Project footprint.

Subsurface Conditions

Based on geologic mapping of the site vicinity, subsurface conditions below existing fills should consist of low-plasticity mixtures of sand and gravel, with moderately weathered meta-sandstone present locally. Existing fills and trench backfills are anticipated to be composed of low-plasticity sandy clay and clayey sand. Based on this, as well as the planned scope of work, subsurface materials are not anticipated to affect constructability.

Geologic Conditions

Location 1 consists of SR 1 gravelly engineered fill, culvert engineered fill, thin clay soils, and Pleistocene-age clayey fine sand of the Marine Terrace Deposits (Helley et al. 1979) situated atop the Jurassic-Cretaceous Heavens Beach Mélange/Mélange of Wren Rock of the Franciscan Complex. Based on the field observations, field conditions are considered generally consistent with the recent geologic mapping by Raymond (2019).

Locations 2 and 3 are underlain by thin soils, SR 1 gravelly engineered fill, culvert engineered fill, and the Franciscan Complex “Wacke of Jenner Headlands”

(Raymond 2019). The wacke is described as a blocky, internally fractured meta-sandstone bedrock unit.

Paleontology

Geologic units with potential to contain paleontological resources occur in the Project footprint. These include Quaternary deposits older than 10,000 years and the Franciscan Complex, based on their depositional environments and ages. Locations 1 through 3 are within a mapped Quaternary geological unit and the proposed depth of the culverted replacement activities at Locations 1 through 3 are anticipated to affect native or undisturbed soils that may be sensitive for paleontological resources.

a(i), (ii), (iii), (iv) Less Than Significant Impact

Because active faults occur within the Project vicinity, surface rupture in the Project footprint is possible. However, Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects; therefore, each culvert would be designed to meet Caltrans' stringent seismic requirements. The Project would be designed according to Caltrans seismic standards, thereby minimizing the risk to construction workers or the traveling public from strong seismic ground shaking. Although surface rupture has the potential to occur, this design would ensure that the culverts would be fabricated, installed, and maintained to ensure an appropriate level of safety. Because of the potential for strong ground shaking in the Project vicinity, seismically related ground failure has the potential to occur in the Project footprint. However, as noted for surface rupture, Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects, and each culvert would be designed to meet Caltrans' stringent seismic requirements. Surficial soils are predominantly clayey and overlie Franciscan Complex bedrock. There is no potential for liquefaction in the Project footprint. This impact would be less than significant.

As previously discussed, the Project footprint is not within an Alquist-Priolo Earthquake Fault Zone, an area with expansive soils, or susceptible to liquefaction and landslides. Erosion control features would be installed as required to prevent surficial erosion and sedimentation at the new drainage systems. This impact would also be less than significant.

b) Less Than Significant Impact

Ground-disturbing earthwork associated with clearing and construction activities in the Project footprint has the potential to increase soil erosion rates and loss of topsoil.

As described **in Section 3.3.10, Hydrology and Water Quality,** BMPs related to erosion control and implementation from the Stormwater Pollution Prevention Plan (SWPPP) would minimize erosion and the loss of topsoil. With implementation of the BMPs identified for hydrology and water quality, less than significant impacts are anticipated for the Project.

c) Less Than Significant Impact

As previously discussed, subsurface conditions below existing fill areas consist of low-plasticity mixtures of sand and gravel, with moderately weathered meta-sandstone present locally. Because the potential exists for strong ground shaking in the area, the culverts have the potential to be located on an unstable geologic or soil unit. However, as noted under the surface rupture discussion, Caltrans' Office of Earthquake Engineering is responsible for assessing the seismic hazard for Caltrans projects, and each culvert would be designed to meet Caltrans' stringent seismic requirements. This impact would be less than significant.

d) No Impact

No expansive soils are present within the Project footprint. There would be no impact.

e) No Impact

No septic tanks or alternative wastewater delivery systems would be constructed or affected by the Project; therefore, no impact would occur.

f) Less Than Significant Impact

As previously described, Locations 1 through 3 are within geologic units with the potential to contain paleontological resources. These geologic units include Quaternary deposits that are more than 10,000 years old, as well as the Franciscan Complex, based on their depositional environments and ages. Because Locations 1 through 3 are within a mapped Quaternary geological unit and the proposed depth of the culverted replacement activities is anticipated to affect native or undisturbed soils, the potential exists for the unanticipated discovery of paleontological resources during Project construction. This potential for the unanticipated discovery of paleontological resources would be addressed through AMM-GEO-1. A less than significant impact is anticipated.

Avoidance and Minimization Measures

Caltrans would incorporate the following AMM into the Project to avoid and minimize impacts to geology and soils. AMM-GEO-1 is discussed here and summarized in Appendix C.

- **AMM-GEO-1, Unanticipated Paleontological Resources**. As outlined in Standard Specifications 14-7.03, Discovery of Unanticipated Paleontological Resources, if unanticipated paleontological resources are discovered at the job site in the native Pleistocene terrace deposits, the following measures would be implemented:

  1. Stop all work within a 60-foot radius of the discovery.
  2. Secure the area.
  3. Notify the Project engineer.

  The Caltrans Department of Geology Services would investigate the discovery and modify the dimensions of the secured area if needed. Paleontological resources would not be moved or taken from the job site until appropriate coordination and consultation has been completed. Work within the radius of discovery would not resume until authorized by a qualified paleontologist.

3.3.8 Greenhouse Gas Emissions

Would the project:

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

CEQA SIGNIFICANCE DETERMINATIONS FOR GREENHOUSE GAS EMISSIONS

Caltrans prepared a *Construction Greenhouse Gas Emissions Analysis* memorandum on GHG emissions for the Project (Caltrans 2021b).

Construction-generated GHG emissions include emissions resulting from material processing, the use of onsite construction equipment, workers commuting to and from the Project footprint, and traffic delays from construction. Emissions would be produced at different levels throughout the Project, depending on the activities involved during various phases of construction. The GHG analysis prepared for this Project focused on vehicle-emitted GHGs. CO_2 is the single most important GHG pollutant because of its abundance compared with other vehicle-emitted GHGs, including methane (CH_4), nitrous oxide (N_20), hydrofluorocarbon (HFCs), and black carbon.

Construction-related GHG emissions were calculated using CAL-CET 2020, version 1.0. For the Project construction duration of 6 months, it was estimated that the total amount of CO_2 produced due to construction would be approximately 223 tons. Table 3.3-2 summarizes the construction-related emissions, including total carbon dioxide equivalent (CO_2e) emissions.

Table 3.3-2. Summary of Construction-Related GHG Emissions

CO_2 (tons)	CH_4 (tons)	N_2O (tons)	CO_2e (metric tons)
223	0.01	0.01	206

Source: Caltrans 2021b

a, b) Less Than Significant Impact

Construction GHG emissions would result from the use of onsite construction equipment, workers commuting to and from the Project, and traffic delays resulting from temporary lane closures during construction. The emissions would be produced at different rates throughout construction. Implementation of Caltrans Standard Specifications, such as complying with air pollution rules, regulations, ordinances, and statutes that apply to work performed under contract and the use of PF-AQ-1 through PF-AQ-4, would reduce GHG emissions from construction.

The Project would comply with applicable state and regional GHG reduction policies and implement emission control measures to minimize and reduce GHG emissions. The Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. The Project would not increase operational capacity or affect travel demand or travel patterns that would contribute to a long-term increase in GHG emissions. The amount of GHG generated during construction of the Project would be minor and therefore, the Project would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHG. As such, impacts related to GHG emissions would be less than significant.

3.3.9 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 involve handling hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	No Impact
d) Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the Project site?	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?	Less Than Significant Impact

CEQA Significance Determinations for Hazards and Hazardous Materials

This section describes hazards and hazardous materials and impacts that have the potential to result from construction and operation of the Project. Information in this section is based on consultation with Caltrans' Hazardous Waste Branch (Wilson, pers. comm. 2022).

To identify potential hazardous sites within the Project footprint, government databases of such sites and facilities were reviewed. The search of the California Department of Toxic Substances Control EnviroStor database and the State Water Resources Control Board (SWRCB) GeoTracker database covered the Project footprint and a 0.25-mile buffer (Department of Toxic Substances Control 2022). No sites were identified within 0.25 mile of Locations 1 through 3.

Because of the Project's remote location, the potential for encountering a significant accumulation of aerially deposited lead in the unpaved shoulder areas is low. The lack

of commercial/industrial development in the area also greatly reduces the potential for encountering offsite sources of hazardous waste. As a result, the Caltrans Hazardous Waste Branch determined that subsurface investigations and site surveys were not necessary for the Project (Wilson, pers. comm. 2022). No metal beam guardrails are proposed for removal or alteration, and treated wood waste is not a concern for the Project. In addition, naturally occurring asbestos is not identified as present at Locations 1 through 3 (California Department of Conservation 2019b).

According to the California Department of Forestry and Fire Protection (CAL FIRE), Locations 1 through 3 are within a State Responsibility Area (SRA) and areas designated as moderate and high fire hazard severity areas.

a) Less Than Significant Impact

Caltrans' Hazardous Waste Branch determined that the potential for encountering an accumulation of aerially deposited lead in the unpaved shoulder areas is negligible. Database searches did not identify hazardous waste sites within the Project limits, and the presence of treated wood waste and naturally occurring asbestos would not be anticipated. However, during construction, the potential exists for an accidental release of the types of fuels, lubricants, and solvents that are typically used, handled, and stored by contractors. Caltrans Standard Specifications Section 13-4, Job Site Management, would be implemented to prevent and control spills or leaks from construction equipment or from the storage of fuels, lubricants, and solvents. All aspects of the Project associated with the removal, storage, transport, and disposal of hazardous material would be done in accordance with the California Health and Safety Code. The handling and management of hazardous materials would comply with Caltrans Standard Specification Section 14-11, Hazardous Waste and Contamination, which outlines procedures for handling, storing, and disposing of hazardous waste. Therefore, the impact would be less than significant.

b) Less Than Significant Impact

As described under checklist item a, Project construction has the potential to result in accidental spills or a release of chemicals. Construction activities would adhere to the 2018 Caltrans Standard Specifications for construction spill prevention (e.g., Standard Specifications Section 13-2, Water Pollution Control Program). Therefore, the impact would be less than significant.

c) No Impact

There are no existing or proposed schools within 0.25 mile of Locations 1 through 3. There would be no impact.

d) No Impact

Locations 1 through 3 are not on the Government Code Section 65962.5 list (Cortese List) and therefore would not create a significant hazard to the public or the environment. There would be no impact.

e) No Impact

The Project is not within an airport land use plan or within 2 miles of a public airport or public use airport. There would be no impact.

f) Less Than Significant Impact

Within the Project footprint, SR 1 is identified as an emergency response and evacuation route for the community of Jenner and surrounding communities. During construction, delays are anticipated along SR 1 due to temporary lane closures for construction and staging activities. However, with use of one-way alternating traffic control, access along SR 1 would be maintained throughout construction at Locations 1 through 3. A TMP (PF-TRF-1) would be developed during the design phase that would identify potential traffic delays, traffic management features, and alternative routes for traffic at the Project footprint. Emergency response times are not anticipated to change during construction because the TMP would provide priority to emergency vehicles during one-way alternating traffic control. In addition, the TMP is anticipated to provide instructions for response or evacuation in the event of an emergency at or adjacent to the Project footprint. Therefore, the Project would not conflict with emergency response or evacuation plans. The impact would be less than significant.

g) Less Than Significant Impact

All three culverts are located in designated moderate to high fire hazard severity zones (CAL FIRE 2007). The Project has the potential to expose workers to fire risks and hazards during construction. Construction of the Project also has the potential to increase the wildfire risk in the Project footprint through the introduction of construction materials to areas with existing high fire hazard risks and the potential to

delay emergency response through the implementation of temporary lane closures. The Monte Rio Fire Protection District and CAL FIRE have jurisdiction of structural fires and wildfires in the area, respectively. The nearest Monte Rio Fire Protection District station to the Project area is located at 9870 Main Street, Monte Rio, California, approximately 10 miles east of the Project area. The nearest CAL FIRE station to the Project area is located at 12604 River Road, Guerneville, California, approximately 30 miles east of the Project. During the construction period, standard precautions to prevent fire incidents (e.g., requiring the use of spark arrestors) would be implemented in accordance with the California Division of Occupational Safety and Health fire protection and prevention guidance. In addition, a TMP (PF-TRF-1) would be developed in coordination with CAL FIRE and the local Monte Rio Fire Protection District prior to construction that would identify potential traffic delays and alternative routes. The TMP would maintain emergency access throughout construction and minimize potential delays to the extent feasible. Therefore, the Project would not introduce new or modified permanent features that would expose people or structures to a risk of loss, injury, or death involving wildland fires. Therefore, impacts would be less than significant.

3.3.10 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 water or groundwater quality?	Less than Significant Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such the project may impede sustainable groundwater management of the basin?	No Impact
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that 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 the would result in flooding on- or off-site;	No Impact
(iii) create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	No Impact
(iv) impede or redirect floodflows?	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?	Less than Significant Impact

CEQA Significance Determinations for Hydrology and Water Quality

Caltrans investigated potential impacts on hydrology and water quality from the Project and prepared a *Water Quality Study Report* (Caltrans 2022d). This section summarizes the findings.

The Project is within the jurisdiction of the North Coast RWQCB (Region 1), which is responsible for implementation and enforcement of state laws and regulations concerning water quality. The Project is within the Russian River Hydrologic Unit. In addition, Locations 1 through 3 are located within the Lower Russian River Watershed and the Willow Creek-Russian River Sub-Watershed. All three culverts convey water across SR 1 to existing water features that ultimately discharge into the Lower Russian River; however, none of these existing water features are listed as beneficial water bodies. The Lower Russian River is listed on the EPA-approved California's 2014-2016 List of Impaired Waters, and pollutants of concern are aluminum, indicator bacteria, manganese, dissolved oxygen, phosphorus,

sedimentation/siltation, specific conductivity, and temperature (California Water Board 2018).

Per Federal Emergency Management Agency (FEMA) mapping, the Project footprint is within a Zone X floodplain. Zone X indicates areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood (FEMA 2017).

The Project footprint is located within the California Coastal Zone and therefore requires an analysis of future sea level rise as provided in the California Ocean Protection Council's (OPC) *State of California Sea-Level Rise Guidance, 2018 Update* (OPC 2018). The OPC provides the most current accepted estimates for sea level rise in California. Projected sea level rise based on the OPC guidance at the nearest tide gauge (San Francisco), assuming a high emissions scenario to end of century (i.e., the year 2100) with a 1-in-20 (5 percent) probability, indicates that sea level rise at the culvert locations would rise to meet or exceed 4.4 feet above current conditions. To analyze how this projected sea level rise would have impact the Project footprint, the National Oceanic and Atmospheric Administration Sea Level Rise viewer (https://coast.noaa.gov/digitalcoast/tools/slr.html) and Point Blue's Our Coast Our Future viewer (https://data.pointblue.org/apps/ocof/cms/index.php?page=flood-map) were used to review SR 1 at the Project footprint.

a) Less Than Significant Impact

Culvert replacement activities would result in 0.12 acre of disturbed soil area (DSA). Staging and construction activities may result in potential temporary water quality impacts associated with the release of fluids, construction debris, sediment, and litter beyond the Project footprint. Potential discharge of sediment and cement during construction has the potential to result in temporary impacts to receiving waterbodies including increased turbidity and pH. However, the implementation of construction BMPs including PF-WQ-1 through PF-WQ-3 have the potential to reduce temporary water quality impacts from Project-related construction. Therefore, the Project would not substantially degrade surface water or groundwater quality. In addition, the DSA does not exceed 1 acre and therefore the Project is not subject to the Construction General Permit and is not expected to result in long-term impacts to water quality standards or exceed waste discharge requirements. Impacts would be less than significant.

b) No Impact

Neither construction nor operation of the Project would use groundwater. The Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded. There would be no impact.

c(i) Less Than Significant Impact

Temporary impacts on water quality have the potential to occur at DSAs during construction. The Project is anticipated to result in 0.12 acre of DSA, which, when within and adjacent to drainages, have the potential to result in the transport of sediment and other pollutants to adjacent wetland and riparian areas. However, implementation of construction BMPs (PF-WQ-1 through PF-WQ-3) would reduce temporary water quality impacts from construction. Therefore, the Project would not result in substantial erosion or siltation. Impacts would be less than significant.

c(ii) No Impact

The Project would result in the addition of minimal new impervious surfaces (0.08 acre). Therefore, the Project would not substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite. There would be no impact.

c(iii) No Impact

Similar to item c.ii, the Project would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. There would be no impact.

c(iv) No Impact

The Project would not impede or redirect flood flows. There would be no impact.

d) No Impact

The Project is not within the 100-year floodplain as defined by FEMA flood hazard mapping. The Project footprint is not in a flood hazard, seiche, or tsunami zone. The Project is located within the California Coastal Zone and requires a sea level rise analysis; however, after reviewing the entire SR 1 corridor using the NOAA Sea Level Rise viewer and Point Blue's Our Coast Our Future viewer tools described

above, Caltrans determined that the Project is not in an area subject to sea level rise at the conservatively estimated highest potential sea level increase to end of century. There would be no impact.

e) Less Than Significant Impact

With the implementation of PF-WQ-1 through PF-WQ-4, the Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Impacts would be less than significant.

Project Features

Caltrans would incorporate standard project features into the Project to offset potential impacts to hydrology and water quality. PF-WQ-1 through PF-WQ-4 are discussed here and summarized in Appendix C.

- **PF-WQ-1, Construction and Implementation of Best Management Practices:** Erosion control BMPs would be included in the final Project plans, and Standard Special Provisions (SSPs) would be included in the final construction package to comply with the conditions of the Caltrans National Pollutant Discharge Elimination System (NPDES) permit. The Caltrans BMP Guidance Handbook (Caltrans 2017) would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and non-stormwater discharges. Construction BMPs for stormwater may include, but are not limited to, the following:
    - Construction tracking control practices
    - Job site management
    - Sediment control (fiber rolls and silt fencing)
    - Waste management and materials pollution control
    - Materials stockpile management
    - Dust and wind erosion controls
    - DI protection
    - Non-stormwater management
    - Water quality monitoring
    - Maintaining and tuning construction vehicles and equipment approximately 50 feet away from Yellow Creek and Schell Creek

  - Locating designated fueling areas approximately 50 feet from downslope drainage facilities, as well as Yellow Creek and Schell Creek

- **PF-WQ-2, Water Pollution Control Program.** A Water Pollution Control Program (WPCP) would be prepared by the contractor and approved by Caltrans, pursuant to the 2018 Caltrans Standard Specifications Section 13, Water Pollution Control, and the Caltrans WPCP Preparation Manual (Caltrans 2021a). The WPCP would be implemented prior to the beginning of construction.

- **PF-WQ-3, Temporary Stream Diversions**. Temporary stream diversions would be used when necessary for culvert replacements. If needed, stream diversions would be determined during the design phase of the Project.

- **PF-WQ-4, Permanent BMPs**. To minimize and avoid potential post-construction impacts on water quality, the Project would consider design pollution prevention BMPs. Design pollution prevention BMPs would be used to minimize runoff, maximize infiltration, maximize vegetation (depending on the location), and reduce erosion.

3.3.11 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

This analysis of potential impacts on land use and planning is based on a review of the Sonoma County Local Coastal Plan (Sonoma County 2001) and the *Sonoma County General Plan 2020* (Sonoma County 2016).

This Project footprint is near the small coastal town of Jenner in Sonoma County. Jenner is on the Pacific coast near the mouth of the Russian River, immediately north of Sonoma Coast State Beach. A few small businesses cater to tourists who visit the area. The Project footprint is within the Coastal Zone (Sonoma County 2016).

a, b) No Impact

The Project involves replacement of existing culverts at Locations 1 through 3 along SR 1. It would not introduce a new road or barrier between communities. There would be no impact.

The Project would replace three existing culverts within a Caltrans ROW. The Project would not affect or conflict with existing land use designations, zoning, or implementation of the Sonoma County General Plan 2020. The Project would occur primarily within a Caltrans ROW (i.e., SR 1), with two minor (less than 0.1-acre) PDEs and three minor TCEs within properties currently zoned for land extensive agriculture, public/quasi-public, and rural residential uses. All of the affected properties are currently used for grazing, rural residential, or open space uses. The Project is located within the California Coastal Zone, would acquire a Local Coastal Development Permit, and is anticipated to be consistent with the policies set forth in the Sonoma County Local Coastal Plan (Sonoma County 2001) and California Coastal Act. There would be no impact.

3.3.12 Mineral Resources

Would the project:

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

CEQA Significance Determinations for Mineral Resources

This section describes mineral resources that have the potential for impact from construction and operation of the Project. According to the Sonoma County General Plan 2020 Open Space and Resources Conservation Element, current mineral extraction within the county consists almost exclusively of the extraction and processing of rock, sand, and earth products for use in construction and landscaping. In addition, eight sites in Marin County have been designated by the state as having significant mineral resources for the North Bay region (Sonoma County 2016). An additional four sites have been designated by Marin County as permitted mineral resource sites. Sonoma County has adopted the Aggregate Resources Management Plan to set forth the state-mandated mineral management policy for the county in resource areas classified as Mineral Resource Zone (MRZ) 2. Per the MRZ Map for Concrete Aggregate in Sonoma County (Miller and Busch 2013), the Project footprint is in MRZ-3, indicating that no known significant resource deposits are present.

a) No Impact

No important mineral deposits, MRZs, or existing or previous mines are in the Project footprint. Because there are no mineral resources or resource protection zones in the Project footprint there would be no loss of availability of known mineral resources. Furthermore, because construction and operation of the Project would not affect access to a known aggregate resource area, there would be no impact on the availability of a known mineral resource that would be of value to the region and the residents of the state.

b) No Impact

The Project footprint is not near mineral resource areas identified in Sonoma County General Plan 2020 or within a known aggregate MRZ (Sonoma County 2016; Miller and Busch 2013). Therefore, construction and operation of the Project would not affect the availability of locally important mineral resources. There would be no impact.

3.3.13 Noise

Would the project:

Question	CEQA Determination
a) Generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	Less Than Significant Impact
b) Generate excessive ground-borne vibration or ground-borne 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 2 miles of a public airport or public use airport, expose people residing or working in the Project site to excessive noise levels?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR NOISE

CEQA requires a strictly baseline versus build analysis to assess whether a project would result in a noise impact. If a project is determined to cause a significant noise impact under CEQA, mitigation measures must be incorporated into the project unless those measures are not feasible.

This section describes the potential impacts that have the potential to result from noise associated with construction and operation of the Project. Information in this section is based on the construction noise analysis conducted by Caltrans for the Project (Caltrans 2021c).

Caltrans, under 23 *Code of Federal Regulations* (CFR) 772, provides procedures for preparing operational and construction noise studies as well as evaluating noise abatement considered for federal and federal-aid highway projects. The Project was determined not to be a Type I project per 23 CFR 772. A Type I Project is defined in 23 CFR 772 as a proposed federal or federal-aid highway project for the construction of a highway at a new location or the physical alteration of an existing highway that significantly changes either the horizontal or vertical alignment or increases the number of through-traffic lanes. Because the Project is not determined to be a Type I project and would not increase highway capacity, a noise study is not required, and noise abatement need not be considered.

To determine if construction noise would be an issue, sensitive receptors near construction activity areas were analyzed. The closest receptor to the construction

area is a private residence approximately 24 feet from the proposed construction activities at Locations 2 and 3.

Activities involving the removal of existing culverts and installation of the new CSP culvert with RSP were analyzed. Construction equipment for this second stage of construction as described in Chapter 2, Project Description, was input into the Roadway Construction Noise Model to estimate the maximum (L_{max}) and the average hourly (L_{eq}) noise levels at the residence (Caltrans 2021c).

The 2018 Caltrans Standard Specifications, Section 14-8.02, Noise Control, state that L_{max} is not to exceed 86 A-weighted decibels (dBA) at 50 feet from the job site between 9 p.m. and 6 a.m. Based on the results of noise modeling, the noisiest operation would be installation of the new CSP culvert with RSP, which would produce a L_{max} of 91.4 dBA at a distance of 24 feet (i.e., distance to residence).

Figure 3-1 in Appendix A lists noise levels for common activities, allowing readers to compare the actual and predicted highway noise levels discussed in this section with common activities.

a) Less Than Significant Impact

Noise from construction activities may intermittently dominate the environment in the immediate area of Locations 1 through 3. Noise levels generated during construction would be a function of the individual pieces of construction equipment, the type and amount of equipment operating at any given time, the timing and duration of construction activities, and the proximity of nearby sensitive receptors. Construction noise would result primarily from operation of heavy construction equipment, the arrival and departure of heavy-duty trucks, and installation of CSP.

The residence near the proposed construction activities at Locations 2 and 3 may be exposed to elevated noise levels during construction. Construction equipment has the potential to generate noise levels of up to 91.4 dBA at a distance of 24 feet. However, Standard Specifications Section 14-8.02 limits Lmax to 86 dBA (maximum) at 50 feet from the job site between the hours of 9 p.m. and 6 a.m. Sensitive receptors would be exposed to elevated noise levels only for short periods of time (i.e., days or weeks), depending upon the work required at Locations 1 through 3. Controlling and monitoring noise in compliance with Standard Specifications Section 14-8.02 and through the implementation of PF-NOI-1 and PF-NOI-2 would reduce the temporary impacts of construction noise in excess of applicable Caltrans standards.

Culvert replacement would not affect operations on SR 1. Traffic volumes, composition, and speeds would remain the same. The Project would not result in operational noise or generate noise levels in excess of thresholds. The impact would be less than significant.

b) Less Than Significant Impact

Construction activities, particularly removal of the existing culverts, would have the potential to generate ground-borne vibration. However, no substantial vibration-inducing construction activities, such as pile-driving or blasting, are proposed for the Project. Given the intermittent and temporary nature of construction activities, assuming that standard construction equipment and techniques would be employed, Project construction would not expose persons to or generate excessive ground-borne vibration or ground-borne noise. This impact would be less than significant.

c) No Impact

There are no airports or airstrips within the Project vicinity. There would be no impact.

Project Features

Caltrans would incorporate standard project features into the Project to offset impacts to noise. PF-NOI-1 and PF-NOI-2 are discussed here and summarized in Appendix C.

- **PF-NOI-1, Public Outreach.** Public outreach would be required before Project construction and throughout the Project construction to update residents, businesses, and others with upcoming activities and time frame of Project. Public outreach may entail sending notices to nearby residents, notifying the city, and posting a notice on the Project website.

- **PF-NOI-2, Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:

    - The Contract Specifications should include a Special Provision requiring Noise Monitoring and Noise Control Measures.
    - Measures in the Special Provision may include a temporary noise barrier and other methods (i.e. scheduling), including the following:

- Equip an internal combustion engine with a manufacturer-recommended muffler that is in good condition. Do not operate an internal combustion engine within the Project footprint without the appropriate muffler.
- Do not idle construction equipment unnecessarily.
- Maximize the distance between stationary noise-generating construction equipment, such as air compressors and portable power generators, and noise-sensitive receptors.
- Locate staging and storage areas away from residential areas.
- Consider reducing impact of detours.
- Use quieter alternative methods of equipment.
- If feasible, use solar or electricity as power source instead of diesel generators.
- Ensure all construction equipment conforms to Section 14-8. 02, Noise Control, of the latest Caltrans Standard Specifications.

3.3.14 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

This section describes population and housing and the potential impacts that have the potential to result from construction and operation of the Project. Information in this section is based on the 2020 U.S. Census, Sonoma County General Plan 2020, and Sonoma County Zoning Ordinance.

The Project footprint is within unincorporated Sonoma County, with the nearest community being Jenner, California. According to the U.S. Census Bureau, the population of Sonoma County grew from 474,047 in 2010 to 499,772 in 2019 (U.S. Census Bureau 2022). For this same period, the population of Jenner shrunk from 99 to 30 (U.S. Census Bureau 2022). Therefore, Jenner had a far lower growth rate than the rest of Sonoma County over the last decade.

As of 2020, there were approximately 204,742 housing units in Sonoma County but only 161 homes in Jenner (U.S. Census Bureau 2020). In addition, more than half of the homes in Jenner were vacant. The number of housing units was only marginally larger in 2020 compared with a decade earlier, with Sonoma County reporting 204,572 housing units in 2010 and Jenner reporting 158 (U.S. Census Bureau 2020). Construction of the Project would occur primarily within an existing ROW along SR 1 and would not result in the displacement of people or housing in the county or in Jenner.

a) No Impact

The Project would occur primarily within an existing ROW along SR 1 and would not include the construction of any residential or commercial structures. Implementation of the Project would not result in a new or different type of use for the area or increase the operational capacity, nor would the Project create or improve infrastructure that serves the site or region that has the potential to lead to substantial

unplanned population growth. The Project is consistent with Sonoma County General Plan 2020 and no modifications to land use and development policies would be necessary to implement the Project components. Therefore, the Project would have no impact.

b) No Impact

There are no people or housing units within the Project footprint. Although residences are present along SR 1, construction of the Project would take place primarily within an existing ROW and would not displace adjacent people or housing. Because people and housing would not be displaced by the Project and the construction of replacement housing would not be needed, there would be no impact.

3.3.15 Public Services

Question	CEQA Determination
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the 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:	
Fire protection?	Less Than Significant Impact
Police protection?	Less Than Significant Impact
Schools?	Less Than Significant Impact
Parks?	Less Than Significant Impact
Other public facilities?	Less Than Significant Impact

CEQA Significance Determinations for Public Services

This section describes public services and potential impacts on such resources that have the potential to result from construction and operation of the Project. Fire protection districts provide services through revenues from property taxes. However, in rural communities such as Jenner, volunteer companies provide local services. Sonoma County contracts with various municipal and district fire agencies to provide backup services to the volunteer companies. The Monte Rio Fire Protection District encompasses 45 square miles, extending from Northwood to Jenner in Sonoma County, including the coastal area from Shell Beach to Myers Grade Road (Monte Rio Fire Protection District 2022).

Police protection is provided at the Project footprint by the Sonoma County Sheriff's Office. The closest substation is the Guerneville Substation, which is the base for patrol services provided in the western portion of Sonoma County (Sonoma County Sheriff's Office 2020).

There are no schools in the Project vicinity. The closest school to the Project footprint is Monte Rio Union School, located 6 miles east of the Project footprint.

The Project footprint is adjacent to the Sonoma Coast State Park, which is located along SR 1 at Location 1. The park offers public beach access from approximately 4 miles north of Jenner to 17 miles south to Bodega Head.

a) Less Than Significant Impact

The Project would replace culverts but would not result in an increased demand for fire or police protection. The Project has the potential to result in temporary traffic delays during construction that would potentially affect the deployment of emergency services. However, the Project would include preparation and implementation of a TMP (PF-TRF-1) that would follow Caltrans' TMP guidelines and include coordination with emergency service providers to ensure that emergency routes are not impeded and that delays at the proposed lane closures are minimized to the extent feasible.

As a culvert replacement project, the Project would not result in an increased demand for space in schools, parks, or public facilities in the area. Any changes to park access as a result of the proposed lane closures needed for construction would be temporary, and implementation of the TMP would maintain access to the park throughout construction. Impacts on public services are less than significant.

3.3.16 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 facilities would occur or be accelerated?	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	No Impact

CEQA SIGNIFICANCE DETERMINATIONS FOR RECREATION

This section describes recreation and potential impacts on such resources that have the potential to result from construction and operation of the Project. SR 1 in Sonoma County, as well as Marin County, is a 110-mile segment of a world-famous north–south highway that runs along the Pacific coastline of California. SR 1 is known for its scenic views and natural features. In Sonoma County, as well as Marin County, SR 1 passes through or near a variety of federal and state parklands as well as recreational areas that are frequented by tourists.

Location 1 is adjacent to Sonoma Coast State Park. The park comprises several beaches that are separated by rock bluffs and headlands. It spans an area of 17 miles, from Bodega Head to Vista Trail, which is approximately 4 miles north of Jenner.

The portion of SR 1 within the Project limits is a two-lane divided highway with no lanes for high-occupancy vehicles. The highway is part of the Pacific Coast Bicycle Route. Segments of it either run parallel to the California Coastal Trail or are part of the trail.

a, b) No Impact

The Project would not increase demand for recreational facilities. Furthermore, it would not result in the deterioration of parks or recreational facilities. The Project would not include the construction of park or recreational facilities or the expansion of such facilities. Any changes to park access as a result of the proposed lane closures needed for construction would be temporary, and implementation of the TMP would maintain access to the park throughout construction. Therefore, there would be no impact.

3.3.17 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) Would the project conflict with 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

This section describes mineral resources and potential impacts on such resources that have the potential to result from construction and operation of the Project. In the Project footprint, SR 1 consists of two 11-foot-wide lanes and 0- to 1-foot shoulders. The Project would maintain all existing nonstandard roadway features, including design speed, lane and shoulder width, curve radius, cross slope, super-elevation rate, maximum grade, and sight distance.

Average daily traffic near the Project limits was 3,400 in 2018; it is projected to increase to 4,200 after 20 years (from construction year). Truck volumes are projected to remain steady at 5.8 percent from 2018 to 2065.

According to the 2014 Sonoma Countywide Bicycle and Pedestrian Master Plan, Locations 1 through 3 are along proposed Class II bicycle routes (Sonoma County Transportation Authority 2014).

Mendocino Transit Authority runs Route 95, which passes through Jenner, to Bodega Bay and Santa Rosa once a day, 7 days a week.

No park-and-ride facilities exist within the Project limits.

a) No Impact

Improving deteriorating drainage systems is consistent with the system maintenance and preservation strategies in the *2021 Transportation Concept Report for SR 1* (Caltrans 2021). In addition, as discussed in Section 3.3.11, Land Use and Planning, the Project objectives are consistent with statewide, regional, and local planning

efforts, such as the *Plan Bay Area 2050, Regional Transportation Plan and Sustainable Communities Strategy for the San Francisco Bay Area* (ABAG and MTC 2021). The Project is also consistent with Sonoma County General Plan 2020. Implementation of PF-TRF-1 would ensure that bicycle access and transit service would be maintained during construction. There would be no impact.

b) No Impact

The Project would not result in an increase in vehicle miles traveled. There would be no impact.

c) No Impact

The Project is a culvert replacement project. The Project would not increase hazards because of a geometric design feature. The Project does not include any design features or Project components that would substantially increase hazards. There would be no impact.

d) Less Than Significant Impact

As described above under Section 3.3.9, Hazards and Hazardous Materials, and Section 3.3.15, Public Services, Project construction has the potential to result in temporary delays from the use of one-way alternating traffic control with flaggers, intermittent closures during culvert replacements, or lane reductions. However, access on SR 1 would be maintained during construction at Locations 1 through 3. A TMP, as described in PF-TRF-1, would be developed prior to construction that would identify potential traffic delays and alternative routes. In addition, the TMP would maintain emergency access throughout construction and minimize potential delays to the extent feasible. Therefore, the Project would not result in inadequate emergency access. The impact would be less than significant.

Project Features

Caltrans would incorporate standard project features into the Project to offset anticipated impacts to transportation and traffic. PF-TRF-1 is discussed here and summarized in Appendix C.

- **PF-TRF-1, Traffic Management Plan**. A TMP would be prepared prior to the beginning of construction to minimize impacts on the public while traveling on SR 1 and ensure their safety. One-way alternating traffic control would maintain traffic operations through all three culvert replacement work areas by using the

lane that is not currently under construction. Flaggers would be used to stop traffic at either end of the work area as well as access points along the lane-closure area (e.g., driveways, parking lots, roadways). Temporary traffic barriers or traffic cones would be used to separate the open lanes from the closed lanes.

3.3.18 Tribal Cultural Resources

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

Question	CEQA Determination
a) Listed or eligible for listing in the California Register of Historical Resources or a local register of historical resources, as defined in Public Resources Code Section 5020.1(k), 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.	Less than Significant Impact

CEQA Significance Determinations for Tribal Cultural Resources

This section describes tribal cultural resources and the potential impacts that have the potential to result from construction and operation of the Project. Formal notification under AB 52 began with the Native American consultation initiation letters sent to the following individuals and tribes on January 14, 2021:

- Cloverdale Rancheria of Pomo Indians
- Dry Creek Rancheria Band of Pomo Indians
- Federated Indians of Graton Rancheria
- Guidiville Rancheria
- Kashia Band of Pomo Indians of the Stewarts Point Rancheria
- Lytton Rancheria
- Middletown Rancheria
- Mishewal-Wappo Tribe of Alexander Valley
- Muwekma Ohlone Indian Tribe of the San Francisco Bay Area
- Pinoleville Pomo Nation
- Robinson Rancheria Band of Pomo Indians

To date, no responses have been received.

a, b) <u>No Impact</u>

No resources within the Project footprint are listed in or eligible for listing in the California Register of Historical Resources. The Project footprint is not considered to

be sensitive for buried archaeological resources. In the case of an inadvertent discovery, Caltrans' standard measures (PF-CUL-1 and PF-CUL-2), which call for stopping work in the event of an accidental discovery, would ensure that impacts on potential resources would be less than significant.

3.3.19 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 adequate 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 thar 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?	Less Than Significant Impact
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	Less Than Significant Impact

CEQA Significance Determinations for Utilities and Service Systems

This section describes the potential impacts on utilities and service systems that have the potential to result from Project construction and operation. Utility verification (i.e., potholing) may be required for the Project. If required, utility verification would occur during the final design phase. Utility relocations would occur prior to the beginning of construction.

a) Less Than Significant Impact

The Project is not anticipated to result in relocation or construction of new or expanded utilities. However, during construction, potholing would be conducted to determine if utilities are in the construction zone and need to be relocated. Any potential relocations would be handled on an as-needed basis, in coordination with the utility owner, to avoid and minimize interruptions in service (AMM-UT-1). This impact would be less than significant.

b) No Impact

The Project would require water only during construction. Water for construction would be provided by water trucks. Therefore, the Project would not require any additional permanent water supplies, and there would be no impact.

c) No Impact

The Project would not result in a change with respect to demand for wastewater treatment. Therefore, there is no impact.

d) No Impact

Any solid waste produced by the Project would be limited to the construction period and the removal of existing culverts. All solid waste created during construction would be hauled away and disposed of according to state and local standards and would not exceed the capacity of any local infrastructure. This impact would be less than significant

e) Less Than Significant Impact

All solid waste created during construction would be hauled away and disposed of according to state and local standards. No solid waste would be generated by the Project after construction. Therefore, this impact would be less than significant.

Avoidance and Minimization Measures

Caltrans would incorporate AMM-UT-1 in the Project to avoid or minimize potential impacts to utilities.

- **AMM-UT-1, Utility Notifications**. Caltrans would notify all affected utility companies of the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction.

3.3.20 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?	Less Than Significant Impact
b) Due to slopes, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	Less Than Significant Impact
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 on the environment?	Less Than Significant 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?	Less Than Significant Impact

CEQA Significance Determinations for Wildfire

This section describes impacts related to wildfire that have the potential to result from the Project. Information in this section is based on the California Fire and Resource Management Program and Sonoma County General Plan 2020 Public Safety Element.

The Project would occur within a rural residential portion of Sonoma County, including the community of Jenner. According to CAL FIRE, the Project footprint is entirely within the Sonoma County SRA. According to the CAL FIRE 2007 SRA Map for Sonoma County, the Project footprint is within areas designated as moderate and high fire hazard severity areas. As discussed in Section 3.3.15, Public Services, the Monte Rio Fire Protection District serves the rural community of Jenner in unincorporated Sonoma County (Monte Rio Fire Protection District 2022). In addition, since the Project footprint is entirely within the SRA of Sonoma County, CAL FIRE supports wildfire response to the Project footprint.

a) Less Than Significant Impact

Construction of the Project would introduce additional vehicles and truck traffic along SR 1 within the Project footprint and require partial lane and shoulder closures. However, Project construction would be performed in stages to keep travel lanes open to the public and minimize traffic disruptions.

SR 1 within the Project footprint is designated as a major regional highway for Sonoma County. It is also identified as an emergency response and evacuation route for the community of Jenner and surrounding unincorporated communities. As discussed in detail in **Section 3.3.9, Hazards and Hazardous Materials**; **Section 3.3.15, Public Services**; and **Section 3.3.17, Transportation**, congestion resulting from the partial lane and shoulder closures required for Project construction would have the potential to impede emergency responders and interfere with adopted emergency evacuation plans for the Project vicinity. However, a detailed TMP (PF-TRF-1) would be developed for the Project to ensure implementation of a safe construction zone and mitigate any potential Project interference with existing emergency response plans or emergency evacuation plans. The TMP would include coordination with emergency service providers such as CAL FIRE and the local Monte Rio Fire Protection District and would provide instructions for response and evacuation in the event of an emergency such as a wildfire. With the implementation of the TMP, construction of the Project would result in less than significant impacts on emergency response plans or emergency evacuation plans in the Project vicinity.

b) Less Than Significant Impact

The Project footprint is not in or near SRAs or lands that have been classified as Very High Fire Hazard Severity Zones (CAL FIRE 2007). The Project would occur in an rural residential area of Sonoma County where the threat of wildland fire has been determined to be moderate to high (CAL FIRE 2007). Portions of the Project footprint east of Location 1 and upslope from Locations 2 and 3 have been designated as high wildfire severity areas; the remainder of the Project footprint is classified as a moderate wildfire severity area.

Construction of the Project would temporarily increase the wildfire risk in the Project vicinity by introducing construction equipment and personnel along the SR 1 ROW and within adjacent temporary construction easements. The introduction of construction personnel and equipment in shoulder areas along the roadway would increase the potential for unintentional ignition of roadside vegetation. Because the increased wildfire risk would be temporary and the Project would not be in or near an SRA or Local Responsibility Area (LRA) lands classified as Very High Fire Hazard Severity Zones, the Project would not exacerbate wildfire risks or expose people or structures to significant risks. The Project would have a less than significant impact.

c) Less Than Significant Impact

Construction of the Project would temporarily increase wildfire risks in the Project vicinity. The installation of infrastructure associated with the Project, including pavement, construction signage, and drainage modifications, has the potential to increase the potential for wildfire by introducing construction equipment and personal to vegetated roadway shoulders in the Project footprint. Because the increased wildfire risk would be temporary and the Project would not be in or near an SRA or LRA lands classified as Very High Fire Hazard Severity Zones, the Project would have a less than significant impact, and no mitigation would be required.

d) Less Than Significant Impact

The Project footprint is within an existing ROW along SR 1. The Project would not propose uses that would expose people or structures to significant risks as a result of runoff and post-fire slope instability. The Project would reduce the potential for roadside and downstream flooding by improving drainage across the roadway at Locations 1 through 3. Project construction activities along slopes adjacent to the roadway would implement the project features identified in Section 3.3.10, Hydrology and Water Quality, to avoid any increase in the risk of landslides. In addition, the project features identified in Section 3.3.10 would avoid any increase in downstream flooding as a result of Project construction. Therefore, the Project would have a less than significant impact.

3.3.21 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)?	No Impact
c) Does the project have environmental effects that 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

The Project would not 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, or substantially reduce the number of or restrict the range of a rare or endangered plant or animal.

The Project would have temporary minor impacts on riparian habitat and temporary and permanent minor impacts on some vegetation communities such as native and non-native costal scrubland and woodlands. The Project has the potential to affect one tree at Location 1. It also has the potential to have direct and indirect temporary impacts on wetlands and waters of the United States at Locations 2 and 3. The Project would have minimal permanent impacts and temporary impacts on CRLF habitat and could result in the loss of a small number of CRLF, if present during construction activities. The Project has the potential to temporarily impact suitable foraging habitat for the MSB; however, it is anticipated that the Project footprint only provides foraging habitat and that larval habitat and larval host plants are not present, based on biological surveys. The Project would not eliminate important examples of the major periods of California history or prehistory.

b) No Impact

The Project involves the replacement of three culverts under SR 1 in a rural environment. There are two other Caltrans culvert rehabilitation and replacement projects north of the Project limits (EA 04-1K730 and EA 04-1K750), both along SR 1. Project EA 04-1K730 includes replacement of 23 culverts from PM 30.8 to PM 40.6. Project EA 04-1K750 includes replacement of 27 culverts from PM 41.2 to PM 54.6. No other projects are known to be proposed in the Project corridor. There would be no cumulative impacts with the Project because the closest of the two other projects is approximately 10 miles north.

c) Less Than Significant Impact

Residences are adjacent to Locations 1 through 3. In addition, one business is within the affected portion of roadway at Locations 2 and 3. Because of the proximity of residences and business to the Project footprint, night work is not anticipated with the Project; directional lighting and/or shielding would be used as necessary. In addition, access to residential and commercial driveways in proximity to construction activities would be maintained at all times, and noise and air quality project features, AMMs, and mitigation measures would be implemented to address noise and dust impacts. Therefore, temporary construction-related activities would not result in permanent or significant environmental impacts on human beings.

Chapter 4 Community Outreach and Consultation and Coordination with Public Agencies

To date, public and agency coordination has consisted of the following:

4.1 Community Outreach

This IS/MND, maps, and Project information are available to download at https://dot.ca.gov/caltrans-near-me/district-4/d4-popular-links/d4-environmental-docs. In addition, hardcopies of this IS/MND would be made available at the following locations in the vicinity of the Project:

- Guerneville Regional Library
  14107 Armstrong Woods Road
  Guerneville, California 95446

- Occidental Library
  73 Main Street
  Occidental, California 95465

- Sonoma County Library: Central Library
  211 E Street
  Santa Rosa, California 95404

The deadline for submission of comments on the IS/MND is August 14, 2022.

4.2 Consultation and Coordination with Public Agencies

Table 4-1. Consultation and Coordination with Public Agencies

Organization(s)	Date	Topic
NAHC and local Native American tribes (identified in Section 3.3.5, Cultural Resources, and Section 3.3.18, Tribal Cultural Resources	January 14, 2021	AB 52 Formal Notification
USFWS	May 2022	Biological Assessment

Chapter 5 List of Preparers

The primary people who contributed to, prepared, and reviewed this report are listed in Table 5-1.

Table 5-1. List of Preparers and Reviewers

Organization	Name	Role
Caltrans	Scott Williams	Office Chief (Acting), Office of Environmental Analysis
Caltrans	Arnica MacCarthy	Senior Environmental Planner, Office of Environmental Analysis
Caltrans	Jessica Thaggard	Branch Chief (Acting), Office of Biological Sciences and Permits
Caltrans	Robert Blizard	Senior Biologist, Office of Biological Sciences and Permits
Caltrans	Jonathan Hogg	Environmental Scientist, Office of Biological Sciences and Permits
Caltrans	Rebecca Carson	Senior Biologist, Office of Biological Sciences and Permits
Caltrans	Helen Blackmore	Branch Chief, Office of Cultural Resource Studies
Caltrans	Charles Palmer	Environmental Planner (Architectural History), Office of Cultural Resource Studies
Caltrans	Kathryn Rose	Senior Environmental Planner, Office of Cultural Resource Studies
Caltrans	Lindsay Busse	Associate Environmental Planner (Archaeology), Office of Cultural Resource Studies
Caltrans	Joaquin Pedrin	Branch Chief, Office of Landscape Architecture
Caltrans	Chris Else	Landscape Associate, Office of Landscape Architecture
Caltrans	Tripathi Ganga	Branch Chief, Office of Water Quality
Caltrans	Mojgan Osooli	Water Quality Engineer, Office of Water Quality
Caltrans	Kathleen Reilly	District Branch Chief, Office of Hydraulic Engineering
Caltrans	Shilpa Mareddy	Branch Chief, Office of Environmental Engineering
Caltrans	Radhika Mothkuri	Transportation Engineer, Office of Environmental Engineering
Caltrans	Chris Wilson	District Branch Chief, Office of Environmental Engineering
Caltrans	Chris Risden	Branch Chief, Office of Geotechnical Design – West

Organization	Name	Role
Caltrans	James Allen	Engineering Geologist, Office of Geotechnical Design – West
Caltrans	Chris McMann	Engineering Geologist, Office of Geotechnical Design – West
Caltrans	Samira Norouzpour	Project Manager, Project Management North
Caltrans	Jonathan Lee	Project Engineer, Office of Design South, Special Projects
Caltrans	Brian Blume	Senior Transportation Engineer, Office of Design South, Special Projects
Caltrans	Fabio La Serna	Project Engineer, Office of Design South, Special Projects
Caltrans	Ryan Graybehl	Construction Liaison, Office of North Bay Construction
Caltrans	Allison Paich	District Office Chief, Office of Right of Way Acquisitions & Project Management Services
Caltrans	Jim Murphy	Right of Way Agent, Office of Right of Way Acquisitions & Project Management Services
Jacobs	Sam Schoevaars	Environmental Planner
Jacobs	Valisa Nez	Environmental Planner
Jacobs	Chris Archer	Geospatial Professional
Jacobs	Clarice Ericsson	Publications Technician
Jacobs	Leslie O'Connor	Technical Editor
ICF	Zachary Cornejo	Senior Environmental Planner
ICF	Trina Sorvari	Senior Environmental Planner

Chapter 6 Distribution List

The Initial Study with proposed Mitigated Negative Declaration will be circulated by July 15, 2022, to the following agencies and government officials.

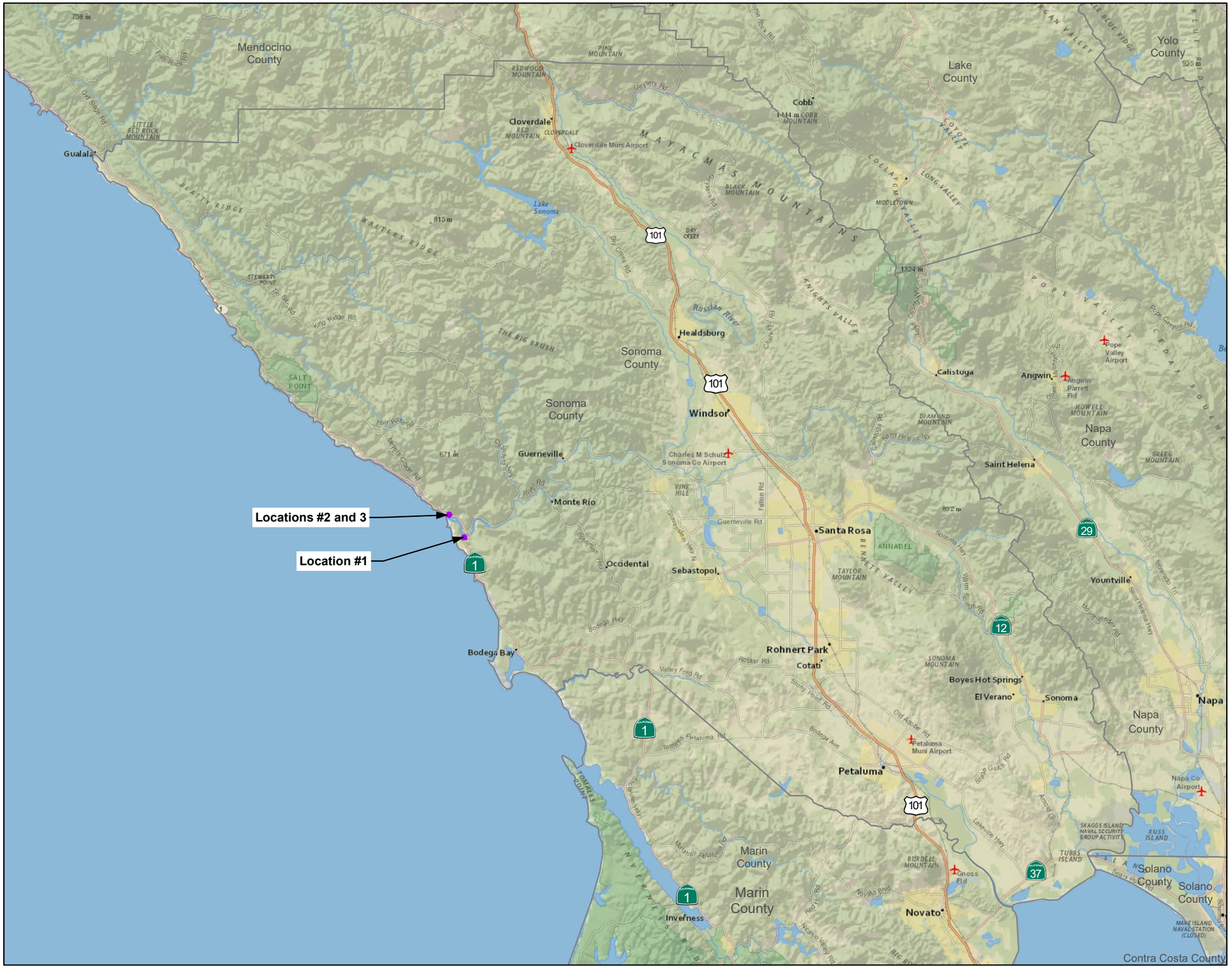
6.1 Agencies

- Bay Area Air Quality Management District
- California Department of Fish and Wildlife
- California Coastal Commission
- North Coast Regional Water Quality Control Board
- Sonoma County Permit and Resource Management
- Sonoma County Planning Division
- Sonoma County Sheriff's Office
- Sonoma County Transportation Authority
- State Water Resources Control Board
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers

6.2 Elected Officials

- U.S. Senator Dianne Feinstein
- U.S. Senator Alex Padilla
- California State Senator Mike McGuire
- Congressman Jared Huffman
- Assembly Member Jim Wood
- Supervisor Lynda Hopkins
- Sonoma County Sheriff Mark Essick

Appendix A Figures



Legend

Project Footprint

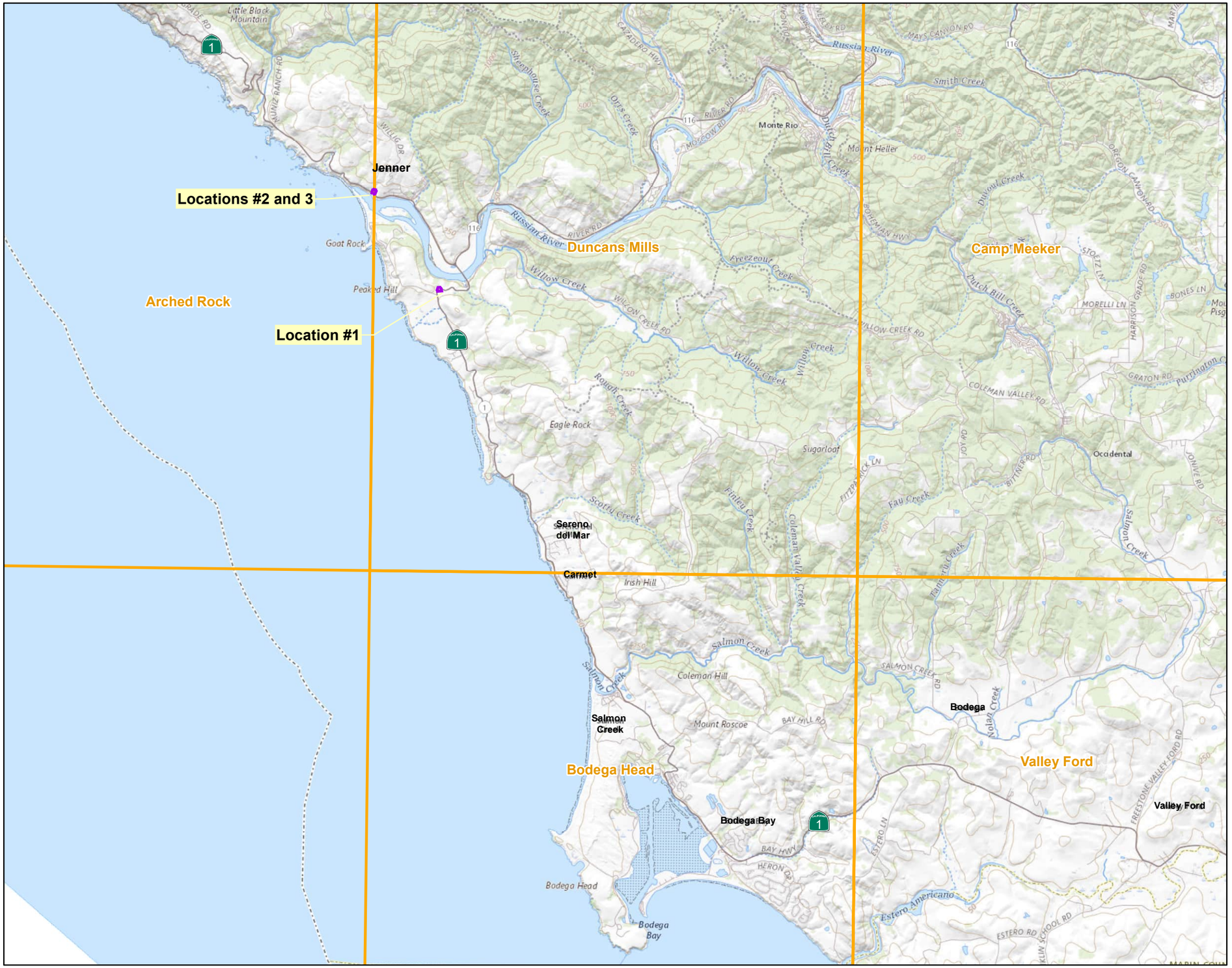
N

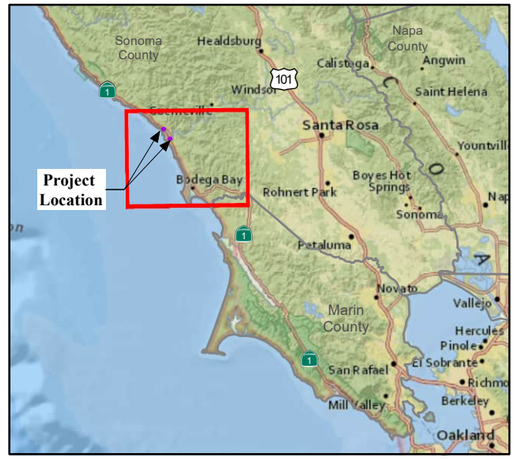
0 6 12

Miles

FIGURE 1-1
Regional Location
State Route 1 Culvert Rehabilitation Project
EA 04-1Q340, SON-1-19.25/21.84
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1Q340_SON1_CULVERT_REHAB\MAPFILES\REPORT\2022\DED\AUG\FIG1-1_REGIONAL_LOCATION_1Q340.MXD





Legend

- Project Footprint
- USGS 7.5 Minute Quadrangle

N

0 7,250 14,500

Feet

Caltrans

FIGURE 1-2
Project Location
State Route 1 Culvert Rehabilitation Project
EA 04-1Q340, SON-1-19.25/21.84
Sonoma County, California

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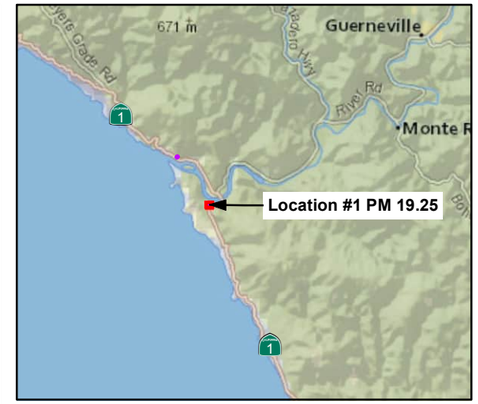
099-050-012

099-050-015

Location #1

PM-19.25

099-060-006



LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove and Replace Culvert
- Remove Tree
- Right of Way Acquisition
  Permanent Drainage Easement

Imagery Source:
Sonoma County 2021

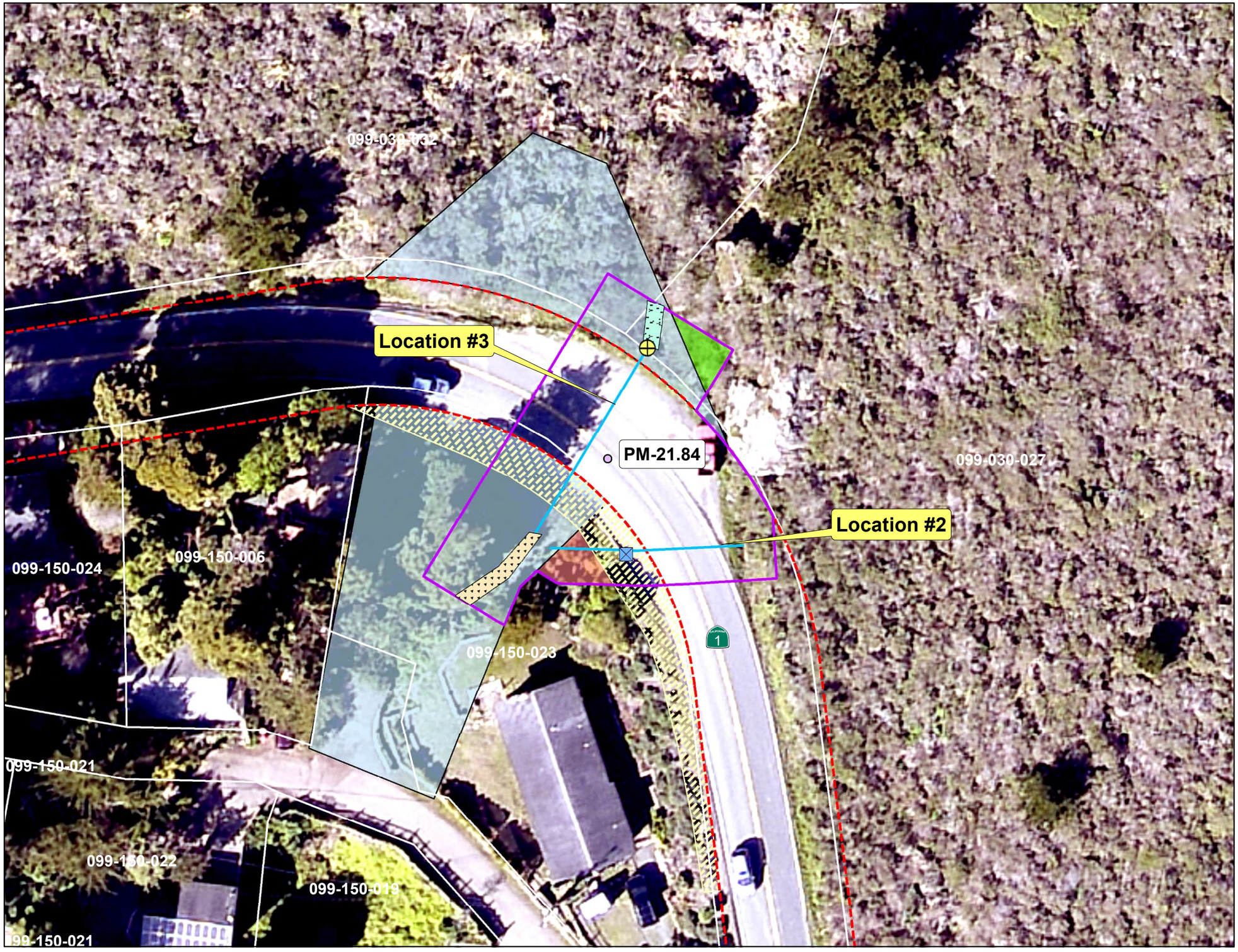
N

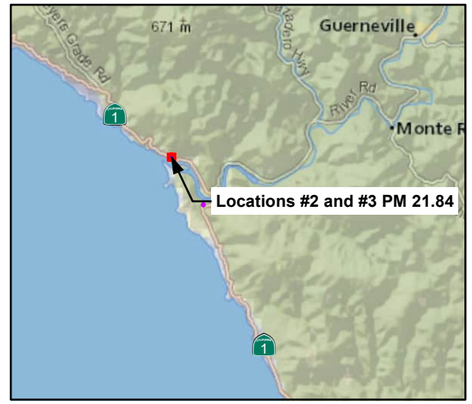
0 30 60
Feet

Caltrans

Figure 1-3
Map 1 of 2
Project Components
State Route 1 Culvert Rehabilitation Project
EA 04-1Q340, SON-1-19.25/21.84
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1Q340_SON1_CULVERT_REHAB\MAPFILES\REPORT\2022\DED\AUG\FIG1-3_PROJECT_COMPONENETS_1Q340.MXD CARCHER 8/31/2022 3:47:26 PM





LEGEND

- Post Mile
- Caltrans Right of Way
- Sonoma County Parcels
- Project Footprint
- Remove and Replace Culvert
- Remove and Replace Drainage Inlet
- Remove and Replace Flared End Section
- Remove and Replace Concreted Spillway and Rock Slope Protection
- Remove Concrete Apron and Install Rock Slope Protection
- Existing Permanent Drainage Easement
- Right of Way Acquisition Temporary Construction Easement
- Right of Way Acquisition Permanent Drainage Easement
- Right of Way Acquisiton Permanent Highway Easement

Imagery Source:
Sonoma County 2021

N

0 30 60
Feet

Caltrans

Figure 1-3
Map 2 of 2
Project Components
State Route 1 Culvert Rehabilitation Project
EA 04-1Q340, SON-1-19.25/21.84
Sonoma County, California

\\DC1VS01\GISPROJ\C\CALTRANS\1Q340_SON1_CULVERT_REHAB\MAPFILES\REPORT\2022\DED\AUG\FIG1-3_PROJECT_COMPONENETS_1Q340.MXD CARCHER 8/31/2022 3:47:26 PM

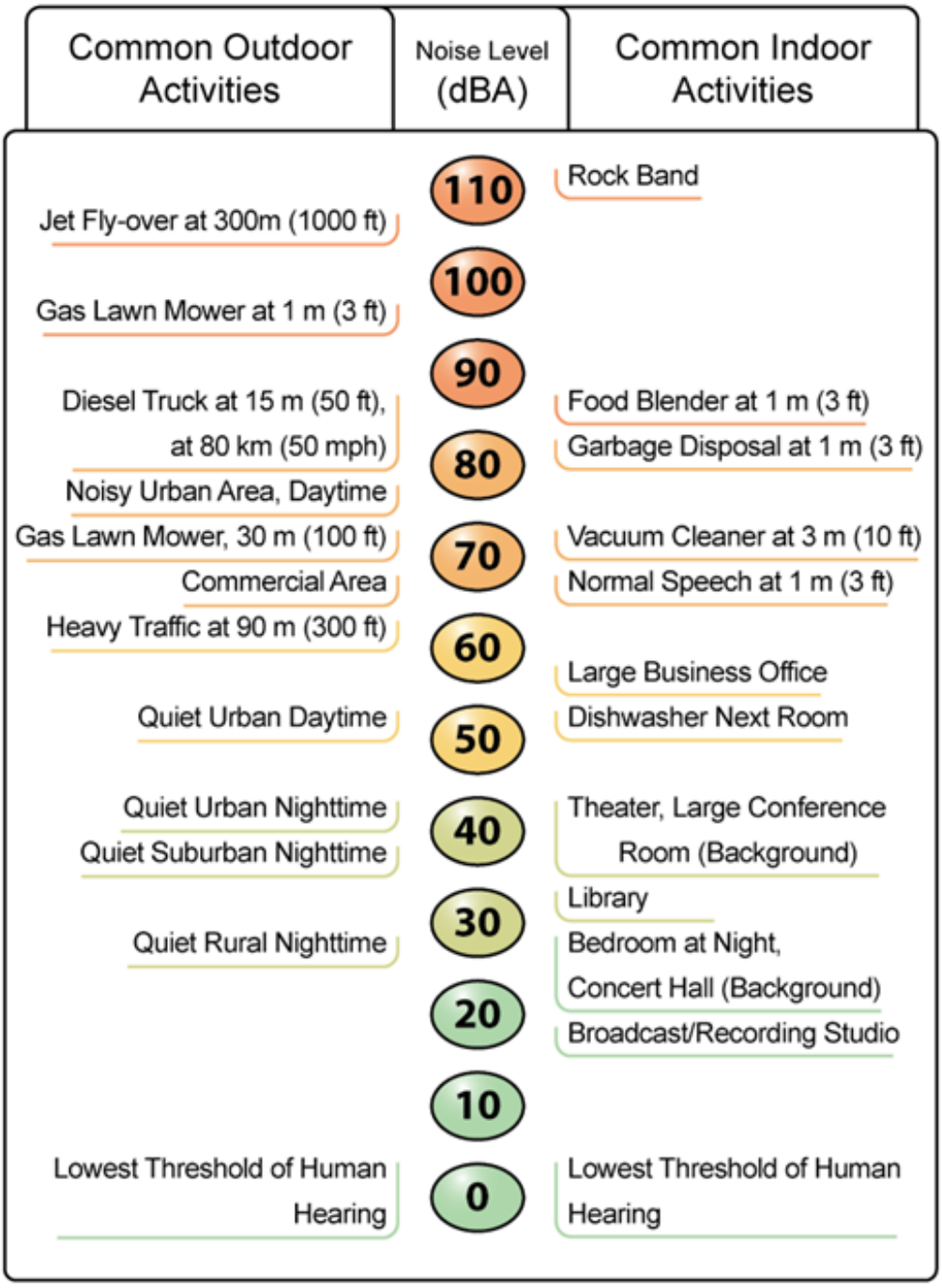


Figure 3-1. Noise Levels of Common Activities

Appendix B Project Site Photographs

Photo 1. Downstream View of Culvert Location 1 – PM 19.25, Looking South

Photo 2. Upstream View of Culvert Location 1 – PM 19.25, Looking North

Photo 3. Downstream View of Culvert Locations 2 and 3 – PM 21.84, Looking East

Photo 4. Upstream View of Culvert Locations 2 and 3 – PM 21.84, Looking Northeast

Photo 5. Downstream View of Culvert Locations 2 and 3 – PM 21.84, Looking West

Appendix C Summary of Project Features and Avoidance, Minimization, and Mitigation Measures

Project Features

- **PF-AES-1, Minimize Vegetation Impacts**. Impacts on vegetation would be minimized to the greatest extent possible during construction. Vegetation to remain would be protected from construction activities through the installation of temporary fencing when it is close to construction work.

- **PF-AES-2, Temporary Fencing**. Temporary fencing would be used to protect the roots and canopies of nearby trees.

- **PF-AES-3, Tree Trimming**. Where the pruning of trees is required to accommodate construction operations, pruning would be performed under the supervision of a certified arborist.

- **PF-AES-4, Staging Areas Positioning**. Construction materials and equipment would be stored in a staging area beyond direct view of the motoring public and residential properties to the extent feasible.

- **PF-AES-5, RSP Treatment**. If it is determined that RSP would be visible to highway users, the Office of Landscape Architecture would determine if aesthetic treatment of the RSP is needed. This may include staining and/or other measures.

- **PF-AQ-1, 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. Any material stockpiled during construction would be watered, sprayed with tackifier, or covered to minimize dust production and wind erosion.

- **PF-AQ-2, Construction Vehicles and Equipment.** Construction vehicles and equipment would be maintained and tuned in accordance with manufacturer's

specifications. In addition, solar-powered traffic control lights would be used if feasible.

- **PF-AQ-3, 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-AQ-4, Recycle Waste and Materials.** If practicable, nonhazardous waste and excess material would be recycled. If recycling is not practicable, dispose of material according to applicable regulations.

- **PF-BIO-1, Delineated Construction Areas, Environmentally Sensitive Areas, and Equipment and Material Storage Sites:** A biological monitor would delineate construction areas, environmentally sensitive areas (ESAs), and equipment materials and storage sites. ESAs are areas containing sensitive habitats adjacent to or within the Project footprints, in which ground-disturbing activities are not allowed. ESAs would be delineated on the final Project plans. A biological monitor would be onsite to direct the installation of high-visibility, orange ESA fencing to prevent the encroachment of construction personnel, materials, and equipment into ESAs during construction-related activities, as needed. Construction equipment and materials would be stored outside of designated ESAs, as specified by a biological monitor, to avoid construction-related impacts to natural communities. At the discretion of the biological monitor, ESA fencing would be removed when construction is no longer active in the delineated construction areas.

- **PF-BIO-2, Construction Site Management Practices:** Construction BMPs for biological resources may include, but are not limited to, the following:

    - Construction vehicles would be restricted to SR 1 and delineated construction areas. Construction vehicles would observe a 15-mile-per-hour speed limit within the Project footprints, except when on the SR 1 travel lanes.
    - Construction access, staging, storage, and parking areas would be delineated outside of designated ESAs within the Project footprints and limited to the minimum area necessary to construct the Project.
    - All construction-related waste, such as wrappers, cans, bottles, and food scraps, would be disposed of or recycled in closed containers and removed at least once daily from the Project footprint.
    - All pets would be prohibited from entering the Project footprint.

  - Firearms would be prohibited within the Project footprint, except for those carried by authorized security personnel or local, state, or federal law enforcement officials.

- **PF-BIO-3, Pre-construction Surveys for Nesting Birds:** If clearing and grubbing vegetation should occur between February 1 and September 30, a biological monitor would conduct pre-construction surveys for nesting birds within the ground areas to be disturbed prior to beginning construction-related activities. The survey would include a perimeter buffer of approximately 50 feet for non-game migratory birds and approximately 300 feet for raptors. All nest avoidance requirements of the Migratory Bird Treaty Act, USFWS, and California Department of Fish and Wildlife (CDFW) codes would be observed. If an active nest is found, an appropriate protection buffer would be established until the young fledge. USFWS and/or CDFW would be contacted if a special-status species is discovered within the Project footprints within 24 hours.

- **PF-BIO-4, Noxious Weeds:** Noxious weeds would be controlled in accordance with Caltrans Highway Design Manual Topic 110.5, Control of Noxious Weeds—Exotic and Invasive Species, and Executive Order 13112, Invasive Species, and by methods approved by a Caltrans-approved landscape architect.

- **PF-CUL-1, Unanticipated Archaeological Discovery**. If cultural materials are discovered during construction, all earthmoving activity within and around the immediate discovery area would be diverted until a qualified archaeologist can assess the nature and significance of the find in consultation with the State Historic Preservation Officer (SHPO).

- **PF-CUL-2, Unanticipated Human Remains Discovery**. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities would cease in any area or nearby area suspected to overlie the remains and the county coroner would be contacted. Pursuant to PRC Section 5097.98, if the remains are thought to be Native American, the coroner would notify the NAHC, which would then notify the MLD. At that time, the person who discovered the remains would contact the Environmental Senior and PQS, which would work with the MLD to ensure respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 would be followed, as applicable.

- **PF-NOI-1, Public Outreach.** Public outreach would be required before Project construction and throughout the Project construction to update residents, businesses, and others with upcoming activities and time frame of Project. Public outreach may entail sending notices to nearby residents, notifying the city, and posting a notice on the Project website.

- **PF-NOI-2, Construction Noise Levels.** The following measures would be implemented to reduce noise levels during construction where feasible:

    - The Contract Specifications should include a Special Provision requiring Noise Monitoring and Noise Control Measures.
    - Measures in the Special Provision may include a temporary noise barrier and other methods (i.e. scheduling), including the following:
    - Equip an internal combustion engine with a manufacturer-recommended muffler that is in good condition. Do not operate an internal combustion engine within the Project footprint without the appropriate muffler.
    - Do not idle construction equipment unnecessarily.
    - Maximize the distance between stationary noise-generating construction equipment, such as air compressors and portable power generators, and noise-sensitive receptors.
    - Locate staging and storage areas away from residential areas.
    - Consider reducing impact of detours.
    - Use quieter alternative methods of equipment.
    - If feasible, use solar or electricity as power source instead of diesel generators.
    - Ensure all construction equipment conforms to Section 14-8. 02, Noise Control, of the latest Caltrans Standard Specifications.

- **PF-TRF-1, Traffic Management Plan**. A TMP would be prepared prior to the beginning of construction to minimize impacts on the public while traveling on SR 1 and ensure their safety. One-way alternating traffic control would maintain traffic operations through all three culvert replacement work areas by using the lane that is not currently under construction. Flaggers would be used to stop traffic at either end of the work area as well as access points along the lane-closure area (e.g., driveways, parking lots, roadways). Temporary traffic barriers or traffic cones would be used to separate the open lanes from the closed lanes.

- **PF-WQ-1, Construction and Implementation of Best Management Practices:** Erosion control BMPs would be included in the final Project plans, and Standard Special Provisions (SSPs) would be included in the final construction package to comply with the conditions of the Caltrans National Pollutant Discharge Elimination System (NPDES) permit. The Caltrans BMP Guidance Handbook (Caltrans 2017) would provide guidance for provisions to be included in the construction contract for measures to protect ESAs and avoid or minimize stormwater and non-stormwater discharges. Construction BMPs for stormwater may include, but are not limited to, the following:
    - Construction tracking control practices
    - Job site management
    - Sediment control (fiber rolls and silt fencing)
    - Waste management and materials pollution control
    - Materials stockpile management
    - Dust and wind erosion controls
    - DI protection
    - Non-stormwater management
    - Water quality monitoring
    - Maintaining and tuning construction vehicles and equipment approximately 50 feet away from Yellow Creek and Schell Creek
    - Locating designated fueling areas approximately 50 feet from downslope drainage facilities, as well as Yellow Creek and Schell Creek
- **PF-WQ-2, Water Pollution Control Program.** A Water Pollution Control Program (WPCP) would be prepared by the contractor and approved by Caltrans, pursuant to the 2018 Caltrans Standard Specifications Section 13, Water Pollution Control, and the Caltrans WPCP Preparation Manual (Caltrans 2021a). The WPCP would be implemented prior to the beginning of construction.
- **PF-WQ-3, Temporary Stream Diversions**. Temporary stream diversions would be used when necessary for culvert replacements. If needed, stream diversions would be determined during the design phase of the Project.

- **PF-WQ-4, Permanent BMPs**. To minimize and avoid potential post-construction impacts on water quality, the Project would consider design pollution prevention BMPs. Design pollution prevention BMPs would be used to minimize runoff, maximize infiltration, maximize vegetation (depending on the location), and reduce erosion.

Avoidance and Minimization Measures

- **AMM-AES-1, Staging Areas Impact Reduction**. Staging areas would not be located where they require the removal of vegetation or result in ground compaction impacting tree roots.

- **AMM-AES-2, Project Design Compliance**. As the design is advanced, any modifications required to ensure compliance with the Guidelines would be implemented as the need becomes apparent.

- **AMM-AES-3, Revegetating**. Trees or vegetation removed during construction would be replaced or compensated via in-lieu fee. Consultation with the Office of Biological Science and Permits, the Office of Environmental Analysis, as well as the Office of Landscape Architecture would be necessary regarding potential tree or vegetation loss, avoidance, and replacement.

- **AMM-AES-4, Reseeding**. Disturbed areas would be revegetated with a regionally appropriate native seed mix following construction.

- **AMM-BIO-1, Proper Use of Erosion Control Devices**. To prevent CRLF from becoming entangled or trapped in erosion control devices, plastic monofilament netting (i.e., erosion control matting) or similar material would not be used within the Project footprints. Acceptable substitutes would include coconut coir matting or tackified hydroseeding compounds.

- **AMM-BIO-2, Pre-construction Surveys for California Red-legged Frog:** Pre-construction surveys would be conducted by a USFWS-approved biological monitor. Visual surveys would be conducted immediately prior to the beginning of ground-disturbing activities. Suitable breeding and dispersal habitat within the Project footprints includes refugia habitat (such as in or under shrubs, downed logs, small woody debris, and burrows), which would be inspected. If an individual is observed, it would be evaluated and relocated in accordance with the observation and handling protocols outlined in AMM-BIO-5. Fossorial mammal

burrows would be inspected for signs of CRLF usage to the maximum extent practicable. If it is determined that a fossorial mammal burrow may be occupied by a frog, the burrow would be flagged for avoidance.

- **AMM-BIO-3, Conduct Biological Monitoring:** A USFWS-approved biological monitor would be present onsite during construction-related activities, including vegetation clearing and grubbing, when special-status species have the highest likelihood of being harmed or harassed. If, at any point, any listed species is discovered within the Project footprint, the USFWS-approved biological monitor may stop work if deemed necessary and a 50-foot-wide work restriction buffer would be applied until the animal moves out of the area or is relocated out of harm's way. For state-listed species, CDFW would be contacted on how best to proceed. Alternately, other action may be taken as authorized in Project permits.

- **AMM-BIO-4, Conduct Biological Monitoring for California Red-legged Frog**. A USFWS-approved biological monitor would be present onsite during construction-related activities that have the potential to result in take of CRLF to monitor for the species. The USFWS-approved biological monitor may stop work if deemed necessary for any reason to protect CRLF and would advise the resident engineer or designee on how to proceed accordingly.

- **AMM-BIO-5, Discovery of a Special-Status Species**. The biological monitor would have the authority to halt work through coordination with the resident engineer if a special-status species is discovered in an active construction area or might otherwise be at risk. The resident engineer would ensure construction-related activities remain suspended in any construction area where the biological monitor has determined that the special-status species could be harmed. For CRLF, work may resume when the individual moves away from the construction area of its own volition or is moved out of harm's way by a USFWS-approved biological monitor. For other federally and state-listed species, USFWS and/or CDFW would be contacted on how to proceed before work is allowed to resume.

- **AMM-BIO-6, Timing of Construction:** Ground-disturbing activities would be restricted to the dry season (i.e., between April 15 and October 31), and work within jurisdictional waters would be further restricted to between June 15 and October 31, when CRLF are anticipated to be estivating in moist refuges and not dispersing through the BSA.

Construction-related activities would not occur during rain events or within 24 hours following a rain event. Prior to resuming construction-related activities, a USFWS-approved biological monitor would inspect the construction area and construction vehicles, equipment, and materials stored onsite for the presence of CRLF. Any discovered CRLF would be allowed to move away from the construction area of their own volition or would be moved by the USFWS-approved biological monitor.

- **AMM-BIO-7, Construction Materials Storage:** For onsite storage of construction materials that could provide shelter for CRLF, an open-top trailer would be used to elevate the construction materials above the ground surface to reduce the potential for any CRLF individuals to climb into the construction materials.

- **AMM-BIO-8, Worker Environmental Awareness Training:** Construction personnel would attend a mandatory worker environmental awareness training (WEAT) delivered by a qualified biologist prior to beginning construction. WEAT would provide information on special-status species and the construction personnel's responsibility in reducing, avoiding, or minimizing impacts to special-status species during construction. At a minimum, WEAT would include the following:

    - A description of special-status species and migratory birds that may occur in the BSA
    - A discussion of the potential occurrence of special-status species within the Project footprints
    - An explanation of the status of special-status species and protection measures under federal and state laws and regulations
    - The description of avoidance or minimization measures to be implemented to conserve special-status species and their habitats as they relate to the Project

    Information on special-status species would be provided to construction personnel, along with compliance reminders and relevant contact information. Documentation of WEAT and sign-in sheets would be kept on file and available on request.

- **AMM-BIO-9, Conduct Pre-construction Survey for *Viola adunca*.** A pre-construction surveys for *Viola adunca* would be conducted by a USFWS-

approved biological monitor. Visual surveys would be conducted in the early spring, prior to construction, referencing phenology trends observed at Fort Ross or other nearby reference populations. If *Viola adunca* are found in the work area, they would be flagged for avoidance. Negative findings for *Viola adunca* within the BSA would indicate that the footprint does not contain suitable breeding habitat for MSB.

- **AMM-GEO-1, Unanticipated Paleontological Resources**. As outlined in Standard Specifications 14-7.03, Discovery of Unanticipated Paleontological Resources, if unanticipated paleontological resources are discovered at the job site in the native Pleistocene terrace deposits, the following measures would be implemented:

  1. Stop all work within a 60-foot radius of the discovery.

  2. Secure the area.

  3. Notify the Project engineer.

  The Caltrans Department of Geology Services would investigate the discovery and modify the dimensions of the secured area if needed. Paleontological resources would not be moved or taken from the job site until appropriate coordination and consultation has been completed. Work within the radius of discovery would not resume until authorized by a qualified paleontologist.

- **AMM-UT-1, Utility Notifications**. Caltrans would notify all affected utility companies of the construction schedule for the Project so that relocations can be conducted by each utility company as necessary prior to the start of construction.

Mitigation Measures

- **MM-BIO-1, Impacts to ESHAs.** Temporary Project impacts to ESHAs would be mitigated at a ratio of 1:1 for temporary impacts and permanent impacts to ESHAs, and waters of the United States would be mitigated at a ratio of 3:1, in accordance with the Caltrans Coastal Act Policy. Habitat mitigation would be purchased from a USFWS- and CDFW-approved mitigation bank prior to Project construction. Temporary Project impacts on ESHAs, mitigation ratios, and appropriate compensation would be confirmed with the Sonoma County Local Coastal Program during the Project permitting phase.

- **MM-BIO-2, Tree Replacements.** The tree removal required for the Project would be replaced or compensated via an in-lieu fee in accordance with Chart No. 1 of the Tree Protection Ordinance (Section 26-88-010(m)). Appropriate tree replacement locations or in-lieu fee compensation would be confirmed with Sonoma County prior to construction.

Appendix D List of Technical Studies and References

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